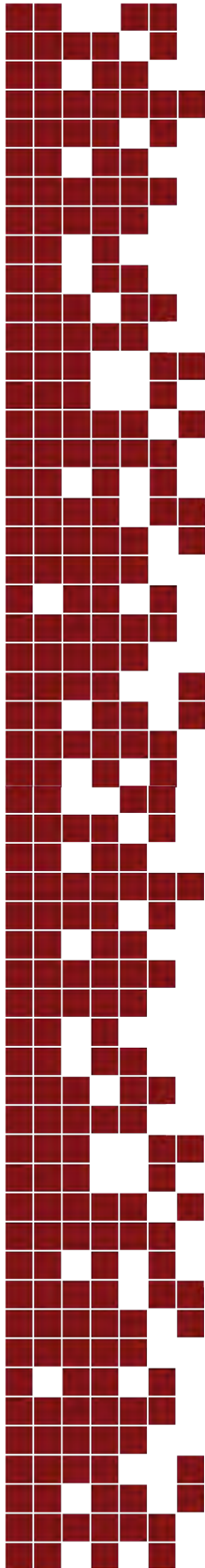




Day 2 Tuesday Oct 30, 2012



KEYNOTE

EMIL SALIM

Tuesday Oct 30th 2012

09.30 – 10.30

Bali Nusa Dua Convention Center

(NusaDua 1, 2, 3 & 4 Ballroom)



Day 2 Tuesday Oct 30, 2012

SPEAKERS

I.B Rai Dharmawijaya Mantra

Chan Soo Khian

Dato Esa Mohamed

Asian Cities & Urban Development

Mayor of Kalimantan

Maria Mynn Porciuncula-Alfonso, Alfredo Bendana Alfonso

Prof. Samra M. Khan

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Patrick Lim, ST. MA, IAI

Nguyen Tien Thanh, Dr. Architect

Architectural Design

Yori Antar

Fahmid Ahmed

Junhua He

Ar. Sultana Zakia Rahman

Ajay Kulkarni

Md Mohataz Hossain, Nazia Afsoon

Cross-Border Practice

Ketut Arthana, IAI



Bali Nusa Dua Convention Center
(NusaDua 1, 2, 3 & 4 Ballroom)

Cross Border Architectural Practice

Dato Esa Mohamed

The WTO negotiations on services have stalled for some time and yet the movement of the services trade globally has been prolific. The 2008 financial crisis that hit the Euro zone and the USA has rendered the Asian region, which is fairly insulated from the crises, an attractive market for consultancy services from the West. There is no doubt that one can see more architects' firms providing architectural services in Asia are now coming from the United States, European Union, Australia, Japan and Canada. These firms have been well established at home and abroad. They pose a challenge to the local architects' firms that are more often ignored by the client bodies at home.

While the members of the WTO are pursuing the objectives of the GATS, there is a perceived exploitation of liberalization at the expense of the local architects. National governments are giving higher priority to the inflow of foreign direct investments (FDI) against the interest of local architects. Perhaps the amount of revenue that is obtained from the professional fees is not as significant compared to other industries in the GDP. Yet one has to appreciate that the architectural profession is responsible in determining the value of the construction sector that can contribute to as much as 5% of the national GDP. It is important to note that capital flow can be influenced by the specifications of the type of building systems and materials deployed in a project.

In Malaysia we, the architects, have been informed of our need to liberalize in parallel with the various regional and bilateral services agreements and trade cooperation. The Architects Act is being amended to allow for foreign architects to establish presence in the country and the residency requirement is being repealed. However there are asymmetries in the state of liberalization among countries that are signatories to the WTO as well as those that have entered into an MRA within ASEAN. Pending the resolutions of the Doha Development Agenda (DDA), the countries may still impose their domestic regulations that may impede the successful liberalization of the architectural services. Within Asia, the APEC Architect and the ASEAN Architect Register are important avenues that can be adopted to facilitate the mobility of architects cross borders. This arrangement can be further expanded in ARCASIA. Negotiators need to be appraised of the standards of professionalism as stipulated in the



Domestic Regulations as well as internationally recognized bodies. The UIA Accord on International Standards of Professionalism in Architectural practice is highly relevant, as it has established the International Standards Policy and guidelines for becoming, and practicing as, an architect.

As countries in Asia commit several billion ringgits worth to projects which attract a lot of foreign consultants and services providers to their home turf, how are they treated against the local professionals? Do local professional architects have the capacity to be competitive against the foreign architects? What are the short-term measures for local professional firms to be globally competitive? What do the governments need to do to facilitate proficiency and capacity building among the local professionals? Can local professionals emerge as giant global consultancy practices on their own? The promotion of professional services export requires coordinated efforts among professional bodies, governmental agencies, financial institutions, universities, etc. Mutual Recognition Arrangements and bilateral or trilateral agreements among regulatory authorities may facilitate movements of professional architects across borders, but the strict regime of immigration and labour movements can be a challenge.



Pontifical and Royal University of Santo Tomas: Embracing the Neo Centennial Global Modernism Challenges

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ABSTRACT

The paper is about the 400 year old University of Santo Tomas Campus, consisting of a cluster of Iconic Heritage Historical Structures in the heart of the City of Manila. The aim of the study is to probe the carrying capacity of the existing site in the context of the growth of the university and to seek benchmarks that would serve as guidelines for new buildings that are still planned to be built that would enhance rather than diminish the sustainability of the unique cultural environment. In the macro level, the study further seeks to analyze how the Campus' intrinsic charm can be extended to the surrounding streetscape filled with commercial establishments to help ensure a long term vibrant environment that would bestow timelessness to the vicinity that would not only endure time but become even more enchanting as it journeys into the next century.

Keywords : *Sustainable Urban Planning of Historic Sites, Architecture and Landscapes*

1. INTRODUCTION

The paper is about the 400 year old University of Santo Tomas (UST), consisting of a cluster of Iconic Heritage Historical Structures in the heart of the City of Manila. The campus has a complex of structures that possess unique characteristics akin to being a living museum of the history of architecture, planning and landscape development in the Philippines which grants it the unique position and timeline of being able to project what may be considered sustainable development in the future under the present and future trends of environmental considerations. While, carrying capacity simply refers to the ability of a site or urban development to provide the basic needs of the public that it serves, the UST historical urban matrix elevates such definition to include as to how the campus can sustain its capacity to contain the intangible as well as the tangible stresses to preserve itself while continuing to be relevant to its continuing objectives. As one walks through the UST Campus, can the perception of its beginnings amidst the successive developments and the high impact of new technology of the seamless present with the future remain coherent and appreciated over time by future generations?



UST has been successful in the preservation of its collection of unique urban structures and landscape identity that link million of people in Manila through Catholic religion and education since its establishment in 1611 in another historic site walled city of Intramuros during the Spanish occupation of Manila.

The aim of the study:

- 1) To probe the carrying capacity of the existing site in the context of the growth of the university
- 2) To seek benchmarks that would serve as guidelines for new buildings that are still planned to be built that would enhance rather than diminish the sustainability of the unique cultural environment.
- 3) In the macro level, the study further seeks to analyze how the Campus' intrinsic charm can be extended to the surrounding streetscape filled with commercial establishments
- 4) To help ensure a long term vibrant environment that would bestow timelessness to the vicinity that would not only endure time but become even more enchanting as it journeys into the next century.

2. LOCATION OF THE PHILIPPINES, MANILA AND UNIVERSITY OF SANTO TOMAS (UST)



Figure 1 - Philippines



Figure 2 -Manila-UST

The City of Manila (Filipino: Maynila- May Nilad) is the capital of our country the Philippines, known as the “Pearl of the Orient” and the recent tourism slogan “ It’s more fun in the Philippines”. It has historically served as the commercial hub in Southeast Asia much earlier than the June 24, 1571 El Adelentado Miguel Lopez de Legaspi’s” arrival in her shores. Manila was the staging point for the Manila galleons, that connected the New World with China and a rich cultural and trade exchanges with Malays, Chinese, Spanish, British and Americans.

During the Spanish Occupations, they brought with them Laws of the Indies - entire body of law promulgated by the Spanish crown in the 16th-18th centuries for the governance of its colonies¹.. The Spanish also erected numerous and magnificent churches in most cities and towns of our 7,100 islands country.

¹<http://www.answers.com/topic/indies-laws-of-the#ixzz27RljBghe>.



Figure 3 -The Entrance of the Real Fuerza de Santiago, Intrmuros Figure 4- Intramuros walled City of Manila

Intramuros, one of the oldest walled cities in the Far East, was constructed and designed by Spanish Jesuit missionaries to provide protection from invading Chinese pirates and native uprisings². An admirable colossal development constructed by the Spanish government because of its most famous feature: a nearly 4.5 kilometers of long massive stone walls and fortifications that almost completely surrounds the entire district of Spanish Houses and Churches. Then came the rapid Christianization of the city. The first missionaries to arrive were the Augustinians followed by the Franciscans, Jesuits, Dominicans and other religious orders. The friars also began to establish schools and churches dedicated to the Christian faith, eventually spreading throughout Manila and beyond



Figure 5- San Agustin Church in Intramuros, Manila– A UNESCO World Heritage Site

The San Agustin Church was first church built 1589 in Manila and now it is a UNESCO World Heritage Site. The Spanish and rich Filipinos lived and worked in Intramuros, a community with grand houses and palaces, Spanish government administration buildings, hospitals and schools. The Chinese merchants and the poor Filipinos lived around the Intramuros wall on the north bank of the river in the present of areas Tondo, Quiapo, Sta. Cruz and Binondo (the present Chinatown).

² Map of Intramuros from Wikipedia (Source: http://en.wikipedia.org/wiki/File:Manila_1851.jpg)

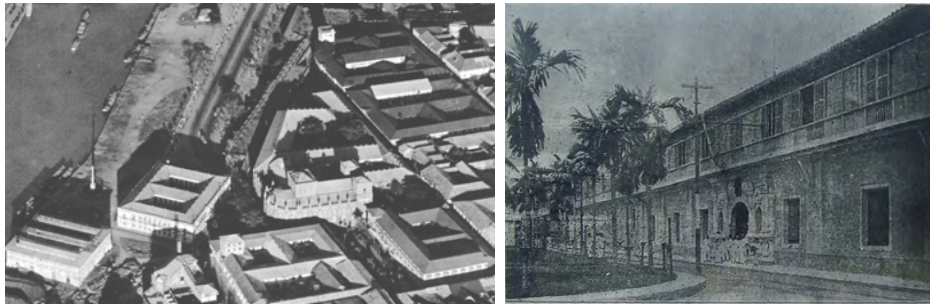


Figure 6- Aerial View and Elevation of Colegio de Nuestra Santo Rosario at Intramuros Manila³

In Intramuros, the first School of University of Santo Tomas was built in 1611 before it is transferred in 1932, at its present location in the district of Sampaloc, also in Manila, which is approximately 4 kilometers away. Intramuros still standing magnificently despite the destruction of many buildings during the war with the British, Americans and World War II. Manila expanded during the American time.



Figure 7- During the Spanish Period (1571-1898) Intramuros and Grid Plan of Manila and the American period (1898-1946), introduced the city's urban planning and development thru Daniel Burnham City Beautiful Plan of Manila

During the American Occupation, an American architect and city planner, Daniel Hudson Burnham, submitted his proposal for a Master Plan of the City of Manila which was "formal in structure though uniquely sensitive to the city". The Daniel Burnham's proposed a plan for Manila in 1905, "Make big plans; aim high in hope and work" are the Government Center, system of proposed arteries radiating from it, the railway station and the shore road. Indeed, beautiful Manila of Burnham, but only few of these were implemented - promenade near Manila Bay, expansion of Luneta Park and development of nearby Parks, Grand Public Buildings such as the Legislative and the Executive Buildings, Manila City Hall, Malacanang palace that resembled the Greek and Roman temples- white, formal and monumental. In 1903 Manila's population was only 223,029 people. Burnham's grand plan for a future was

³ Photos from the file of Mr Vic Torres



for 800,000 people. In 2010 Census of Manila⁴, the population of Manila has doubled to 1,652,171 people. From Forbes Magazine⁵, "the capital of the Philippines, Manila boasts the highest population density in the world, with its sixth district (Pandacan, Sta Mesa, Sta Ana and San Miguel) the densest. The roads are filled with buses, pedicabs (bicycles with sidecars) and cars. The traffic is consistently described as horrendous. Fixing this situation has to be put into the context of serious water problem and other infrastructure calamities. Today, Manila with a population of 1.6 million is the second most populous city in the Philippines, the populace inhabit an area of 38.55⁶ square kilometers with 41,000 person per square kilometers, making Manila the most populated city in the world. Amidst the historic developments of Manila, its rapid population growth resulted problems in housing and livelihood thus, environment degradation⁷. As the saying of scientist-urban planners - ecologist, most people will be living and working in the city by 2050. The city of Manila is divided into six legislative districts and consists of sixteen geographical districts: Binondo, Ermita, Intramuros, Malate, Paco, Pandacan, Port Area, Quiapo, Tondo, San Andres, San Miguel, San Nicolas Santa Ana, Santa Cruz, Santa Mesa and Sampaloc. Sampaloc is a district of Manila which is primarily a residential and university Belt which the University of Santo Tomas is situated.

3. CITY OF MANILA AND UNIVERSITY OF SANTO TOMAS

3.1 History of University of Santo Tomas⁸

The University of Santo Tomas in Asia, in terms of student population, it is the largest Catholic university in the world in a single campus. University of Santo Tomas is a private and sectarian educational institution run by the famed Order of Preachers. In 1605, Fr. Miguel de Benavides founded the institution by donating his personal library and 1,500.00 pesos. On the fateful day of April 28, 1611, the Colegio de Nuestra Señora del Santisimo Rosario was established in Intramuros.



Figure 8-Colegio de Nuestra del Santisimo del Rosario and Santo Domingo Church

⁴ "2010 Census of Population and Housing: National Capital Region". National Statistics Office of the Republic of the Philippines. http://www.census.gov.ph/data/sectordata/2010/2010CPH_ncr.pdf. Retrieved 6 April 2012.

⁵ Forbes magazine

⁶ www.manila.gov.ph

⁸ (From UST- www.ust.edu.ph/)



Colegio de Nuestra Señora del Rosario was renamed Colegio de Santo Tomas, in memory of the foremost Dominican Theologian and its patron-saint, St. Thomas Aquinas, in 1625. In 1645, it transformed into a university by Pope Innocent X. Granted the title “Royal” University by King Charles II in 1785. In 1898, UST was closed when the Philippine Revolution broke out. Classes were resumed a year later, across the campus, the Dominicans built a sprawling plaza aptly named Plaza Santo Tomas with its centerpiece landmark added soon after the monument of Fr. Benavides that was erected in 1889. In 1902, Pope Leo XIII made UST a “Pontifical University,” By the time of the university’s tricentennial, it was clear that UST’s Intramuros campus could no longer meet its growing needs. A decision was made to move to a bigger campus up north in Manila’s Sampaloc district called Sulucan Hills.



Figure 9 -UST Main Building initial drawings at Sulucan, Sampaloc, Manila, the newly constructed University of Santo Tomas, 1927

In 1927, the UST Main building designed by Fr. Roque Ruaño, O.P., was inaugurated. That same year, the UST administration transferred the university campus from Intramuros to its present site in Sampaloc district. In the following year. In 1927, the Sampaloc campus was opened. with most of the university’s population and programs making the move there. After World War II, the UST Intramuros closed and all courses was transferred to Sampaloc District including the historic Arch of the Centuries and the Statue of Fr Benavidez. After 401 years, the following buildings were erected Seminary and Chapel (1930), addition to Seminary 1933 and 1956, Art Deco Gym and Swimming pool, 1932, Major landscaped Area 1934, Ruano Building 1950 and 1967, Statue of Fr Benavidez 1940, Education Building (now UST Hospital) 1940, Medicine Building 1952 and 1957, Arch of the Centuries 1956, Commerce Building 1957, Fountain of Wisdom and Knowledge 1957, New Education Building 1959, Charity Hospital 1962, Grand Stand 1970 and 2004, High School Building 1977, UST Hospital 1974-2006, Central Library 1990, Architecture Building 1993, Research Building 2001, Car park/Commercial/Accountancy Bldg 2006. Plaza Major 2006, Quadricentennial Park 2006, New Gym 2011, Future Buildings Alumni Center (Old Gym Site) 2014, New Hospital 2015.

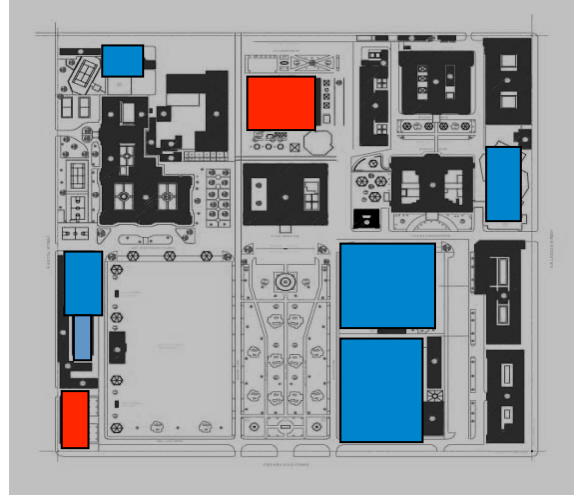


Figure 10- Aerial View of UST Google 2007,

Buildings 1927-1977
 Buildings 1990-2000
 Buildings 21st Century



Figure 11- UST Main Building designed by Fr Roque Ruano 1920-1927, influenced by Frank L Wright's Imperial Hotel in Tokyo, Japan



UST's first building, the **Main Building**, massive, imposing, seemingly solid, this famous city landmark overwhelms every visitor. Unpainted and gray, bleached by the elements, the rugged stonewalls have acquired an aura of its own. It has the distinction of being the first earthquake-proof building in the country. Designed by Fr. Roque Ruaño, O.P., priest and engineer, designed the structure is a rectangular building having a dimension of 86 meters long and 74 meters wide with two interior courtyards. The most significant feature is the fact that it is actually made up of 40 separate structures independent from one another with the only opportunity provided by pre-cast slab flooring. The forty independent structures are separated from each other by a gap of 1"-4", which is filled with loose cement. One of these structures rises beyond the level of the fourth floor to form the tower in the center of the huge box-like stone mass. According to an article written by the former dean of Faculty of Engineering, Arch Manuel Mañosa, this is how it is divided:⁹ (Figure 12)

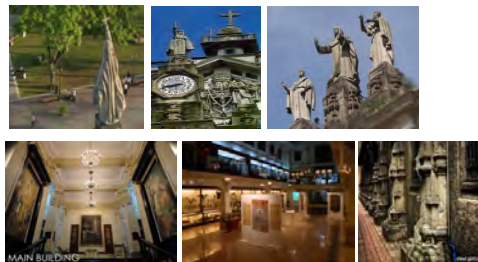


Figure 12 -The 40 separate structure



Figure 13-Heritage Icons of UST

4. UST AT 400

In 2011, UST celebrated its Quadricentennial Jubilee in 2011 marking 400 years as the oldest university in Aisa and the Philippines from its foundation in 1611 by the Dominican Friars. The campus evolved over the years with addition of buildings and the landscaping of its master plan. As shown in the successive photographs below, the original buildings built circa 1611 were of the Spanish Renaissance Style complete with statuary as in the iconic Main Building (also F.L.Wright Imperial Hotel) whose silhouette is used in the university logo. The additional buildings in the 1930's followed the "Art Deco" style of the period. The 1940's period after the 2nd World War marked a period of reconstruction from the damages incurred at that time. The 1950's onwards saw the adaptation of the "International Style" which focused on building massing with the least of ornamental details. The long prevalence of the International Style saw a transformation in the 1990s with Post Modernism, a fusion of the modernist massing with ornaments from the classical styles with the College of

⁹ Tiburcio, R.A. (2007). Earthquake resistant: Structural features of the UST Main Building. *Thomasian Engineer Journal*, 47(2), 20-23.



Architecture Building as prime example. The trend continued on until the electronic design technologies brought about more sophisticated design and construction methods utilizing new materials as in the Cancer Center of the UST Hospital. A more recent addition is the UST Gym, a fully airconditioned massive structure sited in the right front side of the Campus facing Espana Avenue which highly impacts on the cone of vision of the campus frontage originally dominated by the Arch of the Century whose scale is now dominated by the new structure to its right.



Figure 14 – Buildings, monumnets and landscapes 1611

1927

1930



Art Deco

1932

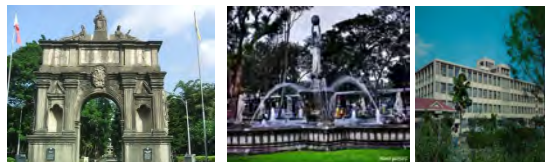
1932



End of World War II 1944 Liberation 1945

1950 International Style

1950



Old Arch

1956

1957

1957



Post Modernism 1990

1993

2006

2006



2011

In Progress 2013

2015



Aside from the architectural development impacts of global architecture of the design and planning of the UST Campus, a perennial seasonal problem that impacts on the life of the academic community at the Pontifical University is the recurring flooding that disrupts classes and at times leave students stranded. The flood problem at UST and much of Manila has unprecedentedly worsened in recent years as a result of a complex combination of environmental causes that are out of the campus authorities' intervention reach, such as global warming, siltation of the series of dams in Luzon whose overflow all lead to the Manila Bay, massive deforestation of the watersheds that free water to dam reservoirs, blocked waterways due to improperly disposed garbage and encroachment by informal dwellers, uncontrolled development in what used to be water catchment areas and other factors that interact to make the floodwaters deeper as ever before and taking much longer time to recede.



Figure 15- Recent flooding at UST¹⁰

5. UST CAMPUS A NATIONAL HISTORICAL LANDMARK

The National Historical Commission of the Philippines declared UST Campus as a National Historical Landmark on May 24, 2011. Four of the University's structures are also declared National Cultural Treasures by the National Museum: Main Building, Arch of the Centuries, Santissimo Rosario Central Seminary, as well as the Grandstand and its open spaces. UST is the first and only university campus to have been named a National Historical Landmark and the only learning institution in the Philippines as location of National Cultural Treasures.¹¹ Thus, the more we need to enhance rather than diminish the aesthetics and sustainability of the unique cultural environment.

5.1 Character The character of UST in its classical context as the oldest university in the country and continue to attract new students each year has to be protected and maintained in the context of the architectural eclecticism that may dissipate such character if not put in context of a long term coherent master concept that would be acceptable to all its stakeholders. The Master Concept proposed to achieve this end is the treatment of the UST Campus as a LIVING MUSEUM of ARCHITECTURE. This concept adopts the basic spatial organization of museums where the planning of the pathways how the "museum pieces" are viewed are designed in a flexible yet directed flow to ensure that the viewers obtain vantage points that best allow the art pieces to be seen and perceived three dimensionally. The concept of living museum highlights the fact that part of the awe generating views are the people of the community themselves as they are able to interact, the landscapes as they reflect the sun and shades and sway to the breezes; the landmarks, the building of the past, present, the near

¹⁰ Photos from Paul Quiambao

¹¹ Madrid, R.D. (August 11, 2011.). "UST, dineklarang 'national historical landmark'". *The Varsitarian*.

http://varsitarian.net/breaking_news/20110811/ust_dineklarang_national_historical_landmark. Retrieved August 12, 2011.



and far future seen not only in isolated perspective drawings but seen in real time in relationship with each other in time and space.

5.2 Adaptive Environment The concept of Living Museum is expanded to include the real environment and the acceptance that whether we like it or not the floods will come and the ability to prevent it is not in the direct hands of the UST Administration. It is therefore hypothesized that the way the campus addresses the “normalization” of its function despite and in spite of the environmental challenges such as the floods is part of the “exhibit of the “LIVING MUSEUM” Concept.

5.3 Preposition for a New Point of View An extreme inspiration of a water challenged place that has transformed a handicap into strength is that of Venice, Italy. Figuratively it is a good example of what we propose to develop as the Concept of A Living Museum. We call this example as an extreme one since the waterways of Venice are there for good and they also serve as the pathways of viewing and navigating this popular tourist destination. In the UST situation, we propose strategically routed pathways on two levels linking all the structures as the pathways in a museum would connect exhibition halls. During non flood periods, the lower level would be most utilized as they are shaded from the heat of the sun and protected from rains and drizzles. During flood periods the upper levels would serve as the all weather linkages keeping the campus alive despite the floods. But the proposed “New Point of View” does not stop there. But what if the floods linger on before and after classes. How will its population approach and depart to and from their own homes ?

Case 1. When the area is flooded before a class starts, how can the students go to the campus despite the existence of the internal bridges.. A long term solution may be associated with a proposal by the Philippine Government to establish a flyover along the perimeter of the campus fronting Lacson Avenue and a Metro Rail Transit (MRT) at Espana Avenue. Since the anticipated flyover and MRT Line are an elevated system, the proposed two level concourse of the UST “Living Museum” can be connected with a secure gateway to provide an all weather arrival and departure access to the campus even during the flood season.



Figure 16 –LRT at Espana Avenue and Lacson Avenue¹²

The district is Sampaloc, whose already dense population is aggravated by the daily influx of thousands of students who attend the University of Santo Tomas (UST), and other universities, Far Eastern University, National University, University of the East and other vast campuses in the University Belt. The Varsitarian, official student paper of UST, quotes

¹² Lacson-España flyover takes off despite protests By Augusto Villalon Philippine Daily Inquirer | Monday, August 6th, 2012



government officials in a report as justifying the project to “alleviate traffic congestion at this major intersection”.

Case 2. If the implementation of the MRT System takes a long period of time, as large projects normally do, a short to medium term solution is proposed as an alternative. When the area is flooded before and/or after classes are held, it is proposed that a more in depth study be made as to the closest area in the radius of the campus to identify the non-flooded staging area from which to approach the campus from various points. But how does one travel from this non-flooded node(s) to the campus over the surrounding floods.



*Figure 17 –Floating Bus*¹³

UST may pioneer investing in floating buses even ahead of the government. Its science and engineering schools may even tie up with institutions to develop it as its contribution to Philippine society. This technology is now being developed in the Netherlands.

6. CONCLUSION

In conclusion, the carrying capacity of the heritage historical University of Santo Tomas Campus in Manila hinges on two main parameters. First is the need for a conceptual approach to allow the university’s growth that would sustain the character of the urban building concept while ensuring that any and all additions will not in any way diminish the character of the whole.

The second parameter is that the new conceptual approach must integrate with it a long term solution to the perennial flood problem, of the campus that increasingly threaten its long term sustainability as the oldest educational institution of the country with a vision to embrace a visionary outlook of the future. This new point of view is summed up in the concept of a “LIVING MUSEUM”. A true to life collection of architectural heritage from the early to futuristic eras in a compact site which can be viewed from well studied vantage points that allow the appreciation of the edifices in relation to one another, providing a total time and space experience. The “LIVING MUSEUM” also shows how the current environmental phenomena can be faced not with a negative outlook associated with disaster, but with a new attitude to convert the handicaps to creative opportunities to develop conceptual solutions that

¹³ http://overheadbin.nbcnews.com/_news/2011/08/18/7408832-floating-tour-bus-launches-in-amsterdam?lite



would allow a normal containment of the perennial blocks to the smooth life cycle of the various sectors of the university 24/7, come rain or shine.

This paradigm shift of positivistic outlook that frees the Filipino mindset from the cognitive limitations of the term “disaster” needs more in depth study to jump start this leap of faith into guidelines for action. The concepts need to be expressed and illustrated in three dimensional walk throughs to show that the design of each structure must be in the context of how the served public would view it in a coherent and aesthetic manner as a departure from the old practice of individual building perspectives, The study needs to collect data as to how many more cubic meters of space can the Campus shelter without any risk to the loss of its strong character from the vantage point of all its stake holders. The analysis should bring forth traffic statistics of both pedestrian and vehicular components to determine how to elevate the flows and movements that the new concept intends to attain into the highest time efficiencies thereby justifying by the value gained all the effort of translating it to reality. Simply put, we propose a NEW POINT OF VIEW.

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Islamabad and the Development of the Architectural Identity of the Capital City.

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ABSTRACT

Islamabad is the first post-colonial modern city constructed in Pakistan. The designing of the new capital city allowed Doxiadis to fully express his philosophy on how cities of the future should be planned; a dynapolis. It provided the government a clean slate to build its new image as a modern young country of the world. The architecture and layouts of the city make no reference to past traditions, the planning, sector sizes, its buildings all are completely emblematic of a new era of modernity. Islamabad became a modern city devoid of any past history through the creation of a new urban fabric and architecture.

The focus of this study is the development of architecture of the city throughout its history, which embodies both the concepts of the modern city and the ideologies of subsequent political forces. The paper will conclude by analysing the current debate on the conflicts of cultural identity that the city faces; the tendency on the government level to find a "National Architecture" to represent the Islamic republic of Pakistan, and the construction of huge glass towers by multi-nationals representing global trends in corporate architecture.

Keywords: *Islamabad, Capital city, Modern architecture, culture, identity.*

1. INTRODUCTION: MAKING OF A CAPITAL CITY.

"It is not easy to plan a new city, for with every line that we trace we commit the life of the city for many generations, or even centuries to come. It is still more difficult to plan the capital of a nation, since the plans to be adopted in it will necessarily become a model influencing several other cities of the same nation."(1)

In 1958, Field Marshal Ayub Khan, President of the Republic of Pakistan, started the project for the design of a new capital city for the country, as the pre-independence capital city of



Delhi had remained with India. This new city was envisaged to celebrate the post-colonial success of the newly independent Pakistan and would help build its new image as a modern young country of the world. The Capital City was also to reflect the cultures, traditions, hopes, and aspirations of the diverse ethnic, linguistic and regional groups of the Pakistani nation. A commission was accordingly constituted in 1958 and entrusted with the task of selecting a suitable site (Fig. 1) for the National Capital.



Fig.1 The selected site for Islamabad..

Source;http://www.visitislamabad.net/islamabad/files/file.asp?pic_category=9&var=pic-gallery#

The new Capital was conceived and planned by Constantinos A.Doxiadis and Associates from 1959–63(2). Islamabad as the first post-colonial planned city constructed in Pakistan, represented a blank slate; *tabula rasa* for the government and indeed for Doxiadis; the planner to fully express the idea of what the future city should embody. The new capital was named 'Islamabad', meaning 'the abode of Islam'.

Islamabad was born from the inspiration and imagination of an age, the subsequent developments of the city may be assessed by studying its architecture, in different eras that helped to shape it. All of these survive not just as objects but as important documents of the city's history and culture. How the architecture of the city developed and where it stands today are important milestones in the chapters of its history.

2. THE MASTER PLAN AND THE DYNA-METROPOLIS CONCEPT.

Doxiadis was an architect and urban planner, who had developed a modern concept of planning, called the 'cities of the future (C.O.F.)'. This was a perpetually revised frame of urbanization reference, which was not finite, but supported continual growth of the city. This model was thus thought to be always valid for a metropolis of any size. Doxiadis' concept of the 'dyna-metropolis', based on the C.O.F. studies, proposed the possibility of continuous linear expansion patterns with the least possible adverse effects in the functioning of the Metropolis. This concept was thought to be the answer to the expected growth of cities of the 20th century.

The planning and layouts of Islamabad as a grid-iron were dictated by modern planning rules and Doxiadis was convinced that, " *The circular shapes must be transformed into*



squares and rectangles. This is due to the fact that an ideal city should be built on the basis of a rectangular grid system of roads. It is quite out of the question for the rational way of building a city to be based on any other system of roads than that of a rectangular network.”(3). Doxiadis identified a sector as the basic modular unit of the city. Thus, changing the modern city from a city of blocks (New York) to a city of sectors, all of which were planned as self-sustaining units. Doxiadis designed a ‘formal’ grid of 2000 x 2000 meters (a sector) dividing the entire site area. He claimed that ‘this pattern forms a modulus in the town and keeps a unified scale in the whole metropolitan area’(4).

Based on expected directions of expansion, the city of Islamabad was grafted onto the old city of Rawalpindi, these together with the National park area made up the Islamabad Metropolitan Area. The physical form of the city took a triangular shape with its apex towards the natural landscape of the Margalla hills and spreading linearly SW in a parabolic form along the existing cantonment of Rawalpindi. The master plan area, measuring about 910sq. km, was based on the principles of possible and probable population distributions according to existing urban development, main transportation axes, and availability of habitable land (Fig. 2). Three major highways defined the basic form and layout of the metropolitan area; the Islamabad highway, the Murree highway (now the Kashmir Highway) and the Soan Highway. The new capital was essentially for the motorist and high speed and middle speed roads divided the basic units of the city. The master plan left 600 ft between two sectors. Major highways were 1200ft, to allow expansion of roads. Principle roads were 600ft, subsector roads were 100 ft and internal roads 50–80ft. A rapid transit system was also planned in the future to connect the twin cities.

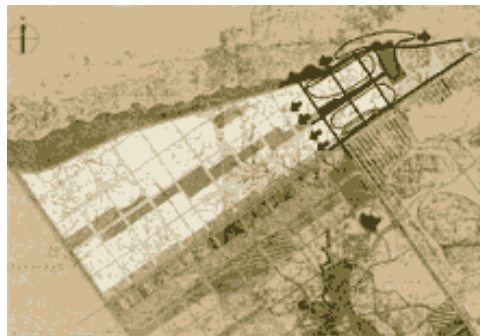


Fig. 2. Islamabad; The concept of the Dyna-metropolis.

Source: http://www.doxiadis.org/files/pdf/Islamabad_project_publ.pdf

Based on studies of the scale of cities by Doxiadis, the volumes, heights, densities, and floor indices of the buildings of Islamabad, were specified for each particular sector. This study led to concrete proposals for the public-buildings area, the layout plan of which was designed to harmonize with the buildings of the administrative sector opposite the public-buildings area. “Planned for the future and built for the present”, the Metropolitan Area of Islamabad a “Dyna-metropolis,” presented many advantages of self-sufficient neighbourhoods with the intelligent provision of spaces for play and social interaction,



controlled and uniform growth patterns, expansion of residential and commercial areas according to need.



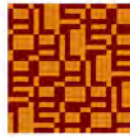
Fig. 3 View of the Islamabad from Shakarparian hills. *Source : Author*

The cultural landscape of the new city of Islamabad had to carve out an identity of its own (5), lying in between; the two political dualities of Martial Laws and democracies. Ahmad Zaib Mahsud points out, that the process of design had to confront these dualities (6) of 'Tradition' and 'Modernity', as a capital of a new country with centuries old culture.

3. ARCHITECTURE OF ISLAMABAD

Doxiadis' planning and the aspirations of the government of a young country, made Islamabad a modern city, and any references to the past history were avoided. The new era planning was also strongly reinforced by the modern architectural styles of the city's major buildings (Fig. 3). On the urban planning side, the city made no reference to past traditions and was completely emblematic of a new era of the modern machine aesthetic. The new urban fabric did not relate to traditional streetscapes, it banishing the organic street patterns and open courtyards enclosed by buildings and all other references to traditional spaces and replace it with gridiron planning where sleek government buildings were surrounded by massive open avenues.

The meticulous urban planning & architectural designs conceived by Doxiadis and subsequent designing of major buildings by a host of international architects (Edward Stone, Kenzo Tange etc.) pushed the architecture of the city towards modernity, however the efforts of subsequent governments to keep the architecture of Islamabad, Islamic and nationalist gave rise to the current debate the city faces; a conflicting dualities of identities based on its varied architectural styles. The paper discusses the development of architecture of the city throughout its history, which embodies both the concepts of the modern city and the ideologies of subsequent political forces in order to understand the current scenario and suggest future directions.



3.1 Architecture from 1960–1969:

Unlike some other new capital cities (like Chandigarh, Brasilia, Dhaka), Islamabad does not bear the stamp of a single architect. Many international architects like Robert Matthew, Gio Ponti, Alberto Roselli, Edward Stone and Kenzo Tange have been involved with major public buildings. The first development in the city produced some of the finest buildings. The secretariat blocks by Gio Ponti (Fig. 4) prompted Kamil Khan Mumtaz to call the complex of buildings as a most successful arrangement of a group of buildings into a well integrated unity (7).



Fig. 4 Government Secretariat buildings.

Source: <http://archnet.org>



Fig.5 President's house complex.

Source: <http://images.search.yahoo.com/images/view>

While some designs courted debates among the architects and the government, the design of the prestigious President's house complex was one of them. Due to the governments' perception of the parameters of design, it exchanged hands among three major architects; among the rejects was the distinguished Louis Kahn (8). C.D.A. (*Capital Development Authority*), wanted Islamabad's public building designs to reflected 'our cultural past'. This was deemed to be best reflected in the proposal designed by Edward Durell Stone (Fig. 5) initially topped by a dome, which was later removed. Making the design of the Presidential complex starkly familiar to another of Stone's more celebrated project; the Kennedy centre for the Arts, Washington .D.C.

3.2 Architecture from 1970–1979:

The post-independence generation saw an increasing number of architects from Pakistan like Yasmin Lari & Habib Fida Ali in Karachi, Javed Najam in Lahore and Anwar Said from Islamabad going abroad for studies to the west, due to lack of local institutions. They returned to set up successful practices which often produced highly original styles of work, combining western architectural theory with vernacular traditions. Anwar Said as chief architect at the C.D.A., designed a large number of public and community buildings (Fig.5). He was able to effectively produce modern architecture within the Pakistani context (Fig. 6). PEPAC also constructed some of the most successful buildings of Islamabad including the NAFDEC cinemas and NWFP house. The designs were original, sensitive to the context and of a high architectural quality. In stark contrast the works of some foreign architects in the



city seemed alien to the environment and the culture. But according to K.K. Mumtaz (9), the finesse of these buildings and the status attached to the architects made these 'models' of great architecture and inspirations for other architects to follow.



Fig. 6 Institute of Folk Heritage, Anwar Said, 1977. Source: Author

3.3 Architecture from 1980–1989:

During President Zia-ul-Haq's Martial law years (1977–1988), the State philosophy of Islam controlled almost all aspects of life; culture, social development, and most importantly it was reflected in the architectural styles. The state as the biggest client for architectural and urban development projects implemented its own brand of Islamic/national architecture on the landscape. In contrast to the many buildings of this era, which had clumsy references to a bygone era, the Faisal mosque, designed by Turkish architect, Vedat Dalokay, very successfully translated a simple concept of a tent into a modern mosque shape (Fig. 7). The lines of the building were clean and fresh, reflective of a modern era in mosque design. The circular dome was redefined into the pyramid like roof, while the four minarets alluded to a classical composition but their shapes were modern and simplified.



Fig. 7 Faisal mosque, Vedat Dalokay, 1984. Source: <http://www.nationalcapitals.net>

While many later buildings of the city degenerated into a conglomeration of various styles of architecture, all of which never seemed to match up to original design concepts of Islamabad.



3.4 Architecture from 1990 – 1998

The first batch of locally trained architects including Sohail and Pasha had established their practices in the city since the 70s and had established their own signature style which was to give the city its first taste of critical regionalism. Architect Nayyar Ali Dada was among the early graduates of local institutions, he initially developed a valid architectural style for the post independence city of Lahore, and later brought in his established style of architecture into the design of the O.G.D.C. (Oil & Gas development company) Islamabad, using tile decorated facades materials and strong octagonal geometry.

The design of the supreme court of Pakistan building was initially awarded to maestro Japanese architect Kenzo Tange. While, Tange's proposal reflected his personal vision, the government proposed multiple changes based on an Islamic persona of the building. Resultantly, the supreme court building underwent so many stylistic changes that it became a paradox as it tried to combine too many elements (Fig. 8).



Fig. 8. Kenzo Tange & Assoc.(Japan)+M/s PEPAC
Source: www.lawonline.com



Fig. 9. PM's Secretariat, 1997.
Source: www.urbanpk.com

Another government sponsored building was the Prime Minister's secretariat building on constitution avenue. This was locally designed and closely monitored by the government. The Prime Minister's secretariat building displayed the classic dilemma of architects of Islamabad that it tried to emulate historic architecture without sensitivity to the context or the era. The design was an attempt to recycle the Mughal glory days, but the towers and turrets seemed out of place in the 20th century administrative building (Fig. 9).

3.5 Architecture from 2000 to 2010.

A result of decades of political decisions and policies as well as the puritanical orientation of the ruling elite, gave way to many governmental efforts to invent pseudo-historical symbols. One such project was the construction of the National monument at Shakarparian hills overlooking the city (Fig. 10). The National monument was dedicated to the nation and the blooming flower shape of the monument was meant to represent the ethnic composition of the provinces, while the design of the monument was exemplary but it remained overshadowed by the need to gratify nostalgia and to create interest for tourism.

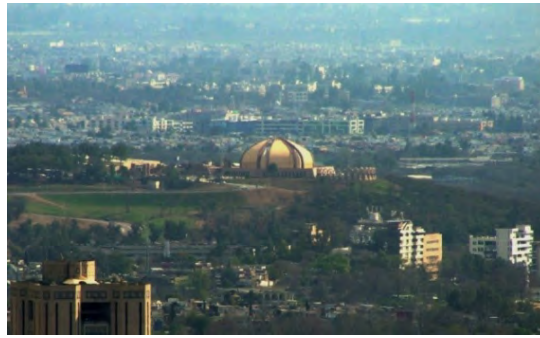


Fig. 10 National Monument, Shakarparian, 2007.

Source: Reproduced with permission of Arif Masood.

The era of political ‘enlightened moderation’, 1999 to 2008, produced two very important buildings; the National Monument and National Art Gallery in Islamabad. Both designs were culmination of nation-wide design competitions, and were awarded through juries, both showed fresh trends in designs that responded to the contextual landscape. Messrs Suhail and Pasha was selected for the design of the National Art Gallery (Fig. 9) in 1989. The Gallery was completed in 2007, it was meticulously designed to respond to the site and culture. The gallery became a symbol of creativity in the modern era and avoided the usual clichés of traditionally emulated arches and Mughal elements.



Fig. 11, National Art Gallery, Sohail & Pasha , 2007.

Source: Author

The building of the Centaurus hotel and apartments (Fig. 12) herald the rush towards a more corporate sponsored style of architecture. The Centaurus buildings and the telecom towers (Fig.13) in Islamabad have truly bought the architecture of Islamabad into the 21st century. It is a more global architecture witnessed in the city since its first modern buildings of the 60s.



Fig. 12 Proposed project of Centaurus Hotel, Aitkins Assoc.

Source: [http:// www.skyscrapernews.com](http://www.skyscrapernews.com)



Fig.13 Telecom towers, 2010

Source: <http://forum.xcitefun.net>

4. ARCHITECTURE AND CONSTRUCTION OF CULTURAL IDENTITY OF ISLAMABAD

Discourse about cultural identity of Islamabad has to start from recognizing that it was conceived as the ultimate tabula rasa (blank slate), for a genuinely new beginning, for a young country. Subsequently, the city has developed a character, as a repository of elite and state power and less as a site of individual and collective memory or history. Its lack of a strong identity stems from the fact that the city has been used by subsequent political forces both democratic and dictatorial to imprint their own brand of values on the built environment; religious, nationalistic and liberal. These inconsistent and conflicting philosophies has left the city without a clear or coherent identity. The varying architecture of Islamabad reflects its still evolving identity, struggling between borrowed modernity and recycled Islamic traditions. The creation of national identity, in itself a complex issue, was and still is an important policy matter on the official agenda.

From its inception, the city saw an influx of foreign architect which effectively subdued the dynamic interplay between local creativity and changing contemporary conditions. Local architects found themselves pressured into following the aesthetics of acceptable international styles and taking up supporting roles to foreign architects in order to stay commercially viable. As a result the nascent experiments of local architects in “appropriate” modernity were prematurely curtailed. A lot of the government sponsored buildings in the 80s and 90s added to the very mediocre architecture of the city. These seemed to be built in a vacuum, neither responding to the context or any known architectural style, adding to the long list of uninspiring and clumsy buildings of the capital. Many employed arches indiscriminately, not paying attention to scale or the climate, while others were box-like with no break in their mass, monotonous and huge in scale, not relating to the man-made or natural surroundings. Still, some architects tackled local and regional issues in architecture giving rise to critical regionalism which could neither be branded as international nor as a folkloric concept of architecture. Their references to the concept of regionalism mainly focused on the relationship of a building to its site and location in a sustainable sociological context. The use of brick and reinforced concrete, in the projects, signalled a formal



continuity with traditional architecture. This work can be considered emblematic of an architecture that is "appropriate to societies."

5. CONCLUSIONS AND DISCUSSIONS

Our architectural professionals and students are more familiar with building designs that are published in western architectural magazines than with those built in their region. This influence has resulted in an acceptance of the indisputable dominance of global/corporate architecture of the U.S., Europe and now the Middle East, and given rise to the thinking that such styles are appropriate for Islamabad. The city, in emulating these precedents, thus aspires to a secondary global city status. The globalization of architecture has produced buildings which are repetitive, uninspiring, economically expensive, ecologically catastrophic and culturally disjointed. Buildings in Islamabad which follow this model, display unresolved conflicts between globalization and regional diversity; they are economically costly and ecologically destructive to human communities. In view of Islamabad's conception, a legitimate starting point for modernity would be an architecture which responds to the context; where "appropriate" materials and technology are present in the buildings and the appropriateness of "place", is present. The more appropriate buildings constructed in the city make use of construction materials that were not imported, and intermediate technologies that were already in common use in the region. The designs explore critical regionalism by designing buildings low to the horizon, near to human scale and retaining the natural environment of the city.

Architects should once again embrace architecture which is sensitive to the context, in a manner that reflects realistically the conditions of the region, its socio-economic conditions, and its lack of sophisticated technological resources. The aspects of modernity taken in by our architects should be "appropriate," that is, suitable to local conditions, and should also be "appropriated," that is, taken over and remade to meet local needs. The new architectural schools setting up in Islamabad and Rawalpindi, could play the crucial role of academic training and discourse in this regard. Thus producing a new breed of Architects, who are firmly anchored in local cultural contexts as well as in modern technological solutions. The challenge is whether architecture in Islamabad can be redefined in this new millennium beyond the constricted perimeters of Western-centric modernism or Islamic-styles. The new generation architects will hopefully, in the midst of 'new wave of modern architecture/deconstructionism etc.,' find an architecture which focuses on local needs and culture, with the aim to achieve a long-term environmental quality and sustainability.

ACKNOWLEDGMENT

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Sustainability in architectural and urban design from theory to practice

Reinterpreting works of maestro of modern architecture in Asia

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ABSTRACT

Even if architects of the modern movement were better known as promoters of an anti-historical and anti-contextual approach; in reality, “modern architects” were always giving attention to some aspects of sustainability, especially that ecological one. Unfortunately, the ecological character of modern architecture has never been studied with an adequate importance: in fact, most studies on the modern architecture and on the built environment in general were conducted to focus on production and architectural forms of project, neglecting all other aspects which are considered “secondary”. This thesis will make a new balance in the interpretation of modern architecture by considering the ecological component as a catalyst of form, of innovation, of change or contradiction in architecture. Many works advanced by masters of modern architecture, including those of Le Corbusier, Louis Kahn, Frank Lloyd Wright, Bal Krishna V. Doshi, in different countries of Asia were chosen to be “read” again with this new criteria and they reveal us many surprising and interesting lessons for all architects working in and for Asia.

Keywords: *Sustainable Architecture, Sustainable Design, Low-tech Architecture, High-tech Architecture, Green Evolution*

1. SUSTAINABILITY & ARCHITECTURE

1.1 A Consideration on Sustainable Architecture

The definition of “sustainable architecture” requires a multidisciplinary approach involving also a socio-economic and environmental elements. In the specific field of architecture, terms such as *sustainable architecture*, *ecological architecture* and *green architecture* are often misused to indicate a way of making that architecture sensitive to the natural environment. It is therefore necessary a clarification of the term itself when we speak about



sustainable architecture as a response to a series of urgent questions and problems. The American scholar Panayiota Pyla identifies three approaches to sustainable architecture [1]:

- From the technical point of view, the architect shall consider sustainability as an opportunity for a general review of the internal priorities of their profession in order to promote green technology, the use of efficient energy and to expand the possibilities for new partnerships with environment scientists and engineers.
- In the socio-political context, the sustainability involves the implementation of social policies, urban dynamics and regional policies that directly affect environmental change. Many schools of architecture and development organizations adhere to this “*modus operandi*” integrating social, cultural and economic conditions in the issue of environmental sustainability.
- In any case, the concept of sustainability introduces a new aesthetic for architecture, enriching it with renewed meaning and purpose. The overcoming of a certain vision of modernism led the operation of new practices that mark the birth of environmental awareness, from which arise new architectural scenarios and a wide variety of architectural experiments.

There are many definitions of sustainable architecture (and of sustainable design). The design of sustainable architecture, in general, aims to achieve an urban and architectural environment meeting four requirements: comfort, energy saving, use of local resources and durability. Sustainable architecture is required to comply the needs of the present without compromising the ability of future generations to meet their own needs. At the same time it is asked to respond to the requirements of a multi-cultural society, preserve the tradition and identity of individual which is now under the pressures of globalization. Not only that, the action of the environment should be thought of in long-term and allow the coexistence of all people in the same environment. The search for a “durable time” is one of the preconditions of the sustainability and, not surprisingly, in the French language the term *sustainable architecture* is translated into *architecture durable*.

Sustainable architecture studies, interprets and activates the transformation of the territory compatibly with the biophysical dimension of the socio-economic systems. It aims to design new *organisms* (landscapes or buildings) and to participate in existing ones with a careful analysis of the relationship between artificial, natural and social systems in order to adopt the best strategies to manage and trigger future changes of the territory. It is therefore a *complex* and *all encompassing* concept that takes into account the civil, cultural and technical implications of architectural design. It is not to provide “a prescription of good manners” of architecture, but to spread a new and invigorated awareness of social, technical



and cultural value of project of architecture, today perhaps the only chance for a civil redemption of architectural research.

Sustainable architecture is the combination of traditional and innovative character of architecture: it is “understanding the nature, [...] properly placing buildings and facilities, taking advantage of the light and the wind” [2] in order to “secure new rights – the right to access to the sun, to the use of energy, to health, to democratic participation in general – and to determine new and different standard of living, of healthiness, of comfort within the different parameters of time and space which are dictated by the globalization of information and goods, by rapid motions and by the generalized and stratification of different cultures and at the same place at time” [3]; sustainable architecture is intended to understand rather than to explain, to study rather than to know and to seek instead of finding the truth and if the conception of the future is not purposeful, that the past must be operational [4].

Sustainable architecture is “*the balance as possible!*”

1.2 Sustainable Architecture – A Brief History / A Development Path

The study of the formation and development of sustainable, or better, of architecture for the sustainability, can identify between the theory and practice of architecture those tendencies oriented towards the “green evolution”.

Although it has become a topic of international architectural debate only from the nineties of the twentieth century, in reality, sustainability has always been a major issue of humanity and architects. If we have to track down the roots of sustainability within architectural culture, we can find in the treatise of Vitruvius, written around the year 25 BC, good advices on how to avoid wetlands and protect buildings from the prevailing winds. Renaissance treatises of Alberti, Serlio and Palladio, confront ecological issues in a mutually dependent with style and composition. In the pre-industrial period, constructors of Anasazi Pueblo in Chaco Canyon (New Mexico) worked on a heritage of knowledge based on the concepts of passive solar and thermal mass, strictly orienting buildings to the south and expanding their hemicycle solar structures to allow the passive thermal diffusion [5].

Towards the end of the eighteenth century, following the introduction of the steam technology in the industry, the harmful impact on the environment caused by the rapid and uncontrolled urbanization becomes increasingly evident. Because of the industrial revolution man’s life underwent drastic changes in all its dimensions and gradually defined new social/living models. As a result, the ecological wisdom of the local builders almost disappears. It is in this context that, in the decade after 1860, two fundamental terms were



introduced. The first is that of *entropy*, formulated in 1882 by the German physicist Rudolf Clausius “to define the dispersion of material and energy according to the second law of thermodynamics. Over the last two centuries, with the advent of modern industries and metropolises development, the entropy has increased exponentially. [...] According to some theories on sustainable architecture, the buildings, the materials they contain, their production processes and efficiency should be evaluated in terms of how much they increase or decrease the entropy” [6]. The second term, *ecology*, proposed by another German, zoologist Ernest Haeckel, assumes a more widely symbolic function in the architectural culture. Starting from the expression of Darwin *the economy of nature*, Haeckel comes to the word “home” (in Greek *oikos*) to define the order of the natural world. This metaphor of architectural origin assumed that the relationships between organisms in nature correspond to the organization in the cooperative sense organization of a well managed house. Haeckel also had a considerable influence on art and architecture with his masterful watercolour illustrations of microorganisms, sea creatures and wild animals, which were published during his life, and collected by him in a hundred tables in *Kunstformen in der Natur* (Art Forms in Nature). The organic forms of *Art Nouveau* in the works of Victor Horta, Hector Guimard and Antoni Gaudí were the artistic correspondent of scientific illustrations of Haeckel [7].

During the nineteenth century until the nineteen-eighties, the ecological issue has progressively assumed an increasing role in the architectural culture. In fact, many architects and architecture schools have inclined towards this “trend”: among them we remember, for example, the Scottish architect Charles Rennie Mackintosh for his very sensitive buildings to the environment; the first model of sustainable city of Ebenezer Howard; the search for a human standard of Finnish school and that for a *good* architecture based on a strong relationship between tradition and innovation of the Amsterdam School and many others. Emblematic in this regard, a comparison of the work of two great architects, Frank Lloyd Wright and Le Corbusier. If both of them were young, they are left themselves to absorb the romantic mission of Ruskin and *the Art and Crafts Movement*, subsequently they develop personal theories on the intrinsic role of industrialization in the production of modern architecture. Despite the apparent dependence on the industrial culture, Wright and Le Corbusier are both to be considered as “proto-ecologists”: the first devoted his life to organic architecture and the second has fought for his “green city”. Wright proposed to build “in the nature”, Le Corbusier “over it” [8]!

Between the last decades of the twentieth century, thanks to a number of initiatives (conducted also at institutional level), the issue of sustainability is addressed both in the discipline as well as in architectural practice and it is spreading all over the world,



particularly in Europe and North. 1992 marks the turning point with two events that, on an international scale, pose sustainability as the central issue. At the institutional level, Rio de Janeiro hosts the *first World Conference on Environment and Development*, in which it was stretched out a development program for the twenty-first century, the *Agenda 21* – action plan projected into the twenty-first century for the realization of development sustainable. The second major event was the Universal Exposition of Seville: for the first times in the history of architecture, the bioclimatic design was internationally focused. The Expo '92 declares the birth of sustainable architecture, marking the first milestone of its long path of development. From this moment, sustainable architecture starts to be known and it's establishing for itself a recognizable identity in the architecture's history. It continues to "open out, hybridize, expand from strictly disciplinary boundaries to become manifest a renewed ethical attitude" [9].

The second part of this essay is an attempt to re-examine the ecological character of the most representative projects of modern architecture's master. The interpretations will be performed with particular attention to the works in Asia. Protagonists that do not belong to the Western world will be also be studied, such as Hassan Fathy, Abdel Wahed El Wakil, Rasem Badran, Balkrishna Vithaldas Doshi, Ken Yeang, etc. for their attempt to seek alternative ways to design more sustainable, even before the term sustainability was recognized officially and publicly.

2. RECONFIGURE MODERN PROJECTS – THE PIONEERS OF THE "GREEN EVOLUTION"

For their inter-connection, tradition and technology are identified as the two interpretative parameters for the study of the ecological character of the selected projects. The process of reading is carried out here aims to build a "network connections" of architectural models that recall the definition of ecology and sustainability, understood as the interrelationship and balance between living beings and their surroundings environment.

We are mentioning first of all **Frank Lloyd Wright** who, in some sense, can be defined as a traditionalist architect. However, rather than inspired by a local tradition, the organic architecture of Wright, in many projects, shows an adaptation and declination of the Japanese tradition to the specific climatic conditions of the United States – just look at the designs for *A Home in a Prairie Town (Prairie Houses, 1900–03)*, which are definitely a clearer demonstration. From the perspective of ecological and sustainable, the *Prairie Houses* are exemplary for the way in which they deal with the issue of environmental awareness: the wide eaves creates a shadow for the "outdoor room" of the house which



combines interior space with external ones, thus favouring a spatial continuity, and at the same time, preventing the increase of heat inside; the prevailing presence of wood, material with low embodied energy, in the construction demonstrates a profound knowledge of the nature of the materials, and finally, the lack of a basement avoids aggressive impact on the ground. In the organization of the interior spaces, distributed according to the optimal orientation in a elemental volume of plan but very articulate in the division between the spaces during the day, it is obvious an optimal use of climatic factors to heat or cool any room in which “any domestic activity is summed up in a report “box to box”, a kind of sequences cellular” [10].

Later, in search of authentic American style, of an appropriate architectural language and identity, Wright works on projects that, from the environmental point of view, exceed the results previously achieved even without making explicit reference to a antecedent vernacular model. We can cite such as: *the second home for the family H. Jacobs in Middleton, Wisconsin* (1943), *Taliesin West* (1938–59). In Japan, Wright was able to realize some buildings of which the most significance is certainly the *Imperial Hotel* (1915–23), which is unfortunately demolished in 1968.

Aside the approach of Wright, **Hassan Fathy**, one of the best known exponents of the low-tech, followed a personal architectural trend that comes from a thorough understanding and knowledge of the culture of his country, Egypt, and began to study the vernacular prototypes in order to seek the reasons for the thermal efficiency in the absence of mechanical systems. Although he is known outside of Egypt for his book *Architecture for the Poor* [11], in which he “describes the attempts carried out to teach the ancient techniques of construction with mud to poor villagers, in order to give them a job and to encourage the construction industry to use less imported materials and technologies, such as reinforced concrete” [12], in reality, Fathy has built more than fifty projects, which are a real valuable “archive” of traditional knowledge, aimed at improving of climatic conditions through what he calls “appropriate technology”.

The reinterpretation and the use of the ancient traditions of the buildings constructed in mud brick and of local knowledge on passive cooling in buildings make Fathy one of the proto-sustainability experts. His most famous project, the village of *New Gournia* in Luxor (Upper Egypt), only built partially in the period from 1945 to 1948, can be interpreted as an all-round version of the concept of sustainability, because the technical strategies, from the choice of materials to the energy efficiency measures, have been integrated with socio-economic status thanks to the close collaboration between local craftsmen and architects. The use of mud bricks has not only minimized the energy embodied and facilitated the passive cooling of buildings, but also drastically reduced the cost of construction.



For his contribute to the spread of a new social and environmental conscience in Muslim contexts, Hassan Fathy was awarded the Aga Khan Award for Architecture. After his death in 1989, there has been an extensive speculation about the survival of his principles and the possibility of a successor to perpetuate them. In this context, it was emerging figure of two new traditionalists: Abdel Wahed El Wakil and Rasem Badran, two of the most representative members of the School of Islamic architecture at this time.

El Wakil worked in Fathy for five years and this experience has been a fundamental basis for his career. El Wakil adopted many of the practices studied from Fathy, such as the use of local artisans or traditional techniques. However, El Wakil is able to extend the “Fathy’s architecture” beyond Egypt to reach Saudi Arabia and Kuwait. It is these two countries that have provided most of the commissions to El Wakil. Among the best known works of El Wakil, one should remember: the *Halawa House* (1975) in Agamy (Egypt), with whom he won the first Aga Khan Award in 1980; the small mosques, including the *Mosque Island* (1986) and *Ruwais Mosque* (1989), along the Corniche near the Red Sea, as part of a beautification plan that transforms Jeddah from a medieval enclave surrounded by a defensive wall in a new urban model for all of Saudi Arabia; and the contemporary Arab courtyard town house for *Farouk Sultan* which is considered by the University of Durham in the UK as an example of environmental design.

Rasem Badran lives in Jordan and even though never worked for Fathy personally, he promoted Fathy’s ideas to a larger scale, and overlapped them with other modern strategies. As the result, Badran has developed an approach to the question of “appropriation of tradition” in a completely different way to that of Fathy. This approach is due to his architectural training in Germany, and in fact, Badran is more “systematic” than other architects of his region in the study of the adequacy of the models inherited. The assimilation of the regional patterns of each of the areas in which he worked gives his architecture a great authority and a sense of inevitability that is missing in the attempts of those who merely copy the shapes without exploring the functional hierarchy and the meaning that stands behind the conception of forms.

His studies are started with an analysis of the processes of urbanization based on complete observing of the existing fabric in order to better explain it to he himself and to others. In this way, he is very close to the definition of Fathy where tradition is read as “the social analogy of personal habit”, which expires fading once it ceases to be viable and useful. Badran describes this approach as a “dialectic method” of investigation, and he sees it as related to a series of interrelated factors, including social, cultural and environmental issues. But Badran does not stop at the study the process of urbanization of the city where he works, he also puts it in comparison with the urban growth of other cities in the region in



order to find points of similarity and difference. As a result, his design is contemporary in appearance, but historically and culturally sensitive and specific, as well as ecologically measured. Projects such as *houses in Sana'a in Yemen* (1983) and the *Palace of Justice in Riyadh* (1992) clearly demonstrate his approach.

Unlike traditionalist architects who “upgrade” architecture of the place, or the principles of organic architecture of Wright which structures the space and shape of the building adapted to climatic conditions, the architects of the Modern Movement and movements that were inspired from it promoted an anti-historical and anti-contextual approach but attentive to some aspects of sustainability. Within this group, it was always a great concern for the “problem of health in terms of the pursuit of environmental quality overall” [13]. In this direction, the architects perfect the study of solar geometry, determine optimal distances and orientation of buildings to ensure the highest possible quality of natural light on different facades. In this regard, one should remember the research Gropius on orientation, height and distance between buildings according to the natural light; the theory on orientation of buildings proposed by Rey, Barde and Pidoux (1906–20) based on the principle of solar-thermal axis; the research of Alexander Klein (1936) on housing in relation to the solar geometry; the research done in the forties by Hilbeseimer and Irenio Diotallevi in collaboration with Franco Marescotti on orientation and building type, density and urban fabric; and the research on *equivalent solar orientation* following the hygienist principle of Italian architect Gaetano Vinaccia (1946–52) [14].

In this context, the figure of Le Corbusier is an interesting case to be investigated.

In the research on orientation of the buildings, around the 30s, Le Corbusier theorizes the abandonment of *rue corridor*. His vertical garden city, the *Ville Radieuse*, offers an alternative to the traditional urban property. While in the traditional city buildings are imposed an orientation based on the run of the road network, the propose of Le Corbusier places them in relation to solar radiation, allowing all the inhabitants of an equivalent number of hours of sunshine. Also the system of public urban spaces dissociates from the road network and becomes an urban space with trees, healthy and oxygenated. But Le Corbusier was not limited to refine the orientation of buildings according to the needs of sunshine, he was also able to interpret the natural components like the sun, green, shadow etc... in the architectural forms (the *pilotis* that raise buildings minimizing the impact on the ground and the ground is therefore transformed in a great unique park; the adoption of the curtain-wall to “provide the essential joys of sun, of space, of green” [15] and hanging gardens that extend along the entire top of the building *a redents*; the invention *brise-soleil* – an architectural element for environmental control and passive exploitation of solar energy). They were key elements in the creation of many projects of Le Corbusier, from



urban scale to the architectural scale. Among these, we remember in particular, the *Tour des Ombres* (1960–65) – a project in which Le Corbusier has obtained a remarkable achievement in relation to the environment control using the same elements as above. The Italian scholar Marco Bovati, in his research, does not spare words of praise exalting this building, describing it as a prismatic volume 3 storeys high that the fourth level undergoes a rotation of 45°. Completely open on the north side, the others are shielded from sunscreen in concrete – horizontal on the south façade and vertical on the east and west side. Behind the architectural choices, there is a detailed study of the movements of the sun, aimed at the creation of the play of light and shadow in a climate controlled environment. The result is an open lobby, very tall and shaded that creates an atmosphere of invitation to meditation, an original and innovative public space, a place of extraordinary poetry space” where “light and shadow create a musical rhythm giving meaning to the space”. In fact, the *Tour des Ombres* has no precise function, “its sole purpose is to interacting man with space, light and climate [16].

During his career, Le Corbusier, on one hand, fully represents the principles of modern architecture including the denial of the context and history. On the other hand, many projects of Le Corbusier show a sensitivity to the place, which, through its social and cultural memory, constitute the ecological basis of the architectural solution – an approach very similar to that of the traditionalist architects previously investigated. In fact, unlike the purist villas in the twenties, which turned out to be quite inefficient in terms of energy, in later works such as *Maison de weekend* (1935), “*Roq*” et “*Rob*” à *Cap Martin* (1949), *Mill Owners’ Association Building* (1954), house for Mrs. Manorama Sarabhai (*Villa Sarabhai*, 1955), *Maisons Jaoul* (1952–54), *Villa Shodhan* (1951–56) and buildings in capital area of Chandigarh (*Palace of Justice*, *Secretariat Building*, *Palace of Assembly*) built between 1952 and 1961. In this phase, Le Corbusier detached from the machine aesthetic to propose architectural solutions more sensitive to the environment. He has also tried to realize efficient passive houses from the energy point of view. The “*Unité d’habitation*” in Marseille is a clear example of this reading: the building, built between 1947 and 1952 as a prototype of social housing, preserves the entire ground floor open into the green, includes a rooftop garden and has been designed to provide light and ventilation to each unit on both sides of the building [17].



Figure 1: *Tour des Ombres* (1960–65), *Mill Owners' Association Building* (1954), *Villa Sarabhai* (1955) by Le Corbusier. In these projects, Le Corbusier developed his architectural “vocabulary” in terms of Indian climate and culture by recognizing and exploring the correspondence between *parasol*, courtyard access, sun breaker and forms of Indian home.

As in the case of Le Corbusier, the ecological aspect has never been studied in the projects of **Louis Kahn** with adequate importance although in reality the environmental issue is many times mentioned by Kahn. In the description of *the City Tower Project* (1952–57), which unfortunately was never realized, Kahn writes: “the façades of a tower, ordinarily, are regarded as a problem in itself, irrespective from the structural system. But since they serve to protect from sun, wind and rain, they may reasonably be thought of as the generating element of a structure which is capable to accept and reject the sun’s rays, to strengthen again the storms: they turn to be an integral part of the design, contributing to the development of a higher order of structural design” [18]. Kahn was also very aware of the environment and climate of the place. In fact, looking at his works in different climatic conditions, such as the *Salk Institute for Biological Studies* (1959–65), the project of the *Synagogue Mikveh* (*Mikveh Israel Synagogue*, 1961–72), and *the Indian Institute of Management* (1962–74), one can find a wide range of environmental strategies that hide behind the very complex tectonic, essentially rationalist the social and climate conceptualism. In particular, the project for the office-residential complex of the Luanda US Embassy (1952–62) in Angola, considered as a great performance of Kahn on the environmental design, there is the reference to Le Corbusier: to reduce heat gain, Kahn has adopted many architectural solutions experienced by Le Corbusier in some projects in India, among which the most prominent feature was the use of the *parasol* and *brise-soleil*.

Looking at projects and constructions of the two masters of the Modern Movement in India, it is naturally directed toward the figure of Balkrishna Vithaldas Doshi – one of the first Indian architects working in the studio of Le Corbusier in Paris. After the positive experience accumulated during the period of work in the studio of Le Corbusier, on his return to India in 1956, Doshi began to work alone the profession of architect in the city of origin Ahmadabad.



In the sixties, he was a determinant in founding the *Faculty of Architecture at the University of Ahmadabad*. The building that Doshi designed to house the Faculty of Architecture (1963) is characterized by a dialectical integration of modernist materials and formal attitudes with the wide range of solutions derived from regional realities. The infallible instinct of Doshi in arranging the building according to the optimal orientation and his strategically positioning of wide openings on each of the long walls of the rectilinear envelope to maximize cross ventilation ensure a constant flow of fresh air through the studios, the public spaces and administrative offices of what is now one of the most representative buildings in India.

The second important task of Doshi is the design of the *Institute of Indology* at the same University (1957–62). The building, designed with an approach similar to that of Le Corbusier, but with limited use of materials, incorporates a very effective passive cooling. The basement of the Institute houses a collection of important manuscripts that require special atmospheric conditions. Doshi makes these conditions by creating a convective current through provisioning of a lawn on one side and a circulation on the other side of the building.

In 1962, Doshi has decided to establish the *Vastu Shilpa Foundation* – a centre for study and research of architecture. With his rich culture, Doshi tried to adapt the modernist principles to rapidly changing conditions and the extreme climatic conditions of different regions of his country. He paid special attention to improving the quality of housing for the low-income ranges, such as shown in *Aranya Low-Cost Housing Project* in Madhya Pradesh (1983–86), and to searching for new solutions against the oppressive climate of India using, for example, natural ventilation.

Doshi personal struggle to reconcile the glaring discrepancies that he found between the principles learned from one of the founders of the Modern Movement and the rudimentary construction methods in a developing country is perhaps resolved in the design of his own studio in Ahmedabad, called *Sangath* (1979–81) (in Sanskrit, it means “coming together”). Here, he operated an intelligent interpretation of “Le Corbusier’s methods” and transcribed them into a convincing rationale language – a perfect link between East and West, between tradition and technology. This building, which includes his studio and home of the Vastu Shilpa Foundation, is built on an area of over two thousand square meters located on the edges of Ahmadabad. Sangath is based on the first prototype *Monol* series. At Sangath, Doshi is committed in the extension of environmental strategies already introduced in the *Villa Sarabhai* by Le Corbusier, introducing the water running in the troughs between the semi-circular vaults (designed based on the principles of the golden section). These vaults are also positioned so as to allow natural light to enter each space. The optimal orientation and the decision to partial bury the complex make it energetically efficient. At the centre of



the complex there are some droughts containing water and covered with pieces of broken china. Vases and sculptures are scattered throughout the campus, which remind Indian handicrafts. Kahn, who has seen Sangath as the realization of a synthesis of modernism, probably after seeing the Sangath, decided to take the barrel vault of Doshi in the draft *Kimbell Art Museum* (1966–72) [19].

The conflict between growth and no growth, the debate focused on the *limits to growth*, the energy crisis and the alarming degradation of the environment from the sixties have brought humanity to the recognition of the concept of sustainability (1987). In this context, within the architectural culture, it has been developed different lines of thought and design proposals, such as: that of Edward Marzia who tried to incorporate in his buildings the “power” of solar energy; those underground buildings promoted by Malcolm Wells to better exploit the thermal mass and release the land for nature... More influential to the world of architects is definitely the trend of *high-tech architects* who believed in the scientific progress considering that technology could solve any environmental problem, no matter how serious.

The *high-tech* architecture [20], though it appears completely alienated from the natural world, is designed to provide maximum performance in terms of sustainability, works to overcome the inherent contradiction in the fact of proposing a high entropy solution to reduce the entropy. Although it was derived from the thinking American engineer Richard Buckminster Fuller, the popularity of high-tech architecture is due to British architects such as Richard Rogers, Norman Foster, Michael Hopkins and Nicholas Grimshaw. According to the critic James Steele, these architects can be defined as leader of high-tech architecture as well as a cohesive group for their stylistic direction and their unitary conviction that the effect of science and technology can reduce the ecological damage on the environment without interfering with the consumerist lifestyles and the worldview of modern man [21].

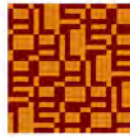
These high-tech architects have realized many building all over the world; many of them have become the landmark of the city of belonging. From the ecological point of view, we can mention for example *The Mound Stand* (1987) of the cricket stadium Lord's Cricket Ground, *David Mellor Cutlery Factory* (1989), the *Renovation of Bracken House* (1992), *Glyndebourne Opera House* (1994), the complex *Inland Revenue* (1992–94), and the new building of the *British Parliament at Westminster* (known as *Portcullis House*, 2001) of **Michael Hopkins**; by **Nicholas Grimshaw**: the *British Pavilion at Expo '92* in Seville and the *Eden Project* (2001); by **Richard Rogers**: The project to extend the *Palais de Justice de Bordeaux*, in France (1992–98), the *Mallorca Development Project* (1994) and the *Pudong Development Plan* for the city of Shanghai (1992–94) – two most human and contextual



urban projects of Rogers; by **Norman Fosters**: the *Willis Faber & Dumas Headquarters* in Ipswich (1975), the *Sainsbury Centre for Visual Arts* (1978) for the East Anglia University in Norwich, the *Hong Kong Shanghai Bank* (1985), the *Headquarters of the Commerzbank* in Frankfurt (1997), the *Greater London Authority Building* on the south bank of the Thames (2002) and the *Swiss Re Office Building* (2004).

The variety of design approaches of the high-tech architects shows a firm belief that the science still has the power to ward off environmental degradation. Conscious of the fact that science is a double-edged sword, high-tech supporters continue to look for new heroic solutions to the problems of the planet: very often the aesthetics of “eco-tech” of high-tech architects attempt to come to terms with the integration of appropriate traditional and sophisticated new technologies. Some attempts may be unsatisfactory; to be overzealous, while others show a more creative fusion of vernacular principles and materials with the high-tech dedication to prefabrication, rapid, large and clear spaces and the celebration of the structure – each of this represents a search for solutions, which will be tested over time, to face the growing environmental difficulties.

Among all these mentioned projects, the *Commerzbank* in Frankfurt is particularly interesting. However, before studying this building, you have to talk about **Ken Yeang**. Believes that due to the pressures of space, Yeang argues that the skyscraper is inevitable. He decided to improve the study on skyscraper and according to him, there are two aspects that must be considered as a basis for the design of a skyscraper: the spatial configuration and the “response to climatic and environmental conditions of the place” [22]. In examining the theme of the design of the skyscraper, to adapt the typology of the office-tower to the new demands of living, Yeang has made some crucial modifications to the “standard design” of skyscrapers: he introduces the green through a *sky court* order to encourage behavioural models similar to those of the road; creates new concepts such as *life in the sky* and vertical landscape against that urban design conventionally carried out on the ground floor dealing with issues such as the constitution of place, the creation of public areas, civic areas, now must be extended upward; and to humanize the floors detached from the ground, Yeang invents the concept of *building map* which will have to follow “the same criterion that guides the mapping of a part of the city, or of the entire city in terms of land use, circulation, density, open space, common facilities. This is a scheme of spatial distribution in which the “human habitat”, the “cultural models”, the “sky courts” and the open transition spaces can be inserted between the inside and the outside of the perimeter of the skyscraper. Regarding to the reaction of skyscrapers to climatic and environmental conditions of the place, Yeang projects the bioclimatic approach, already well advanced in the design of low and medium high buildings, in the design of skyscrapers, therefore, the configuration of the spaces,



shading, placement of components, materials selection will be guided by bioclimatic propositions. This allows the architect to create a new kind of skyscraper, called “bioclimatic”. He also argues that using the climatic and meteorological data of a specific site, one can create an interactive and interacting building with the environment that provides greater physiological comfort for its inhabitants [23]. The clearest example of his design philosophy has been tested in *Mesiniaga Menara* (1992) in Kuala Lumpur. The *sky courts*, three-storey high recessed terraces cut deep into the façade, begin at the top and spiral around the face of the circular tower. Originally, these terraces are designed and planted to carry the vegetation, but the idea has not been realized because of the excessive costs. However, these areas are effective in directing the convective currents of fresh air that rises from the planted mound up, around and into the building. The curtain wall is only used on the north and south facades, while all the east and west facing windows are shaded by wide aluminium bands, projected out of the building and positioned according to the solar angles. This screening system animates the surface of the tower, making it three-dimensional, high-tech sundial that shows how mute skyscrapers facades were in the past.

The invention of the *sky court* of Yeang has been very influential on a new generation of environmentally sensitive high-rise buildings, including the *Swiss Re* tower and especially the *Commerzbank in Frankfurt*, both are works of Fosters. When it was completed in 1997, the Commerzbank tower was announced as the most sensitive skyscraper to environmental issue of the world. In this project, Foster borrowed the typology of bioclimatic high-rise building of Yeang: in fact, Foster adopted the *sky courts* of Yeang in organizing the building structure in nine four-storey-high sections that spiral up the sides of its sixty-storey elevation, each block overlooks directly onto tropical gardens. Foster has also used the strategy of Yeang to move the structure from the centre of the tower to the perimeter to create an atrium, and this led him to undertake a thorough research on convective forces arising from such a tall vertical court. The outcome of this research is the inclusion of a horizontal glass screen on every twelve floors to avoid the stack effect airflow. Triple-layered glazing that makes it easier to control the daylight and ventilation of the interior has intensified the benefits derived from these fundamental typological changes.

Among the works of the *high-tech* architects in Asia, worthy to note are the *Pudong Development Plan* of Rogers for having proposed a model of a city that has changed the conventional concepts of urban planning to get a prototype for a futuristic city based on environmental principles and the *Hong Kong Shanghai Bank* of Foster although from the ecological point of view it is less performance than the headquarters of the Commerzbank in Frankfurt. In Vietnam Fosters is now realizing a landmark tower for the Vietinbank, which



includes energy-efficient design and an innovative and low-energy humidity reducing system, which is the first of its kind to be used on such a large-scale in the region.

3. SUSTAINABLE DESIGN – THE CONTEMPORARY TRENDS

As we have seen, many of the references cited in this essay design represent an attempt to improve the interaction between people, cities and the environment, through different way of acting, but aimed at the reconstruction of a harmonious balance between man and environment, proving the approach to a “*modus operandi*” of a new architecture, called “sustainable architecture”.

Until now, the search for an approach (and / or method) to sustainable design, has resulted in numerous experiments and in the creation of new design themes or revision of themes already investigated in the past, now re-evaluated and revised. Among these, for example, we recognize the issue of *integration between architecture and landscape*, or the *living the landscape*, from which they develop approaches such as *digitizing the environment and perfecting nature*, *the use of technology in art*; the *attention to the relationship between architecture, socio-cultural context and population*; the construction of buildings “*inspired from nature*” with organic form or custody of symbolic cosmic. In this background, the image of sustainable radically changes depending on the climate, regional resources, local culture, and the social component of the inhabitants, the political choices... The guidelines of sustainable architecture will also vary depending on the sensitivity of each architect and his personal experiences. However, we recognize three major trends simultaneously: the *low-tech* approach, its “opposite” *high-tech*, and *reason-based architecture* – somewhere between the first two tendencies: it seems that it is now necessary to find a balance between traditional “ways” and modern “modes” in designing “reasonable house” which is functional, comfortable, economic in an “environmentally correct manner”, in the broadest sense of the word.

Become green, environmentally friendly and sustainable and will certainly be a must and a great challenge to architects in search of the right, real and concrete answer to contemporary living and to the fundamental questions and problems of our time.



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Architecture in the Society of Spectacle: Modernism Challenge in the City and Urban Area

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ABSTRACT

Our societies and cities are growing in the realm of visual culture these days under the development of new technologies. It brings our daily life into the society which emphasizing on the visual sense; the society which drawn by consumerism and makes way for commodification in every aspects of life. The society that sees their life is merely a representation of fragmented images under the power of capitalism and states. As the result, the trend to build 'spectacular architecture' with its shape and images is happening everywhere especially in Asia and Middle East's cities.

Therefore, it is interesting to review the position of architecture and architects within the concept of "The Society of Spectacle" as developed by French philosopher, Guy Debord, in his book "La Société du Spectacle" (1960). The aim of this paper is to investigate the trend of the 'spectacle' abundance and its impact on architectural design nowadays. Also, to questioning how an architect will design a space in the city with these phenomena in the society which might change our perception and conception of space.

Questions:

- Has the concept of 'spectacle' been changed through the time? What can we learn from the history of empires and states?*
- Does the city need 'spectacle' in 'spectacular ways' in order to survive and liveable?*
- Is 'spectacle abundance' bad? How is the effect to the society, community, culture, and locality?*
- Can the spectacle gain a "productive" dimension and becoming an agent of social, cultural and political changes?*
- And how should architect design the built environment under the pressure of spectacle? How to make balance? How can we use this concept to reverse the situation and achieve better built environment?*

Key words

Spectacle, image – representation, unity – separation, territorial – identity, consumerism, production – commodity social relation, culture, history.



1. INTRODUCTION

Our societies and cities are growing in the realm of visual culture these days under the development of new technologies. It brings our daily life into the society which emphasizing on the visual sense; the society which drawn by consumerism and makes way for commodification in every aspects of life. The society that sees their life is merely a representation of fragmented images under the power of capitalism and states. As the result, the trend to build 'spectacular architecture' with its unique shapes and images is happening everywhere especially in Asia and Middle East's cities. The increasing development in those regions especially the interest in high-rise and spectacular design has heightened the need for deeper evaluation and studies on the trend with its impact.

Guy Debord, French philosopher, through his book "*La Société du spectacle*" (1960) analysed this trend and developed the concept of "The Society of Spectacle". The concept tries to explain the background, meaning and the impact of the 'spectacle' which still valid and even becomes more important as the world grows more connected in information and economic. Debord was the prominent figure in the revolutionary group of thinkers, Situationist International, founded on 1957. They developed experimental topics of study, such as unitary urbanism and psychogeography with ultimately highly significant book of Guy Debord as the most famous of it.

Although considerable research has been devoted to the theme of 'Spectacle and Architecture', rather less attention has been paid to the issue of its challenges and position within the local culture and history. Concerning the abundance spectacle, modern cities are facing challenges causing them to lose their locality & heritage wealth which the creation of new spectacle creates another separation between social classes. Thus, several issues are raised in the discussion such as whether the concept of 'spectacle' has been changed through the time and what we can learn from the history of empires and states. It is also important to ask about the importance of 'spectacle' for the city itself whether it is good or bad and how it affects the society, community and culture. In the end, it is interesting to review the position of architecture and architects within this framework especially in modern era and technology.

The aim of this essay is to investigate the trend of the 'spectacle' abundance and its impact on architectural design nowadays. This essay examines the different type of spectacle applied in cities and how it is applied from decades ago until modern day. Also, to questioning how an architect will design a space in the city with these phenomena in the society which might changes our perception and conception of space. The research for this essay is conducted through literature investigation and comparison of case studies. The book of Guy Debord becomes the main source to understand the topic with extension to the group of Situationist International with its 'ideal city' as input to the discussion.

The remainder of this essay is divided into several sections, firstly begins with the investigation on the thoughts behind the notion of 'The Society of Spectacle' to provide a solid and good understanding of the topic's background. Only two issues will be assessed which related to commodity and social relation. Secondly, the essay will examine the



spectacle's conditions in the past and present time along with their architecture conditions with Rome, Dubai and China as the cases. Third, it continues to evaluate the relevance of architecture and spectacle itself including the position of the architect in building a city with localism, culture and history as issues. In the end, it will try to suggest alternate uses of spectacle's concept in a rapid changing modern society to shape the city.

2. OVERVIEW ON THE SOCIETY OF THE SPECTACLE

This chapter will elucidate the term of spectacle and its meaning according to Guy Debord as the basis for our discussion in the next chapters. The 'spectacle' here will be evaluated in the relationship to the notions of *commodity* – *consumerism* and *unity* – *separation* as indicated through his book.

2.1 On Commodity and Consumerism

Regardless the common meaning of spectacle as refers to show, display, event, performance, representation, or view, here the notion of spectacle as described by Debord is more related to the political and economic or mode of production as the result of capitalism. Spectacle is not only understood as decoration and beautification to the object but also it is both the result and the goal of the production system. Moreover, spectacle dominates all aspect of society's life with manifestations such as news, propaganda, advertising and entertainment which represent the constant presence domination of those systems. As highlighted by Debord that "the spectacle is rooted in the economy of abundance, and the products of that economy ultimately tend to dominate the spectacular market" (Debord 2006, 16). Debord states that the commodity acts as spectacle itself.

Further, he outlines in his book two different models of the spectacle which are "concentrated spectacle" and "diffused spectacle". As for the concentrated model is more influenced by political and bureaucratic aspect which it is mainly used as a technique for strengthening state hegemony and controlling power (Debord 2006, 18). It is the spectacle produced by centralized power over a dictatorial or certain political party based around an ideology. Meanwhile the diffuse model is developed over economic leverage with commodities abundances (Debord 2006, 17, McDonough 2004, 462). According to Debord, since the post-world war time the rise of global capitalism has brought these two types of spectacles into a new combination influenced by economic and political power which is the "integrated spectacle". It represents the consumer society that has seen itself in a global spectacular market. It is a kind of spectacular of late capitalist that embodies a new, uniquely specialized form of power.

Notably, the spectacular market in the modern capitalism economy system began to take shape excessively that effecting all social life in modern world as the commodity came into significant as a power since the beginning era of industrial revolution and the discovery of mechanical reproduction techniques which the production become mass processes for a global market. Through the globalization of commodity, the world has been turned into a single large market and dominated by economic interests and as noted by Debord that the



spectacle, none or less, is *capital* accumulated to the point that it becomes images to represent the capitalism's goal itself (Debord 2006, 7). The spectacle consists of what Walter Benjamin identifies as *signs* from the system which acts as the ultimate end-products of that system and it happens when the commodity has succeeded in totally dominating social life. "Commodification is not only visible, we no longer see anything else; the world we see is the world of the commodity" (Debord 2006, 10).



Figure 1: Commodity and advertising in daily life (source: <http://workplacepsychology.net>)

For this reason, it can be said that 'spectacle' is the way to create a spectacular representation that leads to seduction of consumerism. Society is faced with constant replacement of products propagated by all the communications media.

"The things the spectacle presents as eternal are based on change, and must change as their foundations change. This instability is the spectacle's natural condition, but it is completely contrary to its natural inclination" (Debord 2006, 20).

This kind of spectacle is instant and instable in the way they present itself and influence over how people think and behave. The use of advertisements would be a perfect example of how using the spectacle can get people into a mindset that leads them to perceive certain needs which in reality do not exist as Margaret Crawford claims that the consumption habit influences the way we perceive the world (Elsheshtawy 2010, 172–173). The spectacle has shifting people's attention to consumption and imagery transforming everyone into a passive spectator. In the societies where people can get what they want; what they want and needed also depends on how the values are addressed by producers through products representation. The consumerism is marked by retail or shopping center which has become significantly more present in more diverse environments than it was a decade ago. People enjoy the experience of buying and spend their time to see products even though they will not buy it. We are actually inviting, encouraging, and demanding retailers to be more involved in our lives. Look also at any major institution – museums, zoos, parks, universities, stadiums, even churches – and you will see the growing presence of retail. Even airport terminals have become major retail outlets compare to its main function. Take example the



international airport in Amsterdam – Schiphol or Heathrow in London, which can be said as one large city itself with lots of shops and facilities to complement its main function. Actually, as consumerism began to be part of our life, the spectacle can also become a means of maintaining control in a capitalist society.



Figure 2: Schiphol Airport, Amsterdam (source: author, 2012)

2.2 On Social Relation: Unity and Separation within Representation

Next, Debord also discussed the notion of ‘spectacle’ more broadly relating to social relationship. Here, he sees that “the spectacle is not a collection of images; it is more as a social relation between people that is mediated by images” (Debord 2006, 1). He asserts that in societies dominated by modern conditions of production, the accumulation of spectacle has turned the everyday life into a matter of visual representation (Debord 2006, 1). The spectacle has gained its influential in modern society through visual appearances with the help of the modern communication technology and it has been applied everywhere in the world in every levels and aspects of the society’s life. Indeed, it has affected the mode and type of social relationships. The spectacle is the society itself as claimed by Debord which it cannot be separated from the society as it is also serves as a *means of unification* (Debord 2006, 1). Actually in unity itself, there is also separation between reality and image which formed in fragmented views and able to cause delusion and false consciousness from the spectator. As a part of society, the spectacle as unification is also acts as universal separation (Debord 2006, 1).

The economic system is based on the isolation and designed to produce isolation at the same time (Nicholson-Smith 1995, 22). In one such case, as we can see from the commodity produced by the spectacular system also reinforcing the conditions that engender what Debord says as “lonely crowds. The spectacle produces a condition that put people in a state of unconsciousness’ through the fulfillment of social needs. As living condition is good, then the society keeps satisfied but at the same time they are in their own separate consciousness and ‘living in dream’ even though they are in social environment. The television and internet are some examples that show the ability to connect between people



around the world but also nurture the alienation in the other side. People are linked in by medium that actually keeps them isolated from each other through the lack of physical interaction. This is explained by Debord in his words, “the spectacle thus reunites the separated, but it reunites them only *in the separateness* (Debord 2006, 6–7)”. The medium that connect people neglecting the distance and geographic boundaries is also the one that separate them in the end.

Guy Debord dislikes the consumerist society as he notes that in societies where modern modes of consumption prevail, life becomes an ‘immense accumulation of spectacles’. The spectacle as a world vision has become objectified, splitting up the world into ‘reality and image’. Within this discourse, commodification become ways to show the disconnectedness between lived reality and what is being communicated, thereby contributing to a general sense of alienation. What Debord criticizes, and this is crucial, is that the society of the spectacle shows an attitude of “passive acceptance”, a passivity that is triggered by the spectacle’s manner of appearing without reply, by its monopoly of appearance’ thus, the spectacle can contribute to a general sense of alienation by emphasizing the disconnectedness between observers and the material object (Elsheshtawy 2010, 135). The spectacle is, therefore, the product of a system of alienation which produces it.

Subsequently, the spectacle is the ‘bad dream’ of a modern society, according to Debord, as it provides the illusion from the fragmented representation expresses nothing more than the goal of the spectacle producer. This spectacle producer presents the ‘show’ to the world and becoming superior to it which enact the separation gap. This separation takes place along with the spectacle itself and in every creation of new spectacle; it creates another separation between social classes. The separation classes also reflect and rooted from the specialization in professions and power. Most significantly, it can be seen from the condition of worker or producer and the product they produce which eliminate any direct contact between them by the domination of the power holder of the system which the more intense and increase the production, the more widen the gap (Debord 2006, 6). Consequently, they become passive in the social relationship as they feel the alienation of space and social contact in society. As they keep consume and accept the representation of the product produced by the system without any critical resistant, they become deeply fall into delusional stage which deny their own existence and desires. Their self-representations are not their own anymore, it belongs to the system who represents it to them. As consumer, we live in a condition where reality cannot be separated from illusions. It is triggered by the commodity as part of abundance spectacle. We based our perception and understanding on images where the “reality” of the product is unimportant (Saunders 2005, 54). Debord said “the spectator does not feel at home anywhere, because the spectacle is everywhere” (Debord 2006, 7). It takes over the ‘space’ out of the society which the power and separation system find their hegemony above the spectators through the accumulation of the commodity and through the representational images they sell back to the ones who produce it.



Figure 3: People in cinema, image cover of Debord's book

(source: <http://libcom.org/library/society-of-the-spectacle-debord>)

In examining his concept on the society of the spectacle, Debord's focus is on the mass media, though he also extends this to the built environment. One characteristic of the spectacle, as Debord informs us, is its capacity to move beyond borders – diffusion, or what he calls 'the integrated spectacle'. This is the *integrated spectacle*, as mentioned above, which has imposed globally' (Elsheshtawy 2010, 201). Considering some arguments about the 'spectacular development' as fakeness, he argues that this is a natural outcome of capitalism, which 'builds a fake version of everything' (Elsheshtawy 2010, 135). He concerned about the trend for spectacular, the superlative and the meaning of authenticity. However, as pointed out by Debord, "the spectacle cannot be understood as a mere visual excess produced by mass-media technologies" (Debord 2006, 1). It goes beyond that therefore, in order to understand the architecture in the spectacle realm, we must look back at the histories and examples from the past; the raised of the cities under political and economic issues.

3. LEARNING FROM CITIES: TIME, HISTORY AND CULTURE

The first part of this chapter will learn from the history of old cities and the use of 'spectacle' technique of states to maintain its controlling power, in this case is the city of Rome and its first emperor, Augustus. The second part will continue our examining process to the modern cities and its public spaces. The aim of this chapter is to develop the arguments and vocabularies, to mark the important facts the use and role of spectacle in order to investigate it further for our discussion in next chapter.

3.1 Learning from Empires and States: Historical Form of the Spectacle

Debord describes that "the spectacle is the culmination of ideology because it fully exposes and manifests the essence of all ideological systems: the impoverishment, enslavement and negation of real life" (Debord 2006, 67). It represents the expression of the unity – separation and as he pointed out further that the spectacle preserves the ideological features of both materialism and idealism through its realization in reality which conceives the world as representation and fulfilled the ideologies' realization in the form of spectacle itself. The realization is fulfilled through the technical mediation of signs and signals – which



ultimately materialize an abstract ideal. He discussed the matter of spectacle on territorial and power of politics where the state monopoly over the representation. As our example of the city of Rome which becomes an image itself.

Richard Beacham shows that in Rome the concept of spectacle was used extensively with the 'shows' of power from the ruling class society. Through both the event and building, they provided the medium for ruler and elites to shape their 'planned images' to the public. Those spectacle sent messages of patronage, wealth, popularity, and military power to their audiences. Before the reign of Augustus, numerous monuments were erected and events were held by powerful and rich citizens or military generals as the memorial for their victorious conquerors in the far land which through the display of those spectacles they tried to impress and gain support from the Rome citizens. However, those magnificent architectural works in the capital failed to transform Rome significantly, on the contrary; once Augustus ruled and made the concentrated political system under him, the transformation of Rome's urban image began directed and coordinated (Galinsky 2007, 235).

Augustus who reigned from 27 BC until 14 AD, used the 'effect' of spectacle in order to maintain his dictatorship in Roman Empire. He always held his victory celebration annually which the procession would go through the city's road where statue of the emperor and empress was displayed in prominent public space. His images always represented in a younger, strong, athletic and charismatic. Besides that he also associated himself with the mythological images merging into storytelling to strengthen it. Under his government, his closest advisor and general, Agrippa repaired public buildings, built streets, enlarged aqueduct system and built monuments. He presented games for Rome's residents and decorated the city with sculpture. Those efforts were made simultaneously to win popular support for his patron. The intention was to enhance people's familiarity to the emperor in order to maintain his ruling power. The importance of spectacle became obvious and placed in the first priority 'theatrically' which embedded in every aspect of public life during Augustus's time. The city itself became the 'theatrical city' offering spectacles where the intention was to celebrate the power and achievement of the emperor. In this case, the construction of new theaters and amphitheaters showed this intention along with large urban projects which were consciously designed to display public performances.

In Romans' cities, the glory, power and superiority were represented by large size objects and rich materials expansively, whereas in the Republican city only a few buildings had employed those luxurious materials so that the emperor claimed, "I found Rome of mud brick, I leave to you a city of marble" (Galinsky 2007, 254). As Diane Favro pointed out that Augustus, cleverly integrated the extensive use of the luxurious materials and rich ornamented decorations to convey a message of wealth and superiority within well-accepted traditions throughout the city which physically manifested a new age but still respectful of the past (Galinsky 2007, 254).

Equally important to note that the notable buildings and the richness of materials and decorations helped the citizens navigate the complex cityscape of Rome. They oriented themselves by recognizing the notable urban features; as planned carefully by Augustus by



exploiting urban ordering such as landmarks, nodes, districts, paths, and edges which has been analyzed by Kevin Lynch in his book *"The Image of the City"* (1960). Here, as we learned the urban lay-out from Rome, Augustus always ensured landmark status by selecting highly visible sites such as the Mausoleum Augustum towering above the flat Campus Martius and the Temple of Apollo atop the Palatine Hill were visible from great distances which notably, none of Augustan landmark assumed a dominant position and they scattered throughout the city (Galinsky 2007, 255). Likewise, Augustus also shaped the nodes with many concentrated attractions which were formed by placing interrelated significant public buildings. "He reinforced the northwest/southwest axis defined laterally by the two huge basilicas, surmounted with a golden statue of him (Galinsky 2007, 255)". Carefully choreographed narrative pathways provided another urban ordering device. Ancient observers identified conceptual linkages between urban components encountered while moving through the city. Buildings were built to reinforce different messages and purposes from repeated images, verbal signage, forms, and materials into cohesive narratives. As noted by Karl Galinsky that "Augustus and his architects scripted narratives by siting buildings along select urban paths" (Galinsky 2007, 258).

Above all, on an urban scale the Rome expanded significantly in size and beautification which signaled the city's elevated status and importance in the region as Augustus gained the absolute power over the senate. However, as showed by Diane E. E Kleiner that actually Augustan art and architecture were not purely rooted from Romans' traditions but partly inspired by such diverse civilizations as Ptolemaic Egypt, Classical and Hellenistic Greece, yet what it derived from these was merged into an entirely new creation (Galinsky 2007, 197). Indeed, Rome became the 'Rome' as we know because it was developed through carefully crafted urban images which the old urban centers were transformed into the new ones by interaction and learning process with eastern cities such as Antioch, Alexandria, and Pergamon who gained world-class status based upon both their importance in politics and commerce, and their urban environments (Galinsky 2007, 234). Rome took on the eminence of leading cities in the region through its trades and conquests thus, transformed and adapted it into their own. The concepts from those cities were adopted as the Romans needed a 'proven' model to improve and developed their own uninspiring and uncoordinated-planned cities. "Internationalism became nationalism as colorful difference was subsumed in a collective Roman identity Galinsky 2007, 228)".



Figure 4: Augustus' projects in Rome (source: Galinsky, 2007)

3.2 Spectacular Abundance in Modern Cities and Its Public Spaces Nowadays

Next, our discussion on the spectacle will be directed to the modern cities especially in Asia with Dubai and cities in China as the case studies. Here, the most obvious motive that generates the development of cities is all started with desire, competition, and rivalry amongst the cities. Even cities with substantive history are not immune to this race and begin applying the notions of theming and commodification in their urban planning (Elsheshtawy 2010, 201). Moreover, in order for the city to be noticed and grows, it employs the 'device of the spectacle'. Particularly, spectacle is used by the city or country to launch its national image and promotion, therefore, it engages in 'images' creation as indicated by Ute Lehrer that the production of images accompanying the project (Elsheshtawy 2010, 134). Most significantly, the phenomenon of spectacular developments based on the construction of megaprojects is occurred for the reason to foster more the economic growth and attract foreign capital investments. This tendency began to take its example from the case of Bilbao, later known as Guggenheim effect – the development of one city based on specularization of urban space.

Dubai is probably the most 'aggressive' city to be named which using the "spectacle" as a way of making itself recognizably and appealing on the global map. In Dubai, the spectacle is to anticipate the decrease of its oil production in the future. The vision was initiated by the Syekh, as the leader of Dubai to change the main national income from oil to other resources with the idea to create Dubai into a hub for travelers, center for world shoppers and leisure activities. Dubai is built from nothing; majority of its area is vast dessert with beautiful coastal line. Therefore, the idea was coined by attempts to maximize what they have such as the creation of islands to resemble local images like palm island. Also many extravaganza projects were built by transferring the objects or ideas which do not



have by the city itself such as the indoor snow area in dessert. All the spectacular development serves one specific purpose which is creating an instantly recognizable symbol for Dubai.

In the same way, China, along with its emerging economic power, the government felt that it is the time for China to show and represents its development trough objects of gigantic towers and buildings that can reinforce the hegemony of power symbolism and so on. The development is taking place not only in major cities but also in rural area. Take a look at Beijing as the capital; we will notice that it has embarked on one of the largest building campaign the world has ever seen, replacing acres of centuries-old neighborhoods by a series of spectacular architectural buildings. Similarly in the case of Shanghai which through the selection of it as the host city for World Expo. In the short period of time, the abundance of spectacle was forced into the city. The selection as host for the big worldwide events confirmed the desire of the Chinese government to display itself to the world and gain position as a new influential country. It marked the cooperation of the elite political ruler with the rising economic entrepreneurs. Another interesting point to know that in China, as the power is centralized in one small group of elite party which the government officials are appointed and assessed for promotion on the basis of political loyalty, economic performance and achievement thus these officials tend to 'race' to increase the performances of their works by creating high visibility physical projects rather than on social behalf. These efforts are not only to enhance the city's economic performance in the global competition by attracting international tourists and foreign investors; it also strove to restore China's international image and to legitimize the power of China's ruling elite.

Moreover, through World Expo they want to show the nation's development, pride and culture. Also, it emphasizes the exchange value of commodity which gathering it in one place and one time for instant spectacles. Thus, many efforts were made to provide these goals. For example of this instant spectacle was shown in the Danish pavilion for World Expo in Shanghai 2010 which it temporary relocated the national famous image 'the Mermaid' in Copenhagen to the pavilion and replaced it in the original place with the big screen live on internet which showed the mermaid in the exhibition. This kind of spectacle was trying to replace the reality with illusion of present and impression which sometimes does not show the real condition in the city and society.



Figure 5: Dubai in 1990 (source: <http://www.dubai-architecture.info/DUB-GAL1.htm>)



Figure 6: Dubai in 2011 (source: <http://www.dubai-architecture.info/DUB-GAL1.htm>)

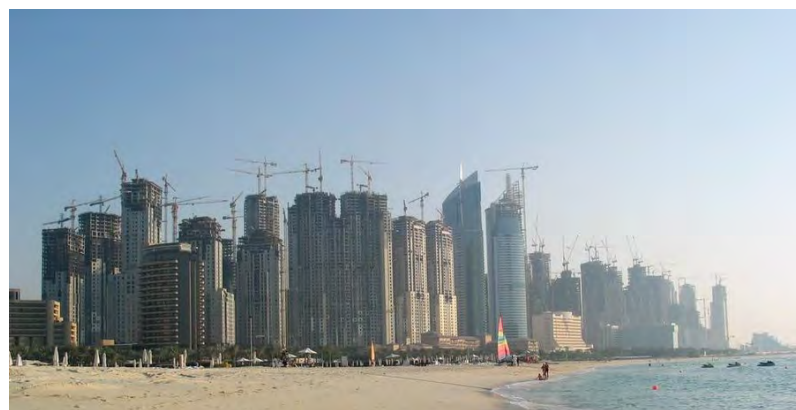


Figure 7: Dubai in 2011 (source: <http://www.dubai-architecture.info/DUB-GAL1.htm>)



Indeed, a city that is seemingly defined by spectacle nevertheless also contains less spectacular space and its own problems. For instance, in the case of Dubai with its luxurious seven star hotel, Burj Al Arab, it is likely most residents of Dubai have never, nor will ever, enter it but somehow it has become a symbol for the city. The design and its luxury discouraged people from entering and keep them just standing and admire at a distance. There are also a lot of urban area which less developed or have distinct conditions compare to the other 'spectacular and luxurious' parts of the city such as the residential area for the workers. The impression of the city evokes the sense of alienation and disconnectivity from one function to others. The same case happens also in most of Beijing's Olympic projects which disconnected from their surroundings and exaggerates the scale of their settings. The site's choice also reflects the political intention which by strengthening of the imperial axis of the old palace, as the symbolic and privileged space of imperial power, then it reflects a desire of the elite to position itself in the lineage of past dynasties. It has remodeled the capital city to their image and replaces it with new 'spectacular' building. Moreover, the spectacular development and representational images also left the forgotten urban space hidden from our view. These spaces sometimes in form of temporal and spaces that were formed by condition because people have no choice and cannot gain access to the space they need. As Elsheshtawy argues that the spectacle in itself is not harmful to anybody but becomes a problem when there is a lack of choice; when developments are increasingly geared to a specific segment of society; thereby excluding a large poor population. Here the spectacle is not just a way to induce passivity in the populations or a tool of domination, but is used to mark, to segregate people along socio-economic lines (Elsheshtawy 2010, 201). Actually, great cities are by their very nature integrative – the spectacular co-exists with the informal, and city residents have the choice to move between these two worlds.



Figure 8: Pavillions in Shanghai World Expo 2010

(source: <http://en.expo2010.cn/pavilions/index.htm>)



Figure 9: Forgotten space in city (source: Elsheshtawy, 2010)

As a concluding remark for this chapter, there are several points that we learned from history and the development of the cities. One of the chief roles of the spectacle is to maximize the visibility of the state. The state depends upon physical embodiments to make its existence manifest. As the most visible expression of cultural and civic values, and the central element in the construction of urban space, architecture thus plays a central role in reinforcing the pervasive presence of the state in everyday life. Spectacular architecture becomes a participant in the machinery of power, and both mirrors, complements and enhances other forms of the spectacle. Spectacle is used as the manufacturing of power and social control as in Rome as well as territorial identity. In the case of modern cities especially since the world war, the reason is also dominated by economic interest. The two models of spectacle of Guy Debord is combined which resulting the borders and boundaries have been crossed and architects have found the perfect patrons and environments to implementing their ideas. In the end, the conception of the spectacle contains the same idea though it transformed by the time according to the dominance of economic interest rather than dictatorial and political hegemony.

4. ARCHITECTURE AS SPECTACLE'S AGENT

Discussions above lead us to the important question on the spectacle in architecture nowadays and our profession in the globalization era to shape our cities and spaces. Considering the facts that our everyday life is surrounded by the omnipresence of retailing



and advertisement's images which mainly shaped by modern shopping mall causing the society to lose their place by privatization of public space in terms of economic interest.

This chapter attempts to identify and discuss the spectacle's impact on the modern architectural design especially related to the local culture and history. Also, it will discuss the possibilities for architects in designing the cities and buildings using that concept while not making a more complex conflict.

4.1 Spectacular Spectacle in Architecture

With regards to the case studies above where we infer that the spectacle and cities have unique relationship and cannot be separated therefore, as highlighted by Anthony D. King when he introduces term '*architectural spectacle*' in his book 'Spaces of Global Cultures' (2004), which can be explained as buildings which "mediate the meaning of the nation to the gazes of the world" (Elsheshtawy 2010, 136), there is a growing trend in which high-end architecture is used as a tool for self-promotion. China and Dubai's attempts show this trend and their efforts to embrace modernity using 'spectacular' architecture as a primary means of achieving this. Historically, the spectacular architecture was come in form with 'height' as a statement of power such as seen in religious buildings or perhaps we can refer to Egypt's great pyramids as the first example and continue to churches in Medieval and Renaissance time. In fact, the obsession with height is not faded over the ages instead global big cities nowadays are characterized by a skyline of high-rise buildings as the manifestation architecture of capitalism and power. Spectacular architecture with high-rise is now valued for its advertising power of capitalism and its ability to brand the urban skyline and is considered vital to enhance the prestige and desirability of place.



Figure 10: Modern city skyline (source: <http://id.berita.yahoo.com>)



Indeed, it is not only the high-rise buildings that mark the scenery of the cities but also the high-end mega projects that come with shapes and forms we never imagine few decades before. Developers and architects are trying so hard to produce a design that can be a new signature in the region sometimes with the made-up beauty. However considering the trend, it is true that human's nature to have a high regard for aesthetic as well as beautifully designed architecture but we also need to be critical in accepting it and questioning its implications especially when the work is simply replicating mass culture's trend.

As mentioned in the previous chapter, the spectacle was used historically to serve certain purposes through many manifestations such as architecture's representation. Consequently, the excessive spectacular shapes and image's adoration in architectural culture has trapped the discourse of architecture within the logic of aesthetic, thus, the relationship between 'imagery' and architecture is crucial to be understood. Unfortunately, architecture becomes the product of mass production with no originality or even lost its exclusivity as what had been indicated by Walter Benjamin with his 'auratic' work of art in the mechanical modern reproduction methods. We lose sense of space and scale sensitivity through the reproduction itself. But most importantly, this tense relationship between architecture and everyday mass imagery is exacerbated by commercial interests where the influence of a rising mass culture underlies all the architectural positions on the city.

As seen in the cases of Dubai and China above, through the transformation of architecture into a device for spectacularization therefore a "predatory and colonization of open space" occurs where public space is commodified for very private consumption. Even now as the museum, the library or other public space – find it ever more difficult to retain autonomy in the dominance of economic interest (Saunders 2005, 35). The imagery of consumerism has entered a level of mass reproduction and mass deployment, and undeniable the technology and mass media helped spread it. Lara Shrijver through her book admitted that 'this phenomenon, based on recognizable imagery (thus also transcending cultural boundaries) also contributed to the homogenization of public space' (Shrijver 2009, 46–48) and intervene the autonomy of it which caused the modern cities to suffer cultural transformations in perception of space and time because of it. As well, they are experiencing a constant shock by the present of large amount spectacle instantly which have been forced from one side to the society. Hence, it raises the question whether the city needs 'spectacle' in order to survive and develop. Above all, spectacle must from and return to local society, community and culture, not only dictated by the politician and capitalist.



Figure 11: Piccadilly Lights in London (source: author, 2011)

To continue, we can see that the process of boundary erosion is happening everywhere not only in the issue of the country's borders but also in the matter of local customs and traditions. The old boundary lines began to lose its bond and true nature. In architecture discourse, the global architectural transformation is also changing the design approaches, which it evokes the debate on the issue that architectural form is no longer bound by local traditions and cultural differences, but merely by visual and the influence of consumerism. Architecture became less a cultural expression that contained a tradition within it. Localism is now artificiality translated by attaching merely 'representational' objects with its meaning is just rationalized to fit into the design. The form is thus sometimes determined by the representation of symbolism since the spectacle is taking the place as sign and image win over the real use value. As Lara Shrijver suggests that the symbolic content of the sign should be given full attention in architecture, and that the 'substance' or spatial content behind it is in essence irrelevant, or at least less relevant (Shrijver 2009, 179). We also know that postmodernism introduces the billboard as a valid element of architectural design and reintroduces a symbolism of architectural form that was hidden in modernism (Shrijver 2009, 154). Therefore, following Venturi's argument in his *Learning from Las Vegas*, ornament in his opinion becomes central, and everything else is irrelevant which the spectacle is achieved by the manipulation of its surface appearance. This correlates with the position of the Situationist International, which also signaled that sign and substance were separated as one of the fundamental problems of the society of the spectacle (Shrijver 2009, 180). Even so, it must be carefully considered as there is a tendency to rationalize superficially this symbolic and attachment to the local culture as what happened in The Burj Dubai Tower. It tries to justify its contextualization and localism by relating the plan of the building to the flower in the desert after the design has already finished in the sake of marketing. In the end, architecture becomes merely representational in the age of the image.



Nowadays, spectacular projects are proposed through exaggeration and focus on superlatives such as the tallest, the biggest irrespective of any relation to local context. It is not supported by strong solid foundation – through public participation, institutional development and social debates resulting in lack of attachment of the people in the city. It evokes the lost sense of authentic culture and identity. The city is reworking the symbolism or imagery of the original and creating a new image which this new image, in turn, becomes in it a point of reference, a Debordian spectacle (Elsheshtawy 2010, 262). Copying symbols from other cultures is not a new phenomenon, it has been occurring throughout history. But perhaps the new type of commercialization which is happening right now sets apart the city that is still maintained its identities regardless the invasion from the ‘spectacle’ and the city that adopt entirely the trend.

Regarding the attachment to local history and culture, the spectacle can be used as a method for paralyzing history and memory and also suppressing any history based on historical timewhich represents a *false consciousness of time*. Spectacular time is the illusorily lived time of a constantly changing reality (Debord 2006, 51) and as a result, people experience a disconnected life with reality even with its own past which they misunderstood and forgotten their own local wisdom because they have absorbed the spectacle excessively. It transfers the images which becomes common and uncritically accepted by the society. The spectacle thus, creates new kind of ‘culture’ to its spectators.

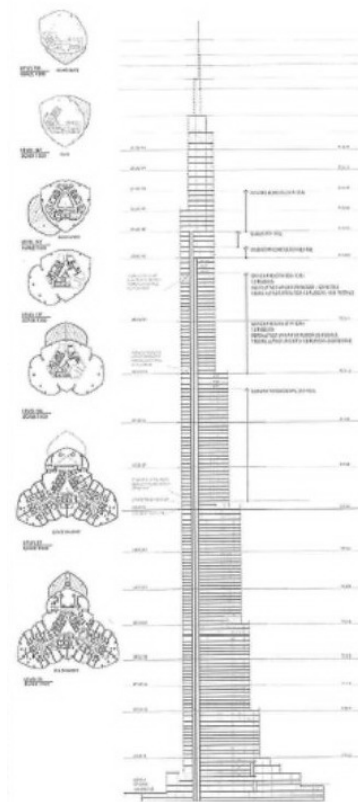


Figure 12: Floorplans and section of the Burj Dubai Tower
(source: Elsheshtawy, 2010)



Debord insists that the spectacle has influenced almost everything in modern society and has absolute control over production, over perception, and especially over the shape. In modern cities which adopt this concept, advertising and commercial forces have taken the lead in the making of modern spectacle. The symbols and images are spreading instantly and easily resulting in lack of value and appreciation to it. Concerning the way the spectacular architecture, as mentioned by King above, to spread and invading the society's spaces therefore I suggest the term of "spectacular blindness". This spectacular blindness will happen gradually along with the rapid development of buildings that merely concern with the aesthetic and 'wow' effect from them. Here, based on our discussion so far, I am considering that by the abundances of the images and spectacle today which is constructed easily by the modern technology, people accept too much of it and in the end they become common objects. It has no effect anymore as they can get the others instantly. People are wandering through buildings, plazas and cities without any excitement anymore as same architecture appears everywhere. Public spaces in the city are no longer places of people with narrative experience, but now they are constructed through instantly fragmented spectacles which try to overcome each other. Spectacular becomes not spectacular for some people which they do not see the position and critical points of it in order to be named spectacular architecture, as it will produce what Henry Bergson's *Matter and Memory* saws as the "standardized and denatured" perception of masses (McDonough 2004, 459–460).

I also want to highlight that our society nowadays is also a 'society of curiosity', which this is caused by the possibilities offered by the modern technologies. Because of it, then people tend to pursue and to know everything they want. This desire triggers people to travel, to see and to experience new places and new objects. Thus it creates a never ending loop of spectacle and society's needs provided by capitalist which captures this opportunities to create 'spectacle' for the society. Today this loop is like a parable of chicken and egg; who comes first and who comes last.

4.2 Modernism Challenge in the City and Urban Area: How Can We Shape A New City in the Society of Spectacle?

To continue, as states by Michael Benedikt that our environment has become ever more commoditized, ever more the subject of short-term investment, income generation, and resale rather than of lifelong dwelling or long-term city making (Saunders 2005, 11). By employing the global devices of urban capitalism which have been implemented elsewhere, a new global urbanity is created. As the increases of travel and communication, the city becomes not only a physical object but also now related to the global village with the digital community and other virtual construction of community which might cause a diminished sense of community. Hence, what kind of built environment can we expect within the boundaries of the global community? One should be concerned is the sprawl of spectacle just as the Romans transferred their town planning, engineering, and architecture to the whole Mediterranean world, nowadays this sprawl is led by the media (Saunders 2005, 2).



Nowadays, architect is always under pressure from their stakeholders to produce different and 'spectacular' design to fulfill the needs of consumer and sales. Thus, this demand creates a trend that design is produced only to evoke the effect of "wow" while ignoring the rest impact later. It is the characteristic of the modern spectacle to produce the surprise effect in its appearances (McDonough 2004, 463). As architects in the positions to design and creates environments, it can be said they responsible to the popular taste of the free market, for this reason, Kevin Ervin Kelley states that "we designers are not really producing what people need; we are producing what they *want*" (Saunders 2005, 47). Architects are designers of perception through image making. In a sense, they are designing the consumers themselves. Actually, architect itself cannot be kept from the influence of economic and commodity. They sell ideas as commodity and in different ways architecture has become a brand in itself in a spectacle realm. One example can be seen when a famous architect becomes a 'comical' stars in visual.



Figure 13: Rem Koolhaas in TV show 'Simpsons'

(source: http://www.architizer.com/en_us/blog/dyn/42122/rem-koolhaas-simpsons-cameo/)

Net, realized or not we can see that in China as the development of spectacular architecture became intensive moved by its economic power, there was tension between local and foreign architects. Local architects felt excluded from the getting the 'prestigious' projects and accused foreign architects using China as an experimental ground to test new techniques and realize their own artistic ambitions (Broudenhoux, p.9). Thus, many of them tried to adopt a more critical design approach that closely rooted in their culture while move towards modernity as the rest of the world does as self-conscious resistance to the spectacle's abundances in their country. By focusing on small-scale, place-specific, and locally grounded projects, these designers are creating a new identity for Chinese design, a truly contemporary architectural language that retains a degree of continuity with the existing urban fabric without falling into the traps of nostalgia and localism (Broudehoux 2010, 10). Thus learning from that experience, it is interesting to see where the architect should stand in this 'turmoil' time and in what way they should shape the new urban area in the society of spectacle.



Figure 14: New Academy of Art in Hang Zhou by 2012 Pritzker Award winner, Wang Shu

(source: www.archdaily.com)

Generally, there is always a struggle between tradition and innovation, which is the basic theme of internal cultural development in historical societies, innovation always wins. But for cultural innovation is different as it is generated by nothing other than the total historical movement – a movement which, in becoming conscious of itself as whole, tends to go beyond its own cultural presuppositions and thus to move forward the suppression of all separations (Debord 2006, 57). If the city is developed based on it then it can be a base foundation in the struggle tense against the dominance of capitalism power interest. Urbanism – “city planning” – as claimed by Debord, is capitalism’s method for taking over the natural and human environment by providing the foundation for the deployment of capitalism separation (Debord 2006, 53–54). Therefore, there must be a way to make a



balance position between city planning influenced by economic interest and city planning with consideration to the local society and history.

For Situationist, in the city of power and capital the spectacle was merely a manufactured wonderment, a hype that concealed real processes of exploitation (Saddler 1998, 17). They believe in the possibility of a cultural sphere outside the spectacle of economic and politics and in that case they can find a way out of the spectacle's domination with it. They proposed a concept, *Unitary Urbanism*, which acknowledges no boundaries; it aims to form a unitary environment in which separations such as work – leisure or public – private will finally be dissolved (Saddler 1998, 25). Along with it Raoul Vaneigem claimed that the ideal urbanism is the projection in space of a social hierarchy without conflict (Saddler 1998, 16), where the planning represents the harmony between cities stakeholders. Above all, unitary urbanism rejected the idealistic quest for fixed forms and permanent solutions that had been the basis of traditional town planning (Saddler 1998, 120). It recommended the society's participation to reshapes its local surroundings. Debord suggests, "In the city of unitary urbanism, urban dynamics would no longer be driven by capital and bureaucracy, but by participation" (Saddler 1998, 117). Situationist's unitary urbanism was a vision of the unification of space and architecture with the social body, and with the individual body as well (Saddler 1998, 118) where everyone can continually be engaged in transforming their own environment. As in Debord's 1961 film *critique de la séparation* had explained, "Until the environment is collectively dominated, there will be no individuals – only specters haunting the things anarchically presented to them by others (Saddler 1998, 97). The society must take more action and responsibility on theirs.

Le Corbusier proposed a separation of functions in a clean and neat city representing the modern city where everything is in order and planned, however, this kind of city does not include people's participation in determining what they supposed to have and get. The planning and decision is come from one side, top to down. Thus, Levebvre and the Situationist saw the traditional city with its diversity and culture as a possibility to offer as they both agree to return to 'traditional spaces' in the city as it is more meaningful (Schrijver 2009, 58).

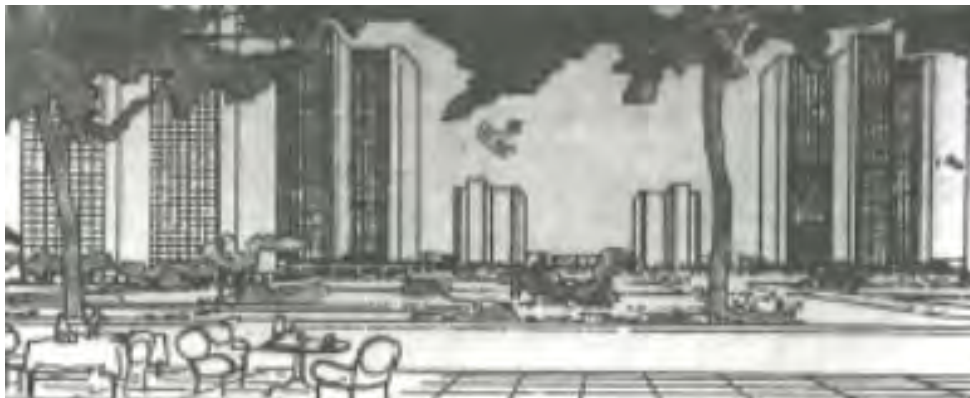


Figure 15: Le Corbusier's proposed city (Source: Schrijver, 2009)



The Situationist considered that unitary urbanism should never abandon the existing city in favor of new territory (Saddler 1998, 121). They were equally aware of the ability of the planner to rewrite the meaning of the city through procedures of erasure as well as construction (Saddler 1998, 99). Erasure of the signs of urban memory can happen whenever there is lack of attachment to the city and participation from the local community. Therefore, the existing city with its historical memory and culture must be preserved and to be learned from. Despite Walter Benjamin's distinction between the auratic original and the mechanically reproduced copy seems as "irrelevant in today's discourse", however in our discussion on the society of the spectacle, the aura of the local culture and history is still needed in order to design a better environment to the city and its residents. Thus, as architect, we should consider that we design an everyday 'lived space', as indicated by Lefebvre, for people with their sensibility and perception where the space becomes part of the everyday spatial experience of a community. Certainly, architecture must eliminate the gap of this separation by trying to produce designs which connecting segregated parties in societies, reminds and engaging community with its own culture and history.

5. CONCLUSION

In concluding this paper, there are several points can be inferred. In any case, the concept of spectacle contains the same idea through the time but it will adapt and evolve according to the dominance of economics interest or dictatorial and political hegemony. In the modern world now, those motives are fuse and create a 'powerful' kind of spectacle that dominate almost all aspect of city's life through it is most apparent representation such as high-rise buildings, malls and mega-scale projects. In modern society now as Debord calls 'the society of spectacle' or as I suggest with 'the society of curiosity', economic dominance is inevitable which helped by the development technology, our society becomes more complex and demanding. We learn from history and experience of cities that the 'spectacle' has the positive and negative sides which in fact depend on how it is used and translated. Thus, we cannot make judgment on spectacle hastily. The city needs 'spectacular architecture' to develop itself but at the same time it must consider also the existing city with its historical memory and culture which must be preserved and to be learned from. The exclusion of this important point will lead the city into a 'soulless' city with lack of identity and sense of belonging from the community. The spectacular development must gain the productive dimension to enhance the quality of life rather than aesthetics matter only. It must avoid an imposed symbolism and go beyond it which it can be an agent for social, cultural and political changes. Otherwise, the entire 'spectacular' become less spectacular in the crowd or in the state of 'spectacular blindness'.

This paper has shown through its discussion that there is nothing to be afraid of and nothing needs to be rejected in the trend of spectacular architecture nowadays as long as we, architect, have the sensibility and firm stance in expressing our idea of design without neglecting local culture and history. This paper becomes important to build awareness in the middle of spectacle abundance in our society so that architecture can lead the way to a better built environment to be built and becomes an answer for the modernism challenges through the time.



With consideration of this paper's discussion and conclusion, it must be recognized that there is still much future research and development to be done in this topic area. The discussion of modern spectacular architecture with its challenges brings another important issue of its later stage. It is interesting to investigate issue on the continuity and usage of the 'spectacular' buildings over the time as they would operate, function and represent the image as expected or otherwise be a 'boomerang' to the city and community.

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New Vision for Hochiminh City Spatial Structure Model in Times of Climate Change to 2030

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ABSTRACT

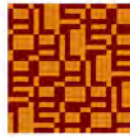
The assignment of Designing Hochiminh City Master Plan was approved by Vietnam Government on 2010 Jan. 06th. The master plan was carried out by Hochiminh City Urban Institute and Nikken Sekkei, Japan. This master plan has been submitted to the Prime Minister for approval in 2011 – 2012, and will be announced in next few months. With new information and foresight to the year of 2020 on climate change, other new achievements, and professional experiences ... the author of this paper has proposed new ideas for Hochiminh City Spatial Structure Model in Times of climate change which ensuring to urban sustainable development criteria. Some special and new issues of this research were not concerned, partly or neglected; also some characteristics of the city have not been presented or not presented fully. These factors are important and may be useful for future city plan. These factors are scientific – techniques basis relating to up-coming research. Basing on these new findings, the author of this paper would like to strongly propose “New Vision for Hochiminh City Spatial Structure Model in Times of Climate Change to 2030”.

Keywords:

(Hochiminh City, Spatial Structure Model, Climate Change, Sustainable Development)

1 INTRODUCTION

Vietnam is a Southeast Asia coastal country. Most of Vietnam's settlements and infrastructure are concentrated in large mega-urban regions located at the two mega-delta regions. In the next decades to 2050, a significant amount of new urban housing developments would be necessary in Vietnam. In which, two most important cities: Ho Chi Minh City (HCMC), located in the north of the southern Mekong river delta; and Hanoi, located in the Red River delta in northern Vietnam.



Climate change has been becoming one of the biggest issues that we have to face. This problem is particularly more apparent in the countries in the tropical low zone of Asia and Southeast Asia. Climate change is likely to result in rising sea levels, more intense rainfall events and more frequent heat waves. The likely impacts of these on human settlements in emerging countries such as Vietnam include increased damage to housing and infrastructure, and increased energy demand

HCMC is largest city of Vietnam – a future unique megacity, the main economy hub in the south, and a leading contributor to national GDP. Surrounded by the Dong Nai River system, and located near the East Sea and the Mekong River Delta, HCMC is also a highly flood-prone metropolitan area. Ho Chi Minh City ranks among the top 10 cities in the world with populations most likely to be severely affected by climate change. By 2050, millions of its citizens will be at increased risk from regular and extreme climatic events such as floods, droughts, and tropical storms. Due to the impact of climate change, sea level rise phenomenon will become increasingly severe.

In 2010 and 2012, HCMC has suffered 02 continuous tropical storms – the unpredicted and never happened events in the past 50 years ago! (Figure 1). The problem is that much of the city land with low building height is still determined to exist in above HCMC master plan. These residential areas (located in low land) have been (and may be) suffered from many disasters of climate change (effects of floods, environment pollutions); meanwhile, the studies in this field were just at the first stage or un-perfect!

In the history of more than 314 years (since 1698), Saigon – Hochiminh city has developed very rapidly both in size and shape! There were many researches for city master plan to help the city develop well. The assignment of Vietnamese government to carry out the Master Plan has been approved on 2010 Jan. 06. HCMC Urban Planning Institute has co-operated with Nikken Sekkei, Japan to study and complete the master plan of HCMC that will be approved by Prime Minister in 2012. The author of this paper proposes new ideas for Hochiminh city spatial structure model in times of climate change which ensuring to urban sustainable development criteria. I have found some new special issues which were not concerned, partly or neglected; some characteristics of the city have not been presented or not presented fully in the research. These factors are important and may be useful for future city master plans These factors are scientific – techniques basis background relating to up-coming research. Basing on these new findings, I would like to strongly propose “New Vision for Hochiminh City Spatial Structure Model in Times of Climate Change to 2020 – 2030”.

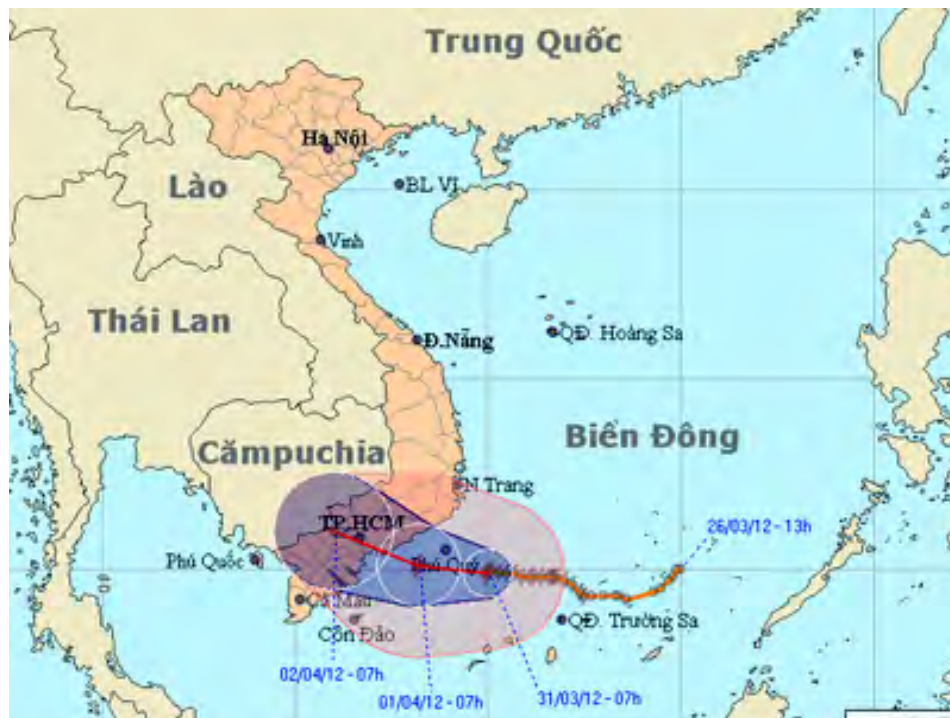


Figure 1: Storm No. 1 swept through the area of HCMC since 31st Mar.2012 to 02nd Apr. 2012

2. SPECIAL URBAN CHARACTERISTICS OF HOCHIMINH CITY

2.1 Urbanization of Saigon – Status Conditions:

The former name of Hochiminh City is Saigon – the capital of Republic of Vietnam (South Vietnam) in 1954 – 1975; a young city founded in 1698. Since the beginning, the city master plan has been designed many times as follow:

Four important projects were designed in colonial times (1698–1953): In 1867, a French colonel – Coffyn proposed a project with estimated population of 500.000 people; In 1890, zoning map of Saigon was done by other Frenchman – Betraux with a population of 113.000 people; In 1939, another master plan has been programmed for Saigon refurbishment by Cerruti; 1943 Purnaire has planned a master plan for both Saigon – Cho Lon with population of 1.2 million people. In period 1954 to 1975, 08 master plans have been researched and designed by many famous urban planners – architects (three master plans were in 1972, 5 other proposed plans in 1974). Among them, the most famous architect is Constantinos Apostolou Doxiadis – a Greek architect and town planner (He became known as the chief architect of Islamabad, the new capital of Pakistan), and was known as the father of Ekistics.

In period of 1975–1998, many research projects on master plan for HCMC, including these important projects as follow: Report to the Hochiminh City – Today and Tomorrow (UN –



ESCAP – 1989). In 1993, the first master plan done by City Planning Institute was approved by the Prime Minister. Other master plans have been researched (by Vie 95/051 Program – UNDP in 1995); New Saigon master plan (1996); and 1 other plan carried-out by Houstrans – JICA, Japan in 2002.

2.2 Special Urban Characteristics of Hochiminh City

Saigon – Hochiminh City has many special urban characteristics: In 1915, Saigon was the most beautiful and prosperous city in Far East of Asia. So Saigon was named: “The Pearl of the Far East”. Hochiminh city will be a unique megacity of Vietnam before 2020. It means Saigon – Hochiminh will be the youngest megacity of the South-East Asia. I think that Hochiminh City would learn a lot of precious lessons from others megacities (Manila – Indonesia, Metro Manila – Philippines, Bangkok – Thailand,...) (Figure 2), or lessons from some special coastal cities (e.g.,: Semarang city in central Java, Indonesia) (Figure 3).

Hochiminh city has had many strengths and opportunities; but also faced some weaknesses and threats. In time of Globalization, HCMC became a member of WTO. This is not only an opportunity but also a threat. Vietnam Economy has flied and developed well, but Hochiminh city has to face many disadvantages; challenges and problems; many difficulties as: Traffic jams, water logging, environment pollution... Hochiminh city has faced and solved many issues in field of urban planning and management; facing severe urbanization, urban sprawl – especially in the suburban districts (Binh Chanh, Hoc Mon, Cu Chi, Nha Be, Can Gio),...



Figure 2: Existing Urban Problems (Manila, Jakarta, Bangkok)

An important problem in field of urban planning is the suitable model for urban spatial structure. The existing Star Model (or Asterisk) of Hochiminh city has created a mono-centric structure in the past. This model is also the reason of severe traffic jams in the past; reason of the absorption people from other provinces into the fringe of the city and the city centre...



In my dissertation, carried – out in 2006, I have shown clearly the bad effects of this spatial structure model for the large cities. According to Kevin Lynch, although this model “has many useful characteristics, particularly for cities of moderate size”; but “It may be difficult to relate the linear development along the fingers to the heavy traffic on them, and the dominant center may be choked by the incoming flows, if the whole becomes very large” [8, page 374].

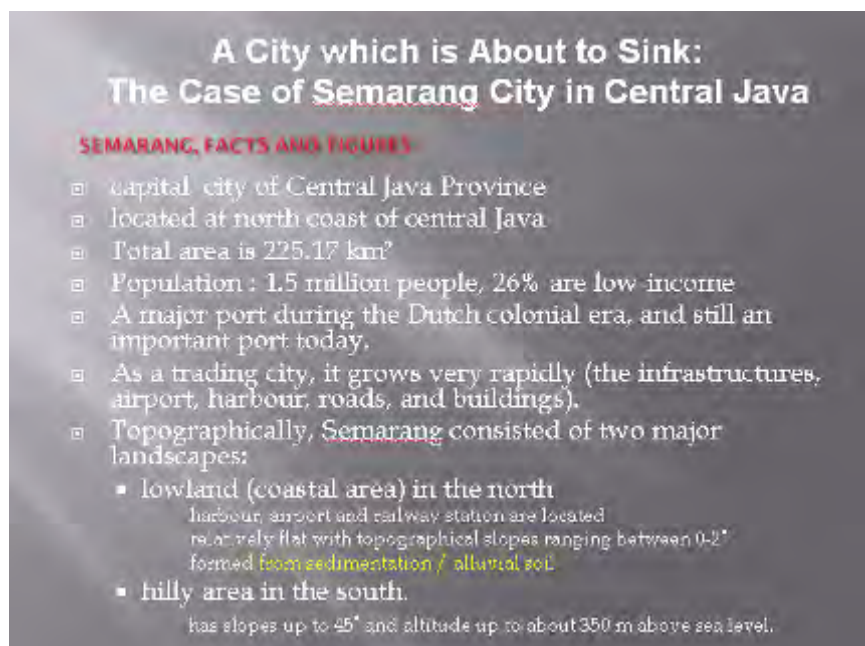


Figure 3: Sinking City: Samarang in central Java, Indonesia

3. CLIMATE CHANGE IN HOCHIMINH CITY AND URBAN STRUCTURE MODEL

Climate change is becoming clearer manifestation in HCM with abnormal weather as more rain and tidal peaks always set a new record. But, I want to note that the current flooding in the city is not only because of the negative impacts of climate change but also by un-perfect urban management!

Vietnamese Government has approved the National Adjusted Response Strategies of National Climate Change on Dec. 05 2011; and announced on Mar. 07 2012, which comprises six components with 10 strategic tasks to deal with climate change. The third strategic task is for to the city:

Strategic task 3: “Suitable proactive response actions to sea-level rise in vulnerable areas: – Research, evaluate and predict impacts and vulnerability of areas, sectors and communities to sea-level rise; – Develop a master plan for socio-economic



development in time of climate change, especially increase in flood, inundation, saltwater intrusion, drought, land loss, and environmental degradation in sensitive areas, including Mekong River Delta, Red River Delta, Central Vietnam's coastal areas, and marine biodiversity reserves; – Protect and accelerate development process in island areas to respond to climate change, especially sea-level rise; – Strengthen residential infrastructure and planning to respond to climate change; improve deteriorated parts of sea and river dykes for minimum protection against storms of scale 9 and tidal frequency of 5%; prevent saltwater intrusion in the most affected areas; protect urban areas, residential areas and industrial zones from flood and inundation; prioritize large-scale multipurpose structures, water reservoirs, buffer zones and green belts; – Review, adjust and promote adaptive livelihoods and production processes in climate change and sea-level rise context (Table 1).

Table 1: Summary of current flood situation, and in 2050 with climate change

	Present	2050	Present	2050
	Frequent flooding	Extreme flooding	Frequent flooding	Extreme flooding
Number of effected wards (/322)	154	235	177	265
Flooding Area of HCMC (ha)	108.309	135.526	123.152	141.885
Percent of HCMC suffered	54%	68%	61%	71%

The impacts of climate change to current and future urban structure of the city are obvious as shown in below (Figure 4):

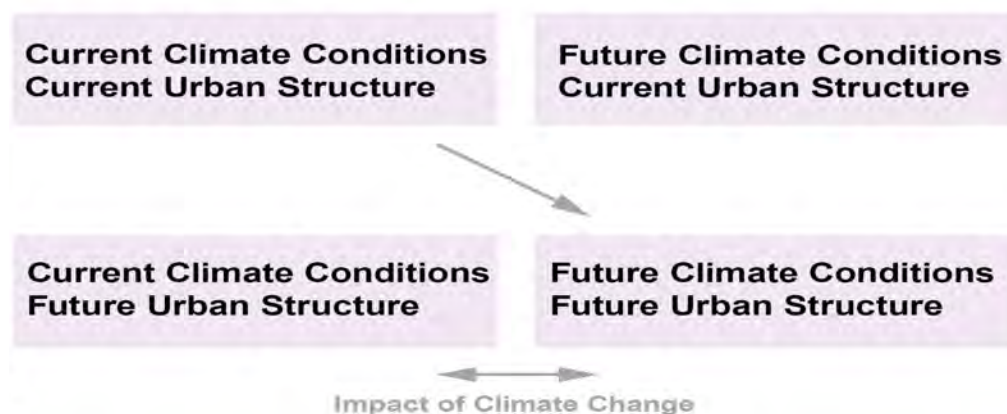


Figure 4: Impacts of Climate Change to Urban Structure



The spatial structure model of Hochiminh city is “Star model.” HCMC now has 9 exits and 2 ring roads; in which the second ring road is still un-completed. HCMC has been designing and constructing this second ring road. City has 24 districts (5 suburban districts). Nowadays, city suffered severe traffic jam in the peak time! City has prepared 4 out-lying business districts (OBD) in 4 main areas of the city: North – in district 12; South in district 7; East in district 9 and, West in Binh Tan district. But until now, it is very difficult to have enough land for this purpose! Residential areas in 5 suburban districts and other functional lands will be suffering more dangers than others because they were locate in low land areas (Comparisons between Figure 5 and Figure 6). This is one of my findings as a new idea for the urban spatial model of city in future.



Figure 5: Master plan to the year 2020 approved by VN government in 1998

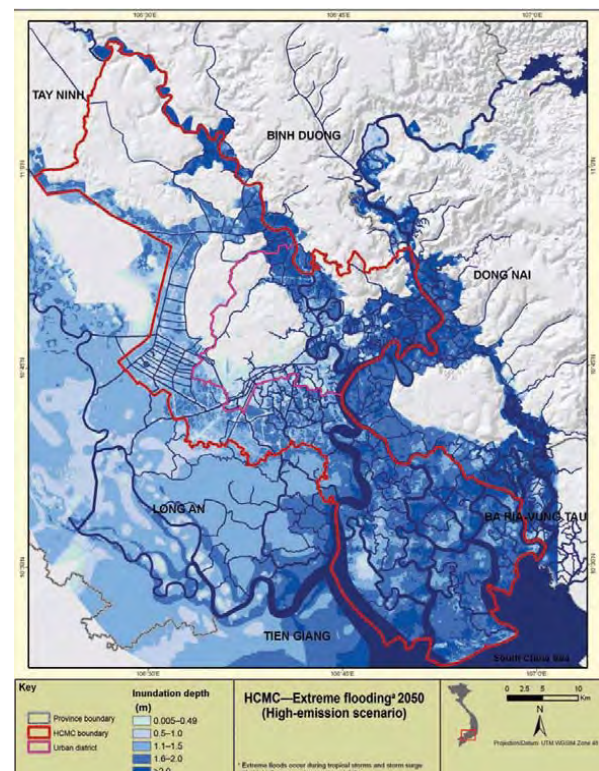


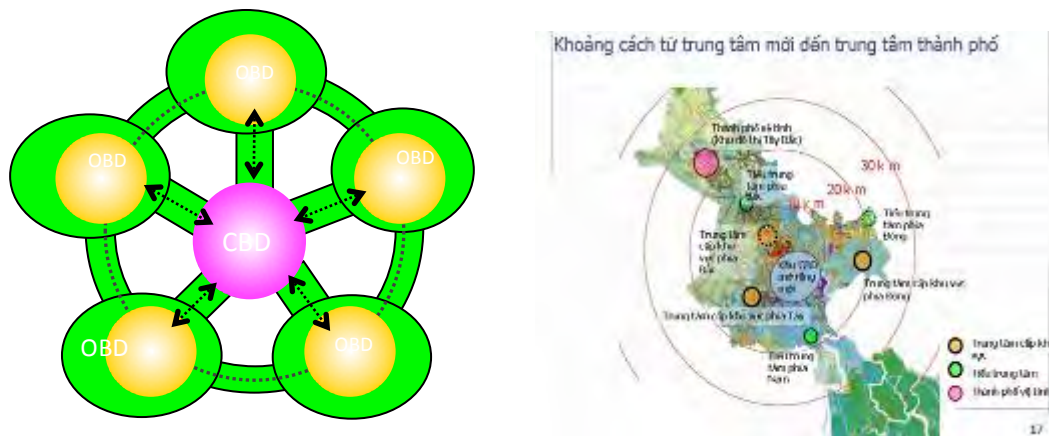
Figure 6: Ho Chi Minh City Areas will be effected by 2050 Extreme Flooding in 2050

4. THE CONTENT OF RESEARCHS FOR HOCHIMINH CITY MASTER PLAN

New Master Plan for HCMC has be done by Urban Planning Institute (UPI) and Nikken Sekkei (NS), Japan in 2011. General speaking, study of UPI and Nikken Sekkei included 10 steps: 1. Analyzing situation conditions of city; 2. Surveying opinions of people; 3. Studying the existence problems of city, including social and economic structure; 4. Developing urban



planning perspective; 5. Proposing basic strategy urban planning spatial structure; 7. Drafting master plans; 8. Assessing environmental impact ; 9. Legal mechanisms; 10. To perfect HCM city master plan. This project has been finished completely in 2011 and has been submitted to Vietnamese government for approval. The works done by UPI and NS also consisted of: Studying related factors to the urbanization process, such as: – Natural conditions, topographic maps, land prices, infrastructure, technical infrastructure, the accesses to city center, urbanization trends, gathering public opinions,... This master plan was evaluated as a best one for the city because of its quality: Many new academic theories and findings applied; many problems of the city have been considerate and solved effectively... I, myself appreciated highly the good result of study-team because of the efforts and the capacities! (Figures 7–8: multi centres for Hochiminh City)



Figures 7–8: Urban planning viewpoint – multi centres for Hochiminh City

5. NEW SCIENTIFIC AND REALISTIC BACKGROUND FOR THE RESEARCH

5.1 The issues related to urban spatial structure

Although the good result created by study team for HCMC master plan, I think that there're some things need to be changed or adjusted, and of-course better! The first one is the most suitable urban spatial structure model for city. "Radial exit – ring road model" (asterisk) was selected by UPI and NS as the city frame for HCMC without no explanation, no alternative, no comparison! This is not convincible, because asterisk model is not the preferred – suitable alternative model. Asterisk model is a model mono-centric that will cause traffic jams and many other urban problems for HCMC. In developed countries as Japan, this model played well its role for Tokyo because of the very good transportation system in the centre. In China, Beijing has the same urban structure with HCMC and Tokyo, despite city government has built already the 6th ring road, but the city still faced the problem of traffic jams! I think there are other better models for HCMC! After this master



plan for HCMC was done completely in 2011, newer research and findings on climate change has shown the important influence on land-use model. There was not enough time for same research again!

Thus, the transportation frame consists of an expected highways and ring roads (dashed line in Figure 9). According to me, Star model is not a good solution, unnecessary and wasteful. These exits and ring roads still continue absorb people and transportation vehicles to city centre! Other expected ring roads of the city are not the optimum solution – has been built and no need to build in the future. I think no need to continue building radial exit – ring road model, because the current ring roads are up to the belt 2; the ring roads 3, 4, 5 are not available! Study team proposed only 1 option for spatial structure model to HCMC. This was not suitable and un-convincible!

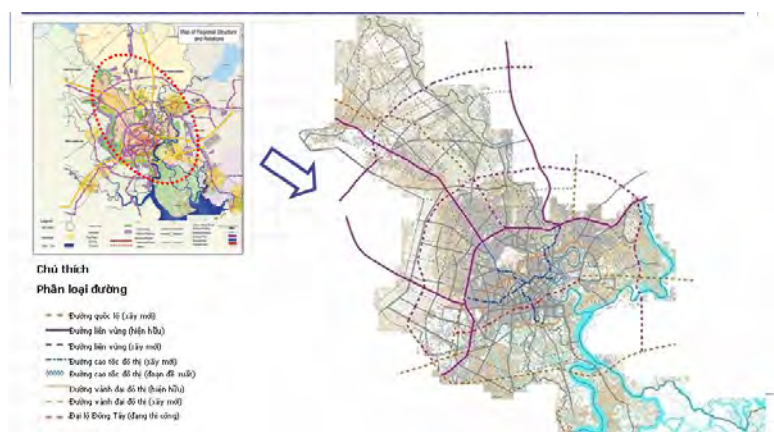


Figure 9: Transportation Planning

5.2 Problems that relate to climate change

The combine model to satellite towns development (or Garden City and Satellite City) may be more appropriate. However, the land use areas for the new satellite city are very difficult to collect because the city no longer has lands (Nowadays, the city is building 03 existing satellites cities in Cu Chi, Can Thanh and Phuoc Hiep). So, if one wants to choose the sites for satellite towns, he needs to select the construction sites in the outside of the administrative boundaries.

This project was not focus on the problems caused by the climate change: wetland and low land areas in the South were still planned for city. I'd like to compare the master plan



designed by UPI – NS and extreme flooding map of the city to 2050. We will see the problems more clearly (Figure 5 and Figure 6). Some planned residential areas locate in flooding areas of climate change in 2050. So, if we chose the existing urban spatial model, it would be very difficult to solve traffic jam problems!

5.3 New ideas for Urban Spatial Model for HCMC

According to above reasons, I think the adjusted radial – ring road model could be work if we will not build some parts of the ring roads, and combined with satellite towns solution. I propose the city government to build some urban centers (Out-lying Business District – OBD) in the city peripheries. I support the former ideas since 2003 for HCMC spatial structure model, which satisfy 03 following criteria: Decentralization; Polycentric Structure (multi-center structure); and Decongestion (Preventing congestion in urban center). It needs to reduce development of residential areas in the southern lowlands of the city. The urban spatial model has to solve many other important issues such as human asset issue, the new trends and new scientific achievements (Tele-city), the new social trends (1 person family, single mom)...

It also needs to fully aware of the factors that shaped the criteria of “Saigon – Far East Pearl” will be helpful. The vision would be referred to the research result of JICA Study Team on “Master-Plan for Urban Drainage and sewerage system for HCMC” – from 1998 to 2001, which will address severe flood issues. Future land-use model for HCMC has to be tackled the problems of the city flooding plan, peak tides and flood controlling...

6. CONCLUSION

The master plan of HCMC designed by UPI and NS made a good success for two study teams. The perceived successes (and shortcomings of what was missing) are the participation of scientists and interested experts. However, after the study completed, some other factors of scientific basis and practical information were not to be updated (climate change...). I think this approved master plan will be so useful to HCMC in urban planning and management in near future. However, HCMC has to concern to climate change issues for construction permit in low land areas; and has to continue other researches for more suitable spatial structure model which satisfy new criteria and trends (climate change, sustainable development, sustainable healthy urban, ecology green city...)

The ideas and findings of this paper were based on my work experiences of more than 25 years at UPI and international work-shops and seminars – especially in the field of megacity, sustainable development and climate change. They were also based on my two proposals for



HCMC spatial structure model solutions (according to sustainable development orientation to the year 2020), which were considered as “new initiatives” by many VN experts in field of megacity at that time. I think that the findings, ideas and visions to the year 2020 – 2030 for HCMC master plan with the new role of climate change are useful; and have reliable values in times of climate change./.

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Rumah Asuh Yori Antar



Started in 2008, a group of young architects lead by Mr. Yori Antar started to set out some plans to preserve the endangered traditional architecture in Indonesia. The initiatives started as their previous trips, including to traditional villages in Toraja, Sumba, Flores and Nias had shown the vast richness of Indonesian culture and architecture, while on the other hand had shown how most of them are currently not in the good condition and suffering for their existence.

Running as an alternative movement to save and preserve the local wisdom of Indonesian architecture, Rumah Asuh's main principles includes working as a community-based program, prioritized for the endangered types of architecture and a potential learning experience for the next generation, constructed based on the traditional and original methods by the local people themselves, support the eco-tourism, built in its actual habitat and community, and lastly, act as a potential learning experience for the academic world.

One of Rumah Asuh's project : the conservation of the Mbaru Niang in Waerebo - Flores (fully supported by the Tirto Utomo Foundation, Mr Arifin Panigoro, Mr. Laksamana Sukardi and PT Tirta Investama- Aqua. Danone), has won the UNESCO 2012 Asia Pacific Cultural Heritage Conservation Award.



Water Urbanism in case of Dhaka: Searching Urban Water Intervention Strategies for Reclaiming and Protecting the Water Bodies for an Eco-city.

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ABSTRACT

Bangladesh the largest delta in the world is a land of Hydraulic civilization. The capital city Dhaka was built based on its water culture. Water culture has played powerful role shaping the histories, societies and economics. Water Urbanism is one hand is the Science of a city and on the other hand it is the discipline that holds the capacity to steer the transformation of the city and to design rational development. The huge rate of urbanization and the so-called modern city actually shattered water based city and the dialogue between water and city was collapsed. Water appears to be one such issue that is (re)conquering the cotemporary agenda of urbanism. Water bodies supposed to be the life of the city which should work as the line of communication, natural drainage and ecological space. These water bodies and surrounding area should be the major open spaces and space for recreational facilities of the city. Dhaka had many canals and water bodies integrated to its socio-economic and cultural life. Over the last few decades the cityscape of Dhaka, the capital city of Bangladesh, has been experiencing a transformation in terms of its water system due to rapid and uncontrolled urbanization. The paper will focus on understanding of water culture of the deltaic city of Dhaka and analysis the metamorphosis of water bodies of Dhaka city. There is a miss-opportunity to reinvent waterscape traditions to integrate present and future requirements of water management, ecology and open space development. How to intervene in the existing complex urbanization pattern of the city is a big concern which is discussed in this paper. Water urban intervention is needed to take in to account for the solution and traditional relationship of people with water will be reclaimed with the water-infrastructure intervention in urban areas. The ecological continuous open space system can change the qualitative aspect of natural life. These open spaces can play a vital role shaping public activity spaces and spaces for stress release. Integration of lakes with public activity spaces is the single strategy to protect water bodies against encroachment which is a challenging issue in case of Dhaka city; what other strategies those could be adopted by the city to safeguard them against other threats posed by urban



development pressures. The paper discusses the possible urban design solution in terms of water urbanism in the city in both academic research and practical level. The paper will highlight some studio exercise as example which was conducted with the fourth year studio in BUET. How the strategies of research and academic exercise can give a guideline for practical project is important. How to reconcile the need to construct networks of public open spaces along water bodies to serve social and ecological needs within the growing city which will be affordable approaches to engineer and water management systems in case of Dhaka is a major concern. The paper will conclude with possible intervention and search for bridging the gap between vision and reality. The research will give us a guideline for reclaiming and protecting the water bodies as well as possibilities for an integrated water network system. The study will enhance the dialogue between water and city such as replacing the "hard" or engineered solutions by "soft" or more flexible solutions. The design solution can create a continuous ecological space integrating people with the spaces as an urban open space which will create new environment for future generations.

Key Words:

Water Urbanism, Public Open space, Hydraulic Civilization, Water Bodies, Urbanization, Urban Design Intervention.

1. INTRODUCTION

Dhaka the capital of Bangladesh is the seventh largest populated city of the world, initially established along the river Buriganga in 14th Century. The establishment is evident from 7th century [1]. This is the only city in the earth which is surrounded by four rivers all around. The main city is bounded by three rivers. This was a city of more than sixty canals and many ponds even in the 1950's [2]. Dhaka was compared with Venice by many Europeans in the seventeenth century [3]. The huge rate of urbanization and so-called development actually encroached water based city and the dialogue between water and city is now collapsed (figure2 and 3).

As s it is mentioned "Water appears to be one such issue that is (re)conquering the cotemporary agenda of urbanism. Now it is not a surprise as we are constantly reminded of the consequences of global warming and rising of sea levels, uneven distribution of resources"^[4]. In case of Dhaka, flash floods (figure 7) due to rainfall have become a common phenomenon as retention ponds and water bodies were filled and natural drainage is destroyed [5]. Even major part of the river is encroached and extreme pollution of water due to toxin waste of industries created major natural disaster and climate change of the region.



Other cities are in the same process of destructions and most of these cities are beside rivers and sea, which is alarming for future in case of rising of sea levels. Dhaka could be a major case for Searching Urban Water Intervention strategy for reclaiming and protecting the water bodies for an eco-city as well as addressing the climate change in this region. The paper discusses about the transformation of water bodies (figure 2 and 4) and the significance with possible outcome. The studio exercise by forth year students is also part of the paper which was conducted in 2011 in the Department of Architecture of Bangladesh University of Engineering and Technology (BUET). The methodology of the exercise with analysis of some water bodies and possible design is discussed in the paper. The paper explains the possibilities and strategies of reclaiming and protecting of water bodies for an eco-city based on its water culture.

Geo-morphological challenge of a deltaic city is important for Dhaka. The idea of the paper is to understand the need of water which is an important phenomenon in the twenty first century for water scarcity due to lowering the water level, rising of sea level, ecological imbalance due to pollutions and unplanned urbanization with land filling and so many other reasons. To address the water issue for Dhaka objectives of this research are as followings:

- a. The Research looked for the city water bodies' evolution with growth of the city and changing impact on urban life. The focus is on some specific water bodies in different urban tissue as test case in different part of the city for detail analysis and possible intervene.
- b. The Research searched for possible reclamation and protection of water bodies to develop design policies and guidelines strategies for urban water intervention for an eco-city based on its water. The study looked for an integrated water system solution which will guide the intervention for an ecological corridor. The idea is to defining a concept for the edge of water and land; identify the horizontal dynamics of water which will integrate the city with urban water intervention.
- c. The idea is to incorporate water more with the city and providing more public places by proposing new guidelines for designing and planning, based on urban water intervention including water infrastructure which will help to intervene rational water transport system as well as natural drainage system. (figure 1)

2. EXISTING SCENARIO OF WATER URBANISM AND TRANSFORMATION OF THE CITY

Dhaka is the 9th largest populated city in the world and by the year 2020 with existing urbanization rate; it will be the third largest city of the world [6]. The city has large gap



between supply and demand of water, and the water level of the city is becoming lower day by day. The aquifer is becoming deeper 1.5–2.5 meter/year [7]. In a city of 15 million populations with average density of 2000 person per square kilometre with heterogeneous quality of urban life there is social injustice in terms of access to basic needs like drinking water and access to urban amenities. It was a city of 65 canals as per survey in 1912; now only existence of 26 canals with minimum 10 meter width [8]. Most of the canals are in the process of decay with land encroachments and extreme pollution. 60% of the water is polluted (figure 5 and 6) by industrial waste which is published by Dhaka WASA (Water Supply Authority). 35% of the population lives in the slums and many of them lives in the low lying area along with the edge between water and land. Hydrological cycle is also effected by filling up low lands and pollution, and ground water is also been contaminated which is evidence from the survey by Geological Department of Dhaka University and WASA. Due to concreting the outer surface with minimum recharging and extensive use of ground water, management and protection of water is hampered intensively. The city become too much urbanised with shattering image without urbanism. The mega city of developing country is a curse whereas megacity for developed country has different image. The image of the city is devastating with improper and uncontrolled urbanization. Landfill after landfill becomes a giant octopus swallowing the wetlands. As stated by Kazi Khaled Ashraf in his book *“Urbanization has come to describe the dark side of the modern city: migration, malfunction and misery”* [9]. water was the basis of urban life has already evaporated. The river becomes large drain and canal becomes box culvert and small drain. Around 25% of the sewer is covered by city authority and rest 75% solid waste goes to storm water networks, canals and rivers which are making more water pollutions (figure 6). The river is almost dead in term of ecology and life line for usable water, fish and aqua culture. There is only one water treatment plant for the city which only treats little water, and the BOD (biological oxygen demand) and COD (chemical oxygen demand) is not at all acceptable for the rivers and most of the canals.



Figure 1: Idea Sketches by Fahmid Ahmed

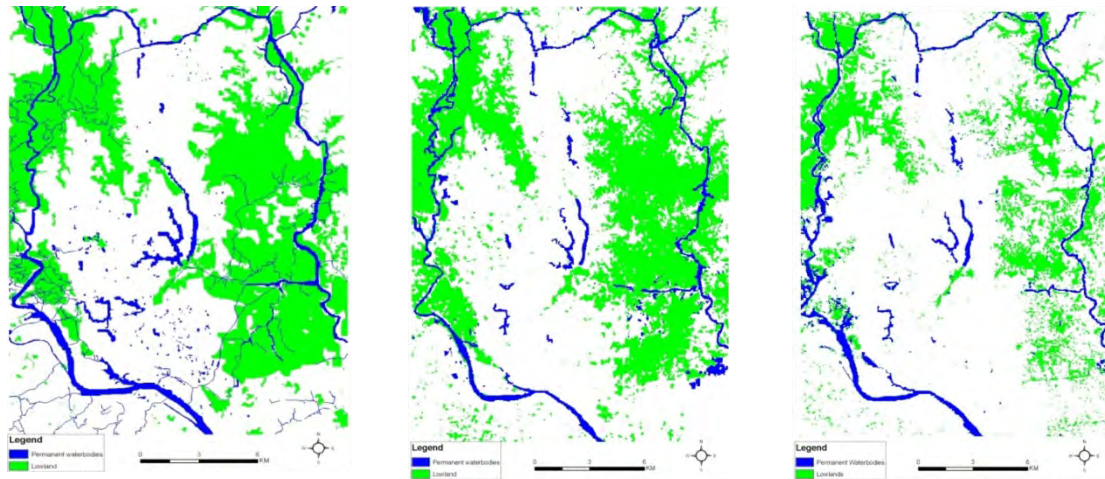


Figure 2: The transformation of water bodies and low-lands (1960, 1988 and 2008)



Figure 3: existing lakes and rivers

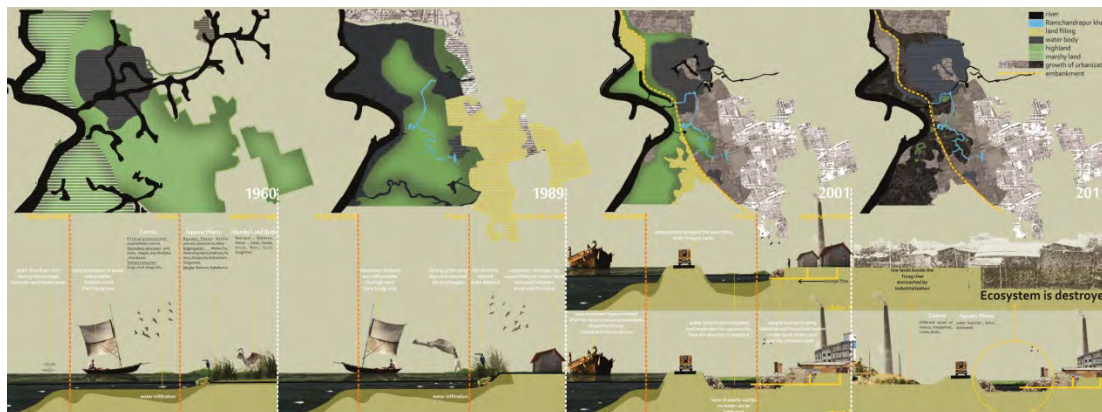


Figure 4: Transformation of Ramchandropur Canal in the central-western part of Dhaka (Nusrat Jahan)



Figure 5: Encroachments of existing low lands and canals

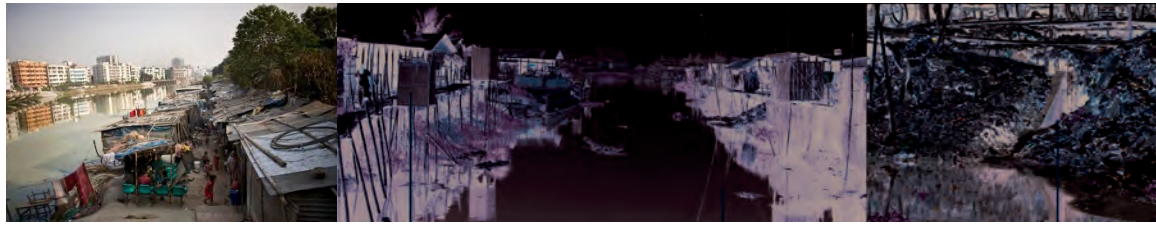


Figure 6: Pollution of low lands and canals



Figure 7: Water Stagnancy (The Daily Star Newspaper)

Urbanization rate is extremely high in Dhaka due to population increase and intermigration along with the major centre for all kinds of administrative and economic activities. How to revive the water system in the densely populated urbanized area is a big concern. Could water bodies can play an integrated part of the water system after reclamation and protections need to be questioned. The research will analyse how to protect the wetlands of Dhaka in the existing built city as well as peripheral part of the city which is in the process of development. The paper also discusses the possibilities of making the inner water bodies as a part of integrated transport network with water taxis acting like a transport corridors. How ecological continuous open space system can change the qualitative aspect of natural life shaping public activity spaces and spaces for stress release is important. Integration of lakes with public activity spaces is the single strategy to protect water bodies against encroachment which is a challenging issue in case of Dhaka city; what are the other strategies those could be adopted by the city to safeguard them against other threats posed by urban development pressures is discoursed in this issue.

3. SIGNIFICANCE OF WATER URBANISM FOR DHAKA

The water urbanism has significant impact on city's urban design component for sustainable urbanism as well as it has significance on people's life. Major significances of water urbanism are the followings:



- a. The research of water urbanism supports to find out the possibilities of reviving its water system which will help to reclaim the water-bodies of the city. The integrated drainage system with manmade canals, retention ponds and rivers eventually will mitigate water stagnancy and the flood due to rainfall. This water stagnancy and flood creates huge loss of infrastructure, economy, living quality and sometimes human loss (figure 04).
- b. For future sustainable development process, the research will enable to formulate guidelines for a balanced ecology. City needs continuous ecological space with water and the research of this discipline will always find solutions to intervene. These canals, water shades/retention ponds and water-infrastructure intervention could be a backbone for qualitative urban development and water control. These water bodies can play a major role for ecological balance.
- c. The reclaimed and protected water bodies can play a vital role in terms of water transport which also fulfils the goal of strategic transport planning of the government. Our city had a very bad traffic system with huge traffic jam due to lack of road, absent of proper mass communication system and poor management. This makes annul loss of \$1.68 billion [10] due to traffic Jam. The water transport can play a vital role in city's traffic integrated with other mode of transport.
- d. City needs open spaces for public activities and space for stress release. The reclaimed and protected water bodies can play a significant role in shaping city's need for open spaces. The water culture which is ruined by urbanization will be revived.
- e. For proper management of hydrological cycle of ground water as well as fulfil the basic need like access to water and maintaining ground water level water urbanism is important. For a city where annual rainfall is 2200 mm and with deep water level along with polluted surface, water demand of water for different use can be fulfilled to some extent.

4. GLOBAL AND LOCAL PERSPECTIVES

Water Urbanism is comparatively a new term or discipline in the field of Architecture and Urban Design although practice of water urbanism started a long time ago. Both empirical and theoretical researches about this topic have been done especially in last ten years. The qualitative aspects of water, related with Urban Design will be the focus of the Paper.

Prof. Kelly Shannon of Catholic University of Leuven (Belgium) explained the trends of water urbanism and possibilities to intervene in the Mekong Delta Vietnam for future city with traditional environment and enhanced density [11]. She highlighted the water culture of the delta explaining the integrated way of life with water. Vietnam is a large delta with big and



small rivers including both natural and man-made canal system. The development is very much like Dhaka with blurring edge of the urban and rural character. The character is more R Urban rather than urban or rural [12]. Prof. Shanon explains the edge of water and land, and how this can be enhanced. She focused on the development with densification process coping with the urbanization without destroying the traditional system of hydrological culture of the region. The Paper focuses on the same hydrological culture of Dhaka which is similar context in terms of tropical deltaic city.

Dhaka had many canals and water bodies which is very much evident from the writings of Ahmed Dani, Prof. Sharifuddin Ahmed as well as Muntasir Mamum. The natural features, lush green spaces and water bodies surrounding the habitations that prompted historian James Taylor to remark in 1824, "*Dhaka looks like Venice of the orient*" no longer exists [13]. The historical city is a maze of crowded bazaars and narrow streets contrast to Ramna Maidan and surrounded area (the large open space and park in the north of old city) which is the modern post-colonial area to the north, where most of the government buildings and educational institutions are located. Dhaka lies on an alluvial terrace above the northern bank of the Buriganga River, which offers access to several of the major regional rivers, including the Brahmaputra, the Meghna, and the Padma. The old town was bounded by the Dulai canal, a waterway coming from the north and curving eastward as it joins the Buriganga which is no longer exists.

The region's profits and peril are correlated with extensive system of river, canals, lakes, ponds and low land marshy areas. Heavy rain cause severe flooding in low-lying areas of Dhaka. Underutilized open spaces along with water bodies encroached by vulnerable squatter settlements [14].

"The common sense logics of cities and water are evident; clean water source, the possibility of transport, water as a defence mechanism, a receptacle for storm water, etc. such logics make it all the more surprising when water suddenly disappear, in the 19th century, at the moment modern urbanism emerges as a scientific discipline." [15]

In different edges between water and land of the city in Europe, the spaces are preferred to use as residual space which is no longer exclusively used as a mono functional purpose, but intervene with possibilities from informal social occasion to more ephemeral event as in Antwerp city [16]. Our spaces on the edges of wet and dry morphology need to intervene for such social activity spaces which are evidently very much absent in Dhaka. In Venice, new landscape infrastructure give new dimension to the city [17]. In Netherlands water urbanism is becoming a major process of city expansions and development new urban areas with engineered land reclamation along with new urbanism. Polder Dikes used as Water



Infrastructure to manage water and introduce new housing areas like Borneo, Sporenberg, I Berg etc.^[18] The City of Amsterdam has adopted integrated water infrastructure with city like four large booster stations used to carry waste water out of the city with eye-catching architectural structure^[19]. Almost 70% of the lands of Amsterdam are reclaimed ^[20] where major part of new housing was developed after 1970's. On one hand Old Amsterdam grew with Amstel River and canal system, on the other hand New Amsterdam is still growing with new dimension of Urban Water Intervention. Water plays a major role in the city of Amsterdam for mobility, open space as well as ecological space. Old city has alternate road and canal grid; on the contrary new city become more diverse and plays a different dialogue with the water. The solution of Amsterdam is with highly sophisticated engineering solution integrated with Urban Design decision. On the other hand traditional eastern cities like Cantho have different approaches. *"In the current investigations, the different elements of water infrastructure no longer relate only to their own networks defined merely by functionality and efficiency, but also to their context of culture, social and ecological process with in the urban matrix"* ^[21]. In case of Dhaka it is essential to combine both traditional features with contemporary urban design decision to intervene for a sustainable solution.

5. POSSIBLE OUTCOMES

Urbanization is a visualization of the city with building, infrastructure and space. Followings are the possible outcome which may achieve through water urban intervention in Dhaka city:

- a. Introduction of urban governance will co-ordinate with local and central government. Different sectors needed for urban governance with different disciplines as needed.
- b. The first outcome will be an analysis of the transformation of water bodies in the city which will give a guideline for further research and design intervention. These analyses will also help to understand the growth pattern of the city related to its water.
- c. The research will give us a guideline for reclaiming and protecting the water bodies in Dhaka city's context as well as possibilities for an integrated water network system. The study will show us the way by which we can improve the edge conditions of these canals and other water bodies making them more accessible thereby reintegrating them to the city which will also work as natural drainage system for the city.
- d. The end outcome will be water urban intervention in specific area to enhance the dialogue between water and city such as replacing the "hard" or engineered solutions by "soft" or more flexible solutions. The research will demonstrate how water system as a hybrid built infrastructure; ecological functions and public green space can serve as fundamental components to change the urban landscape.



- e. The study will develop a policy and a guideline for urban water intervention strategy which will help the city to integrate its water with Urbanism. The dialogue between water and city will be re-established. The wet ideology of hydraulic civilization will give focus for any kinds of urban intervention. Currently, there are urban planning policies but no urban design policy for Dhaka city. The research will enable to give policies on urban design for the city.
- f. The design solution can create a continuous ecological space integrating people which will act as an urban open space that will create new environment for future generations.

6. THE STUDIO EXERCISE

The studio project had multiple methodologies (figure 8) in different phases of the project in both qualitative and quantitative terms. At first phase, literature survey, site survey and data collection for understanding the existing features of the water problems. After literature survey and site survey, data mapping or generation of diagram drawings were made. For site survey different methods were used as data collection tools like reconnaissance survey, observation, interview, photographic and questionnaires etc. Data was also collected from concerned city authorities, professionals as well as city dwellers. After survey and collection of data, analysis was done for understanding the transformation of water system. With the help of maps and diagram by using different drawing tools, data was analysed with the reference of collected data from different concerned authorities and surveys. Simultaneously case studies were also done by the students. The numbers of students were forty eight and they did the exercise in group of three. Sixteen groups worked on four specific sites (four groups in each site). In each site physical, social, environmental studies were conducted with four studio teaches and external specialist of different professionals. After study, design exercise were conducted and each group did a master plan for the specific site (figure 9) highlighting the water network, open spaces, circulation and public buildings integrated with the social and physical context.

The design of landscape infrastructure with master plan was important for those projects. Some projects highlighted the contentious water network and green belt together act as an ecological corridor as well as public spaces. Some projects highlighted different public activity zones integrating new traditional and cultural space like boat museum (figure 9 and 10). One of my supervisee students did a project in 2012 of housing design in the lowlands addressing the hydro culture of this region (figure 11). The project area was in the low-lying periphery of Dhaka city where new land filling is on the way for development. The project addresses the living pattern of the people integrating the water-culture and eco-system of the deltaic city.

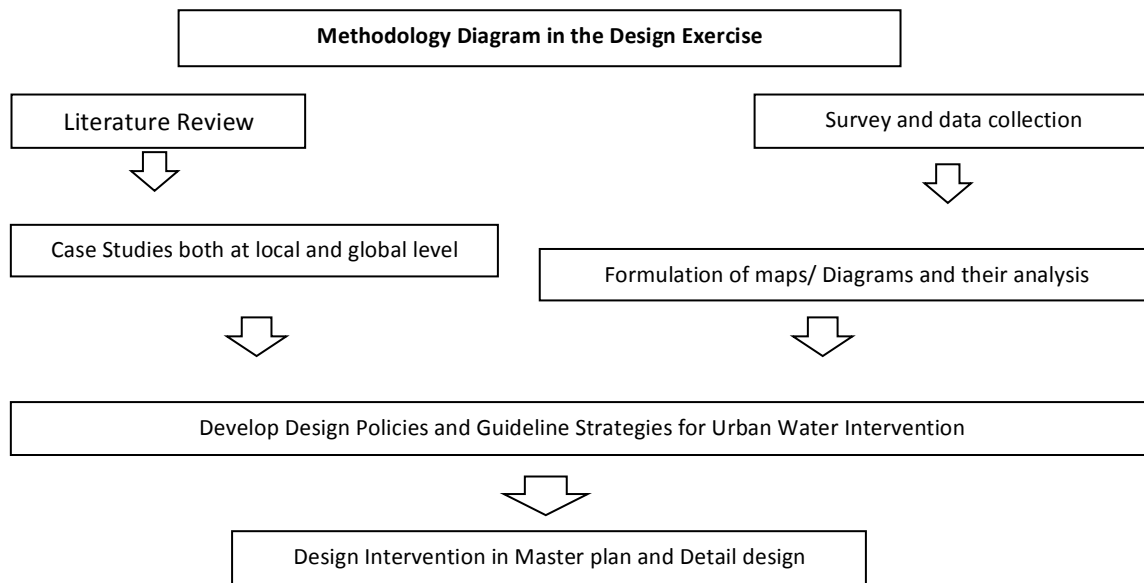


Figure 8: Methodology Diagram



Figure 9: Design Intervention (master plans of students' projects)



Figure 10: Design Intervention (Students' Projects)



Figure 11: Living with water (Project of Labib Hossain for B.Arch Thesis in BUET)

7. CONCLUSION AND RECOMENDATION

The city needs vision for its Urbanism. Urbanization is a quantitative term rather urbanism is qualitative. Water urbanism is essential for restructuring the Dhaka city. The city needs to be a hydrological city rather than a water front city to sustain. The city needs a proper language for the edge between water and land. Water-ground relationship is important phenomenon for water urbanism or an ethos for water. The city needs a hydrological landscape for its urbanism. Our land and water is opposing each other, rather hydrological city needs land and water together. We need a wet ideology for our city, which is at present focusing on dry ideology. We had a wrong concept in mind that dry is civilized and wet is uncivilized. Rather wet theory is more appropriate for Dhaka for its hydrological dynamics. There are the possibilities for urban design, landscape urbanism and intelligent planning to take a soft engineering approach where interventions will work with nature. Our geography is fluid and it has a delta matrix where we need to embrace water for our city. Water morphology need to imagine for our city to live with the water. Rivers, Canals and retention ponds can create water adaptive cities and could create synergies with other important urban components and functions such as mobility system, serving as an open space network for social needs and balanced ecology, supply water for domestic and industrial uses as well as serving as a system for storm water retention and natural drainage. Therefore, this research will be an appropriate step to save Dhaka city from further deterioration and returning its true inherent character. To sustain city need proper urban design policy which could be formulate from these kinds of research.

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The Architectural Features and The Recommendations of The Rectification of The Xiamen Eighth Market

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ABSTRACT

The very keen atmosphere of old market block is in the Xiamen eighth market. There are multiple reasons for locals really like to inhabited by there. With the alterations of Zhongshan Road and the surrounding neighborhood blocks in Xiamen .The development of this ancient blocks has been affected more or less. This is full of contradictions how to protect external architectural form of the store, how to make better use of interior space under the impact of the urbanization and the market economy. Messy and spontaneous formation of market street is resulting in congestion of the traffic line. From the analysis of the architectural features of the Xiamen eighth market, to expound the importance of markets of architectural culture, and To put forward the recommendations of the remediation market space from the perspective of architecture symbols. and the recommendations of the rectification market block of space from the architecture Semiology.

Keywords

market, architectural style, symbol, renovation for space

1. INTRODUCTION

City can not be separated from the market, since ancient times.

The urban development economic theory believed that, the urban economy activity decides one of urban development most elements. The food is what matters to the people, the marketing campaign is closely linked with resident's life. Once prospered the ninth market are substituted for gradually by the supermarket, but the eighth market were actually an exception, its influence was expanding, was not merely the material, but also had the non-material. To fully understand a person, it is necessary to look at the kitchen of his home. If you would like to see a city, then go to the vegetable market. So, you want to understand Xiamen? I invite you to the eighth market take a look at it.



1.1 The formation process of the market of the Xiamen eighth market

This is Zheng Chenggong's military camp is at in 300 years ago. There used to be water transport of goods distributing center in Xiamen. There are many piers, including Dian bao pier, Hong benbu pier, Datie pier, Desheng pier, and so on . Desheng pier also known as Admiral pier. Tongan fishermen, Nanan fishermen had berthing in the Datie pier. Hong Benbu pier is located in Hong Xu Minister Yamen ruins. Coastal territory turmoil time, Hong Xu is Zheng Chenggong's military officer. [1]

Take advantage of the tide comes, the fishermen to sell fresh seafood to the local population. Local hawkers also sell vegetables.

In the 1920 of the 20th century, Xiamen built the first road-- Kaiyuan Road. The above said fish aquatic product rural fair on in this road neighbor.

The 20th century 30's, the eighth market is located between Yingping Road and Guying Road. Yingping Road connected to Kaiping Road and Kaihe Road. Area the Guying Road was fish aquaculture market. This developed for afterwards the grocer has laid the foundation. It is occupying a land area of about 400 to 500 square meters. The internal space was already accommodating more than 20 stalls, sells the vegetables, the fruit, the aquatic product, the meats in indoor business space.

In the 1930 of the 20th century the local population increases, eighth market extended into Kaiping Road, increased to more than 60 more stalls.

In the 1980s, the eighth market expansion Yingping Road agricultural trade market .With an area of 1720 square meters, temporary corrugated belong to the open steel frame structure. The plane assumes the cruciform. The intersection has the octagon turret. [2]

1.2 The current situation of the market of the Xiamen eighth market

Today, but 200 meters east along Kaiyuan Road to the eighth market, looking at the ancient facade, the old Xiamen feeling immediately feel. The Epitaxial length was equal to one kilometer from the transit hub. Contain Kaiping Road, Yingping Road, Kaihe Road, Guying Road and other main roads linear swing. And more interesting is that there are many residents here, where you can see a very authentic old Xiamen life. Xiamen eighth market near the pier, convenient traffic, here is the freshest and cheapest seafood distribution center in Xiamen; half the size of the restaurant is open everyday seafood procurement in eighth market. Eighth market is known for its seafood and snacks around for nearly a century, approximately 750 existing fixed pitch. Eighth market has the most cherished Guzao styles.



When I was writing this essay, eighth market was undergoing a transformation, from May 2012.

2. THE ARCHITECTURAL FEATURES OF THE XIAMEN EIGHTH MARKET

Speaking of the architectural features of the eighth market, but it is very rich. We used the observation method of perspective, into close-range, medium shot, long-range observation to focus eighth marketing architectural features. Close-range is Featured architectural style. Medium shot, is Interesting ceiling space. Long-range observation is Interesting regional patterns.

2.1 Featured architectural style

From two part talk, these are the layout about traditional store, and building facade above the second floor and the second floor.

2.1.1 The layout about traditional store

But to talk about the layout of the store are the traditional Chinese mode, the front counter, back in the operating room or the treasury. Underlying facade door are wooden, suffused with a dark color. The arcade space has become a business space, lost its purpose as a transportation space. The first floor space uses for to exhibit the goods or to act as the storehouse. The upstairs, it is taken shop owner's residence, or rent to those who need it. The underlying traffic space was admitted to the indoor space. Counter position can also be moved to the road, and excavated trenches in the ground to fix the counter. In order to protect the cleanliness of the counter, the store installed outrigger steel frame under the skin along the ground floor beams, covered with corrugated sheets.

2.1.2 Rich facade styles of the second floor and the second floor above

Although in some arcade grow the roots of trees, some put up the chimney, and some were built, lost their original appearance.

However, part of the arcaded facade forms well-preserved. People can see the architectural modeling considerations and the craftsmanship of the builders.

If the canopy is not removed, and I'm also not found the eighth market arcade has such a rich facade forms.

Fine lintel decoration (see Figure 1), the superb craftsmen used cement to complete these patterns carved on the wall. Red brick and white seam of arcade corner walls (see Figure 2)



were in stark contrast with freshly trimmed window frames and pilasters. It is indeed Professional maintenance. Reinforcement of cornice (see Figure 3) was painted brilliant white, contrasted with old walls. Fine streamline line foot and treasured vase decoration in balcony (see Figure 4), exquisite workmanship lets me be startled. The cement carving flower proportion is moderate. Exterior wall using Rouge-brick masonry (see Figure 5), and is by far the best preserved. Brick moldings on Parapet are very rhythmic, coherent and natural. Rouge-brick masonry is unique brick art of the Minnan region.



Figure 1: Fine lintel decoration



Figure 2: Red brick and white seam of arcade corner walls



Figure 3: Reinforced cornice



Figure 4: fine streamline line foot and treasured vase decoration in balcony



Figure 5: Exterior wall using Rouge-brick masonry

2.2 Interesting ceiling space

As a large market for seafood, the canopy is the necessary facilities.

First, Xiamen's plenty of rain; the umbrella is the goods which the pedestrian must bring along with. The canopy likely is the market umbrella. The stall keepers have supported the canopy. In order to cause the seafood to be bright, they have placed the seafood under the



awning. And they worried the rain water has diluted in the trough sea water, affects the seafood quality.

The eighth market canopy is set up between opposite arcade. The following pictures reveal a message (see Figure 6). That is the importance of the canopy. For the purpose of transformation, cross-shaped canopy demolished. But the shopkeepers have supported many large umbrella and shade nets. Contradictory, if the recoveries of the canopy, then you see less than arcaded facade beautifully.

Moreover this roof function is not merely rainproof, but also provides the interior lighting, has been hanging very many light bulbs on the steel frame. While shops for the convenience of customers to choose the goods, partial lighting is also set on the counter. Customer can clearly look for the goods in the space. The market is in place from morning to night. Markets are doing business from morning to night. The night market is equally bustling with the daytime.



Figure 6: Yingping Road after the dismantling of canopy

2.3 Symbolic regional patterns

It is surrounded by a lot of houses in the market, along with the eighth market development, and today has become old and high-density residential areas (see Figure 7). There are Bagua Cheng Lane, Jiutiao Lane, Shiyi Jian Lane, Hezai Gan Lane, Datie Street, Daoping Road near the market.

Kaiping Road is divided into three sections, respectively, the sale of cooked food, vegetables and groceries. The Longquan Temple is Buddhist architecture (see Figure 8). Inside the



temple is worshipped Bodhisattva. The devout Buddhists in Xiamen were greater than the number of Christians.

The Cathedral, Zhushu Chapel in the Kaiyuan Road. The infield section of the eighth market is precisely a cross, and this is a coincidence this? Or the familiarity of local church, thus affecting the city's self-organizing form. Yingping Road that length is approximately 190 meters. The east side aims at Lujiang Road, west side aims Sibe Road. Guying Road that length is probably 140 meters, its southern section perpendicular to Kaiyuan Road. Yingping Road and Guying Road, which the two roads constitute symbolic Latin cross. This is precisely a core part of the eighth market. It is a symbol, from the geometric figure. This symbol has been deeply printed on the satellite map. Cross is easy to spot on a map, will not confuse other streets.



Figure 7: High-density residential areas of Xiamen eighth market



Figure 8: Buddhist architecture: the Longquan Temple

3. THE RECOMMENDATIONS OF THE RECTIFICATION OF THE XIAMEN EIGHTH MARKET

The past memory could not forget. A lot of tourists and locals feel that the eighth market is where “the most Xiamen”.

3.1 Two different opinions

About this transformation, I have heard two different opinions.

The first viewpoint is as follows. The eighth market carries on the promotion transformation, scheduled for completion at the end of September. The main projects of reconstruction of



the old market included underground drainage system and the road surface, as well as the original stalls. We want to change the status quo of the "dirty and messy".

Then it is a different view. The transformation of the old city turns a city full of warmth and memories into history debris, and then a piece of thoroughly crushed, and allows them to disappear permanently. Stele in Hong Benbu street, water distributing point in Danshui Lane, water well in Guying Road, and so on, whether these traces of history with the pace of reconstruction and gradually disappear.

3.2 Referencing examples

We look at how to transform the old market in Istanbul and Barcelona.

GAD designed a concrete deck triangular-shaped shell that covers all the space that invites visitors to enter through large openings at street level. The new design injects a contemporary and pragmatic solution, while preserving the history of the fish market. Both the internal market as its outer covering is used occasionally for art events. [3] This Besiktas Fishmarket design methods can be used within the range observed in the close-range perspective.

The proposal for the rehabilitation of the old Santa Caterina Market, located in the Ciutat Vella district of Barcelona, involves action on the urban tissue adjacent to the existing structure to streamline its location. At the same time, the intervention aims to mixed and confused with the original structure. Cover becomes more important in the facade of the building, with the disadvantage that is only visible from the air and, for now, there is the possibility that there is a viewpoint which would cover. [4] This rehabilitation of the old Santa Caterina Market design methods can be used within the range observed in the Medium shot perspective and Long-range observation.

Both of these designs are to deal with market relations with the surrounding historic district.

3.3. Thinking on protection and reconstruction

Market transformation should not be done overnight, to be sustainable and to protect the original traces of the traditional culture and architectural features.

3.3.1 Market environment or the living environment

This Besiktas Fishmarket is Protection of the living environment of the original, and surrounded by a certain distance.



Lies in this compared with the contradictory place, the eighth market gathers the human spirit is not merely comes from the customer, but also comes from the inhabitant.

This mix kind of Commercial–residential environment is Xiamen's characteristic, I also may see in Xiamen's other places. This is perhaps the portrayal of the usual life of the ancient heritage of coastal fishermen. Even in the high–speed development, people still like the market, like the life.

The rehabilitation of the old Santa Caterina Market wants to make history in the building, with a great roof structures. The city and the market can not be split, and then we have to accept them.

3.3.2 Sustainable transformation

The traditional market cannot turn the supermarket. Each supermarket goods are similar; we will find not many types of fresh food and seafood. Why is this? Many traditional shops, low prices, and profit margins are low. This one, they can not afford the cost hydropower and rent as supermarkets. Several old market is in Xiamen is after reconstruction, land prices rising, they can hardly compete with newly opened super markets, withered in abundance.

There may be a need to consider the existing fire safety issues of the location. The transformation of the wire and cable also must be considered. With respect to energy, solar energy technology can be used in the multi–storey house in the roof has a lot of room to use.

In terms of protection of architectural features, we should take the attitude responsible to history. This is a great project, need experts to participate in the drawing of the construction drawings, specialized craftsmen to participate in the construction, and expertise in quality control for acceptance.

The functional partition problem, you can refer to the design of the two markets. To consider now is to build a kind of roof, is to adopt the old shape or new consideration. How to do both shelter for the market space and do not affect the arcaded facades overall sense. This as if is a difficult problem, but I thought we the designer may solve this problem.

3.3.3 For the next generation

With the pace of real estate development, many places in Xiamen Island have been developed. More and more supermarkets substituted traditional Market position. Everything is new, can not find the mark in the past.



What kind of environment we want to leave to future generations? We think clean is really be? I have witnessed a reconstruction on the Zhonghua road, Centuries-old arcade building become construction trash in an instant. Now here is the very big shop. They Sets up the surface to defer to beforehand appearance reconstruction along the street, but the line foot is such roughness and the stiffness. The sham forever is unable with the original work to compare.

I saw in the eighth market such a special building. Lujiang Kindergarten is located on the Kaiping Road (see Figure 9). After business hours, parents with children through the eighth market, teaches children recognition recognition of marine fish, communicate with the store. Then forward a hundred years there may be a lot of kids play through the arcade, leaning against the wooden door side, listens to my grandfather talk about the history of Xiamen. After 100 years, Xiamen eighth market will survive? Beautiful arcade facade will survive? Flood Street in this part will be in? Old folk customs of local people still exist? What type is Xiamen in descendant's eye? This is not alarmist; the key is how we want to leave a Xiamen to future generations.

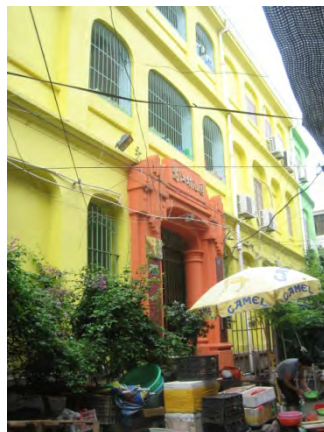


Figure 9 : Lujiang kindergarten

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Symphony of tradition and modernity: Crossroad to Think and Re-think Architecture

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ABSTRACT

Enlightened ancient wisdoms sprouting from Asia's rich resources had translated life, philosophy, health, architecture, art etc. into a new expression, incorporating spiritual dimension with the physical, man with cosmos. With time, these myths have changed; human civilization has come a long way into today's era of globalization. Where is architecture proceeding in terms of tradition and modernity? What were our traditional wisdoms? Should the built environment be based on those tradition, be universal or a mix of both? Questions are numerous; answers with varied approaches, debatable. This paper is a humble effort to discuss these issues briefly and open doors towards thinking and rethinking architecture with a new vocabulary.

Asia, a rich reservoir of unbeatable wealth of ancient wisdom has antique building science that still amazes us despite our ability or failure to address them in practice. Wondrous examples of the past shine like diamonds in the dark mines and mesmerize us with their age old transcendental rhapsody; these range from the traditional domestic architecture to timeless heritage sites. Contemporary architecture deals with many issues. Global connectivity and IT revolution allow free flow of information and ideas having both good and bad sides. New paradigm of sustainable architecture, heritage etc. are widely addressed while to replicate global designs or create international charisma some works involve insensitiveness towards local context and tradition. It's a crossroad where evolving and strengthening a new vocabulary of Architecture is vital. To do that, we will have to continue our efforts in looking into deeper meanings of architectural vocabulary by integrating tradition and modernity and create a new symphony. We create our own destiny to an extent; we either pay for it or get blessed. It's upon us to choose the path.

Keywords: *Asian Architecture, Tradition, Modernity, Spiritual dimension, Integration*



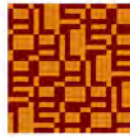
1. INTRODUCTION

The three A's, Asia...Asian Architecture...Asian Architects are three key issues that are relevant to this paper. Asia is a continent of wonders; Architecture here has a marvelous heritage that continues to teach us wisdom and knowledge till today. As architects we build not only space but dreams too. With the mystic philosophical background in Asia, philosopher architects emerge to work close to life within and beyond. We, as architects help people to dream and turn those into reality... making it a whole process of constructing dreams for us and for others. Any architectural entity or man-made structure physically may stop growing but actually it continues to grow along with the lives that grow within it, and together they become a good adventure. This is architecture, an inevitable adventurous part of life and mankind.

This paper addresses the issues of tradition and modernity or modernism related with Asian Architecture and tries to see where it stood in the past, stands today or where it may stand tomorrow. Should Asian Architecture relate to modernity only or be based on its own tradition and culture? Be globally universal or be characterized by individuality? Questions are numerous; answers with varied approaches, debatable. The paper discusses these issues briefly and makes an effort to open doors about thinking and rethinking architecture with a new vocabulary.

2. THE FOLDS OF ANCIENT WISDOMS... IMPRISONED BEHIND THE MUTE

Tradition refers to something which delivers, transfers and transmits in a quasi-organic manner, the customs, beliefs and behavior of a group of people through generations [1]. It is usually contrasted with the goal of modernity and should be differentiated from customs, conventions, laws, norms, routines, rules and similar concepts. Enlightened ancient wisdoms sprouting from Asia's rich resources had translated life, philosophy, health, architecture, art etc. into a new expression, incorporating spiritual dimension with the physical, man with cosmos. Thus, Asian architecture traditionally embodies two aspects: physical and metaphysical and is glorified with ancient building sciences like the Vaastu Shastra, Feng-shui or Geomancy. These teachings still amaze us despite our ability or failure to address them in our practice. The principles of the four to five thousand old Vastu Shastra were based on how nature's laws affect human dwellings while designs followed directional alignments. According to it, the universe including human bodies is comprised of five basic elements namely Earth (geomagnetic energy), Water (gravitational energy), Air (wind energy), Fire (solar energy) and Space (cosmic radiation). All these forces have a powerful influence



on us as well as on the environment. Vastu Shastra guides to arrange man-made environments to be in alignment with these natural forces. If we are not aligned with solar and geomagnetic forces we may experience bad effects similar to trying to go against a current. In our context, the east is the source of solar, ultra-violet rays, north is the source of magnetic energy where as harmful infrared rays come from the south and the destructive gamma rays from the west. Each of the elements is associated with a particular direction: water in the northeast, fire in the southeast, earth in the southwest, air in the northwest and space in the center. The actual life force of this earth, the place where humans reside is the Vastu. Using the principles and guidelines of the science of Vastu Shastra we may have a built environment with proper directions and balance of elements in their proper proportions, to gain the benefits of life.

Feng Shui literally meaning wind and water originated in China over 4000 years ago to embrace the idea of living in harmony and balance with our environment. It is the study of energy and how it affects people. This ancient art deals with the placement and location of structures to harmonize with the surrounding environment and is based on the balance of the yin (feminine) and yang (masculine) elements as well as on the harmony of the five elements (gold, wood, water, fire and earth) [2]. Thus, it emphasizes the emotional and intangible aspects of design and the articulation of space, form and structure in such a way that the person /s using those spaces may feel a sense of harmony and balance in terms of spatial experience and natural setting. Both these sciences incorporate the flow of Universal energy called Chi in Chinese culture and Prana in Hindu and focus on the well being of human lives [3].

In the late 1970's Dr. Ernst Hartmann discovered a grid of magnetic energy lines known as Hartmann Grid which radiate from the earth's surface and circumscribe the globe, oriented both in the north-south and east-west direction. The energy fields are called Bio-Electro-Magnetic fields (BEM) [4]. Both positive or good energy fields and negative or harmful ones like in underground water streams, faults or cavities in the earth exist which directly or indirectly affect us, our well-being. Our forefathers had attained special wisdom to understand the exact and intimate knowledge of these energy fields as well as their direct and subtle effects on human body. They had developed ways and means to master these fields and manipulate them according to the interest of human lives. Buildings, cities or landscapes were designed conforming to these sciences. Wondrous examples of the past shine like diamonds in the dark mines and mesmerize us with their age old transcendental rhapsody; these range from the traditional domestic architecture to timeless heritage sites. In Bangladesh, the ancient city of Pundranagar, presently known as Mahasthan (3rd century B.C) embodies the mandala based buildings and settlements. It is a rectangular city



elongated in the north–south direction. Harappa and Mohenjodaro in Pakistan are evidences of pre-vedic roots of Vastu. Even the 3000 years old burnt bricks and terra-cotta from Harappa were used to built a railway embankment in 1915 and those bricks were strong enough after so many years to hold up the trains that travelled over them. Examples reveal that Chinese cities were planned according to the principles of Feng Shui, with the north–south axis and grid iron pattern. In Japan too, the practice of ancient wisdoms are seen in building cities and structures. The pit dwellers of the Jomon period (c.8000 B.C) who were the earliest builders of Japan or the surface dwellings (300 BC) adopted the principles of orientation incorporating aspects of nature [5]. The Vedic huts of the Indian sub-continent, the traditional Bengal house, the Mongolian Ger also conformed to age old wisdoms of building sciences and symbolism. Vidyadhar's Jaipur (1720) was based on local climate, materials, technology, social and symbolic needs. Early temples, monasteries such as Sompur Mahavihara popularly known as Paharpur Monastery of Bangladesh or Borobudur of Indonesia are examples that complemented symbolism and architecture.

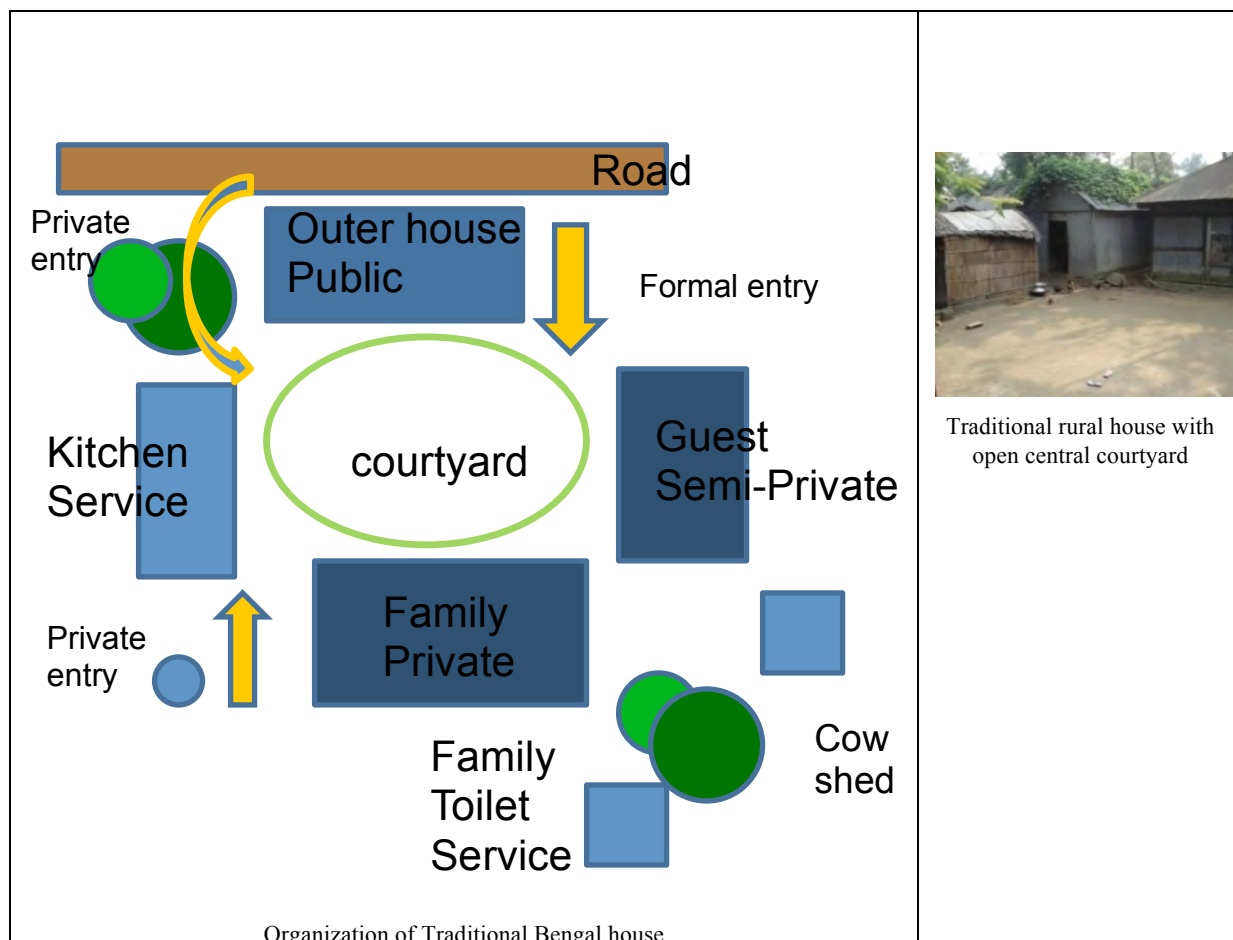
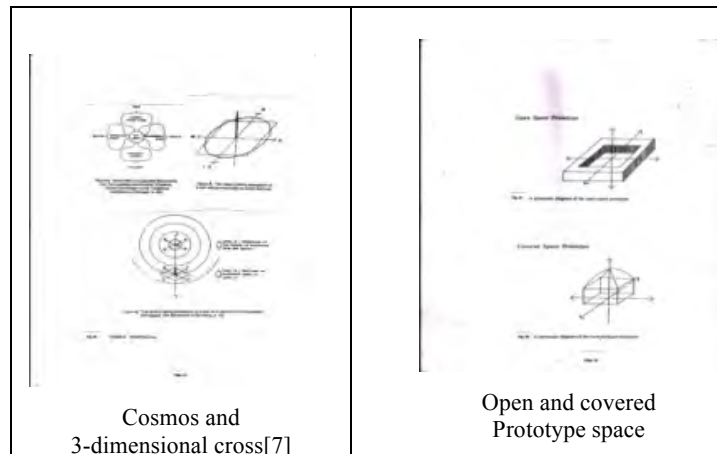
2.1 The Principals of Spatial Order in Traditional Bengal Architecture

Bengal's traditional architecture includes a wide range of building typology and built environment. The physical forms include an inherent geometric structure of the three-dimensional cross, identified as (i) expression of the cardinal directions which is denoted by building alignment with the cardinal directions of space (ii) expression of the architectural centre reflected in the organization of space around a centre and (iii) expression of the central vertical axis which refers to the development of spaces around a central vertical axis. These again are revealed in two prototypical architectural expressions: The open space prototype and the covered space prototype [6]. The open space prototype refers to open to sky space confined by surrounding structures like the centralized courtyard structures in the typical rural homesteads.

A traditional Bengal rural house usually is comprised of loosely spaced detached structures arranged around a courtyard known as the "Uthan." The individual structures are oriented in the four cardinal directions and reflected as the covered prototype space. The courtyard on the other hand is the open prototype space through the centre of which lies the central vertical axis. Again, the housing units or huts, usually rectangular or square are covered by sloping roofs. Here, too the cardinal directions are implied by the four facades, entrances or openings of the hut, where as the central axis refers to the ascending directionality of the curvilinear or sloping roof at the apex. Together the horizontal axes and vertical axes create the three-dimensional cross.



Later, with the advent of urbanization, new urban structures also took the form of this open and covered space prototype. But here, the open to sky courtyard or central hall was surrounded by closely spaced rooms. Buildings in Old Dhaka depicted this house form until new developments, especially the apartment type buildings replaced them.



Traditional rural house with open central courtyard

Figure 1: The Traditional Bengal Architecture and the three-dimensional cross



In the Buddhist, Hindu and Jain tradition, the myth of Mount Meru spatializes the cosmos into the structure of a three dimensional cross and are manifested in religious structures. Mount Meru rises from the centre of the cosmos and is surrounded by four continents at the cardinal directions of space corresponding to four quarters of the cosmos. Mount Meru, the lofty cosmic pillar is the vertical axis intersecting the cross of the four horizontal directions demarcated by the four continents or four petals of a lotus. Following this concept, architecture of the vihara temple or stupa is underplayed by the three-dimensional cross. Concentration of energy takes place around the vertical axis passing through the apex of the stupa. These are exemplified in the 7th century Sompur Mahavihara, one of the UNESCO heritage sites of Bangladesh. The Monastery lies in the north-south axis with a central temple. Indonesia's Borobudur, built as a single large stupa, and viewed from above takes the form of a giant mandala. This embodies the Vajradhatu Mandala (Diamond World Mandala) extensively used by the Vajrayana Buddhist tradition to represent an ensemble of five Jina Buddhas reflected by the four cardinal directions plus the centre. [8]

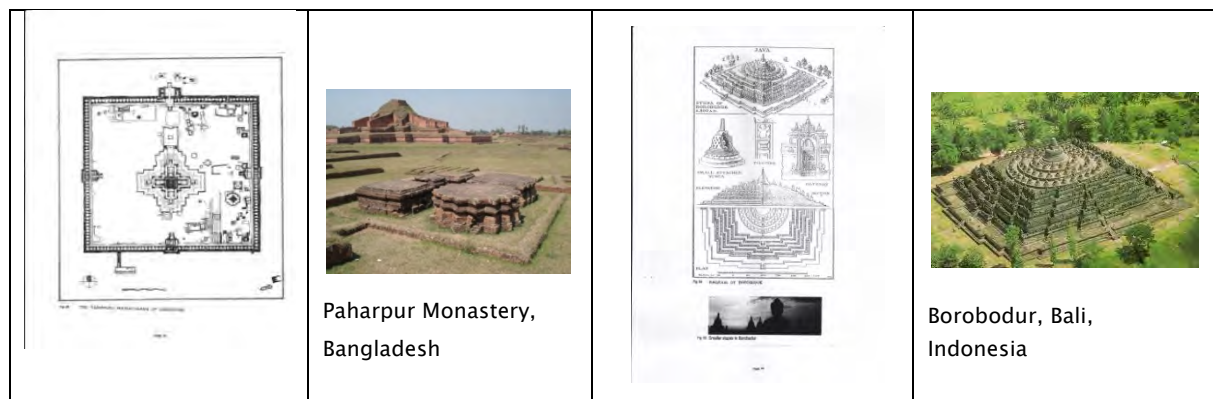


Figure 2 : The Paharpur Monastery in Bangladesh and Borobudur in Indonesia

2.2 The Significance of Shape and Mystic Symbolism

Architecture, earlier was not only a creation of form to define space, but also considered inherently a sacred form known as the three-dimensional mandala. Central to it is the Purusha representing man in two principal aspects: human and cosmic. In Vedic times, the circle was the cosmos; man defined himself and his actions in relation to the cosmos. Buildings and cities were constructed as models of the cosmos and generated by magic diagrams called Vastu-Purusha Mandalas. These represented Energy-fields, the centre of which is both shunya (nothing) and bindu (the source of all energy). The ground underneath the building is said to consist of either eighty one or sixty four squares which are derived from a large square sub-divided into smaller squares nine or eight on each side.



According to South Asian literature the middle of the ground is an object of veneration where the central vertical pillar exists [9]. The basic form of most Hindu and Buddhist mandala is a square with four gates containing a circle with a centre point. Each gate is in the shape of a 'T' [10]. These mandalas are concentric diagrams, which often exhibit radial balance and have spiritual and ritual significance in both Hinduism and Buddhism. Thus, such metaphysical symbolic notions manifested within the physical form of architecture enabled the presence of life energies and their positive impacts on those spaces as well as on the well being of the space users ie. human beings.

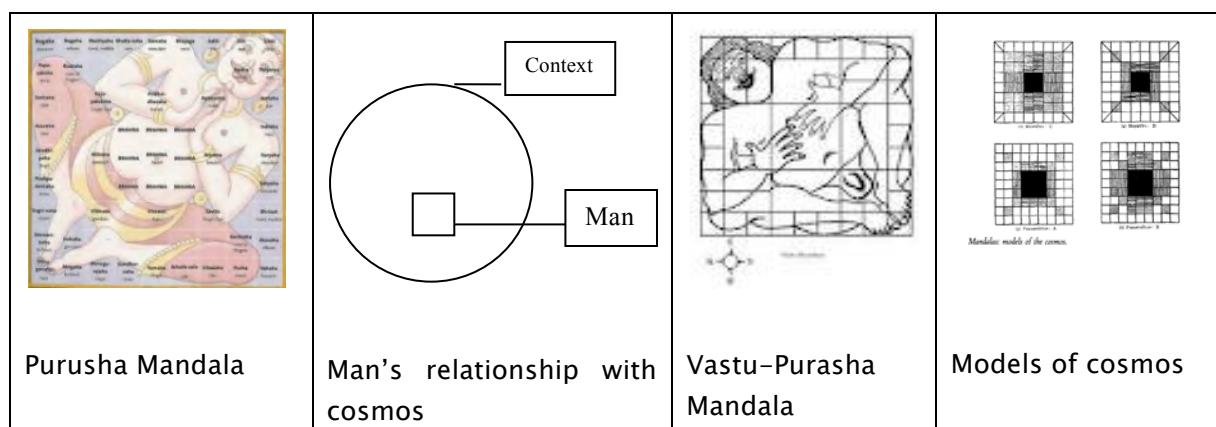


Figure 3 : Mandalas and the Models of Cosmos

With the advent of Islam, the circle changed; man's context became partly a judgmental relationship with an all powerful Divinity and in part a social contract. The Charbagh of Islam reflects this notion. Western influence changed the context again where the circle became the Age of Reason with notions like rationality, science and technology [11]. In contemporary times, the circle is changing once more bringing in sustainability, ecology or concern for nature and environment. In all cases, the human aspect of Purusha remains constant as the circle of context changes either due to external forces or internal metamorphosis. Also, temples of ancient times were related to the parts of the limbs of the human body signifying the Purusha or cosmic man. The structural and material honesty of those constructed form were derived from the spirituality of the joint.

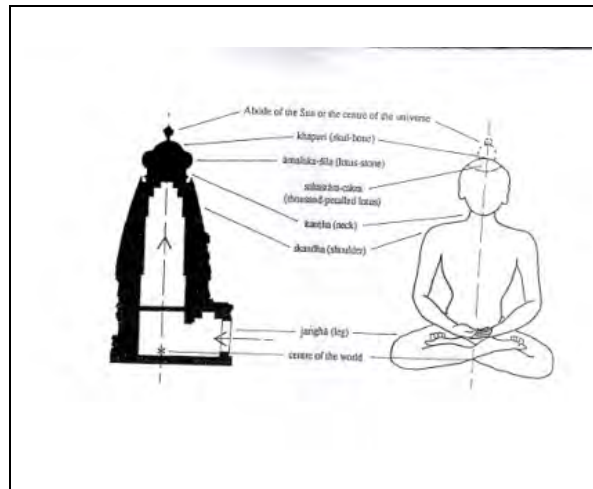


Figure 4 : An analogy between Rekha temple and a Yogapurusa [12]

The science of Geomancy enabled architects of those times to create forms that were in harmony with the laws of greater creation mysteries. Those forms actually created architectural magic by outgrowing time. Magic displayed itself in numbers, sacredness of proportions and materials, mysticism of harmonics and colors as well as in the selection of the right location at the right moment in time [13]. Materials in nature also exhibit positive or negative energies. Like, sandstone or marble have very high positive energies. In our technological world, man is confronted not only by the nature created energies but also by many more negative energy radiations from different sources; mentionable are reinforced cement concrete buildings or structures and other synthetic materials. Steel reinforcements in structural members create a highly charged environment and to neutralize them good earthing becomes necessary. Any form, geometrical or other, also creates a concentration or dispersion of cosmic and earth energies which are either beneficial or harmful to man. The Kirlian photography experiment revealed that different forms have different radiation patterns. Further experiments showed that the square, triangle and rectangle seem to have strong impact on the energy fields of the body as the body field progressively diminishes. The circle on the other hand restores the energy lost due to other forms [14]. Thus, in the human body, each cell receives fundamental energies in the form of vibrations from the earth and nature's variables. So, making the right choice of materials and form, ensuring proper orientation to harmonize with the climatic factors, having good daylight and sound insulation etc. can accommodate these teachings into the buildings.

3. THE WAVES OF CHANGE... DEALING WITH MODERNITY

Change is the key to life and is essential to meet emerging needs and challenges. Modernity comes as an answer to such challenges of time as a result of social and political revolutions



as well as technological developments. What is modernity that counters tradition? Modernity refers to the idea of change in a desire for progress and emancipation. Marshall Berman states that 'to be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world– and at the same time, that threatens to destroy everything we have, everything we know, everything we are. This is where we need to rethink about being modern. Should Asian architects leave behind their age old traditions and teachings or integrate them wisely as much as it is needed to bring modernity.

Asian architecture too, like other countries all over the world has gone through many changes both of different periods and of styles to become modern. There was change in concepts, materials and technologies over time. Ancient South Asian history reveals that till the Mauryan Period, architects or craftsmen used wood and brick to create buildings of cosmic symbolism and metaphysical context. The Mauryans then introduced stone as building material but followed the earlier tradition of wooden crafts and Buddhist religious symbolism. Later, the Muslims brought in a significant change by introducing new building technology and use of mortars and arches. Craftsmen with meticulous skill worked with stones and incorporated the wisdoms of Vastu Shastra, like the central pillar of the Diwan-i-Khas in Fetehtpur Sikri. Then, colonialism brought its own grandeur and style. Thus, in each era, modernity was introduced for that time which came into being as a result of cross-cultural intervention. But during all those time, in addition with new emerging materials and technology, the spiritual symbolism or cosmic notions were achieved through the philosophical backdrop, use of organic materials and nature friendly form and organization. Thus, architecture attained a significant place with the blend of the metaphysical and physical.

Then came Modernism as an era. Modernism, Post-modernism, Neo-modernism or International Style of architecture, all are themes and myths that have influenced the architects at different times. Although, in the west early modernism started at the turn of 20th century, but in South Asia it came later. Modernism began in the Indian sub-continent during the 1940's despite its roots being of much older times related to the colonial experience. This modernism was articulated about an ideal of blurring boundaries between the East and the West, about creating a universal civilization and history [15]. In Bangladesh, it started during the 1950's whereas by the end of this decade architectural modernism became quite established in South Asia.

During the long way to enter today's era of globalization and attain modernity, many traditional teachings have become imprisoned behind the mute concrete and glass walls of



new architectural developments. Many of us, architects have forgotten that architecture flies beyond addressing mere functional, aesthetic and economic terms and that there is a vast sky to explore the spiritual dimensions that has been taught by our ancestors. At one stage of architectural development, to bring modernity in architecture some of us, architects had started following western building trend blindly. We began confusing the role of nature sensitive design in people's physical and mental lives while practice of ancient wisdoms in the built environment started to diminish. Global connectivity and IT revolution allow free flow of information and ideas having both good and bad sides. To replicate global designs and endow an international outlook, we often ignore our tradition and culture; make insensitive use of materials and technology by mistaking foreign products of the global free market being modern and thus bringing threat to sustainability. Should this be the way to progress?

To go for things that are different from what exists often becomes the important thing irrespective of conforming to any basis of reference, style, history or tradition. That is what we do when we imitate global designs suited for other countries or for different contexts. This is the negative effect of modernity. Sometimes, there might have been some reluctant additions to give a touch of the local context with modern interpretations, but those were not enough to serve the purpose. Thus, architectural expressions at times have imitated western vocabulary making the cities look like any other contemporary city of the world, pigeon hole boxes or glass enclosed air-conditioned boxes making cities look like concrete jungles. This to an extent had given rise to monotonous sameness in the outlook of buildings. Modernity was confused from its noble gestures. Regarding insensitive architectural works, "Father" of LEED, Robert Watson had mentioned, buildings can be categorized as the most and worst polluting human activities. Thus, it is essential to make them more intelligent." On this point, as architects we are responsible in designing with more sensitiveness and intelligence to create sensitive and intelligent buildings.

4, SYMPHONY OF TRADITION AND MODERNITY ... CREATING A NEW VOCABULARY

Master and conscious architects have never forgotten to blend tradition and modernity and this has been proven over time that such integration of concepts and philosophy gives rise to priceless architectural works. With those inspirations, architects are continuing to explore new directions based on culture and heritage. They do not confuse modernity blindly with the western notion of modernism but accept high technology as universal and capable of



using them appropriately in its context. In this regard, the blend of tradition and modernity is evident.

The Institute of Fine Arts in Dhaka designed by late Master Ar. Muzharul Islam had announced the commencement of Bengali Modernism that took a different path from the then existing stigmatized colonial or hybridized traditional form. But he had successfully integrated the local context, its climate, materials and basic requirements of traditional wisdom. Thus he had created a symphony of tradition and modernity. According to this master architect, modernism means more than an architectural vocabulary, it means above all an alternative ethical and rational approach geared towards addressing the social inequities. Another strong example of modernism is the world famous Jatiyo Sangshad Bhaban (National Parliament Building) Complex of Dhaka designed by Ar. Louis I. Kahn where tradition and modernity harmonize with each other. Ar. Ashraf described Kahn's Parliament building as a centralized volume with hierarchical rings of space. The plan reflected a mandalic formation with an order of a nine square grid as suggested in Florindo Fusaro's analysis where the explicit forms, the spatial concentration and the artifices of light are orchestrated as if to express the inexpressible, the sublime "emptiness of the centre."



Figure 5: Two examples of architectural expression in Bangladesh to symbolize tradition and modernity

Thus it refers to the centre of the cosmos that the paper has earlier discussed and shows how Kahn had combined the spiritual dimension with the physical and embraced tradition and modernity together. Le Corbusier worked in India with the compassion towards local context and tried to understand the Indian traditions and rituals while he went deep into the roots to find out what was needed for the people. The master architect had created a new vocabulary for the then contemporary India by making a fusion of both tradition and modernity in his buildings in Chandigarh and Ahmedabad and in addition brought a connection with cosmological phenomenon. In different countries of Asia, similar endeavors



had taken place, but on the contrary, in each country works that were insensitive to tradition have also continued to go on.

‘Nature is old and wise and there are plenty of things that we can learn from it.’ But, even after knowing that incorporating nature in architecture is vital for human well-being and development, we compromise with certain modern technologies to diminish the age-old practices. However, with the growing awareness of sustainability, these concepts are reviving and can be strengthened furthermore with added research works and investigations. Martin Heidegger’s (1889–1976) concept of the fourfold is to engage the earth, the sky, the mortals and divinities into architecture and thus engage nature and the spiritual dimension. All four elements are unified through human beings such as mortals, dwellers, builders and thinkers in a building process [16]. It proves that even recently, philosophers are taking or learning from the ancient wisdoms that prevailed earlier.

The notion of modern architecture has its own traits and from the teachings of western architects we also had benefited a lot. We came to know the merits of Frank Lloyd Wright’s “Form follows function” and learnt how simplicity and clarity of forms and elimination of “unnecessary detail” can give rise to good architecture. Modernism has taught us the use of visual expression of structure (as opposed to the hiding of structural elements) ie. honest use of materials rather than concealing or altering the original to represent something else. Industrialization and consumerism has enabled us to use varied industrially-produced materials or the adoption of the machine aesthetic. We have tried to give visual emphasis on horizontal and vertical lines rather than classical curves and motifs. All these are praiseworthy and hence taking in such modern elements and features in architecture are understandable. The only point is that their integration should be carefully done to complement the context.

In recent years, architects consciously are designing sustainable architecture and going green to have environ-friendly living scopes. In Bangladesh too, architects are striving to work with more sensitivity towards environment. The Grameenphone Corporate Headquarter building in Dhaka incorporates the traits of architectural modernity by dint of its use of materials, technology but at the same time integrates symbolism, tradition and green features like waste water treatment plant, Rain water re-charging, reduction of solar heat gain, recycling condensed water etc. In this conference city Bali, WOHA Architects have designed the Alila Villas Uluwatu Hotel which is a fusion of modernity and traditional in terms of its context, material use and form. The Taipei 101, the 508 meters tall, 101 floors (above ground level) and 5 floors below is one of the tallest green building complex whose architecture have been inspired from traditional notions. Architects all over Asia are trying to



focus on minimizing the adverse effects of the built environment on nature and on human health. Since architecture is a continuing, open ended question, so the process remains as a form of enquiry as to how much traditional notions would be incorporated and up to how much we would limit ourselves to bring modernity.

To bring about a successful integration of tradition and modernity in our architecture few things need to be focused. First of all, during the conceptual level, the spiritual dimension or metaphysical elements need to be emphasized. Overall planning and design, materials as well as technology then should be employed such that they are energy conscious and nature friendly. Thus, buildings should be designed appropriately to respond to local climatic and environmental context. Attention should be given such that there are reduced strains on human and natural resources as well as lower long term energy consumption pattern. Conflicts might arise in such efforts, like use of wood to initiate nature-friendly materials but at the same time the high demand of wood required for the construction industry would give rise to the question of resource saving. We have to think about an optimum solution while research works on new nature friendly materials can come up with good solutions. Also, formulation of building design guidelines should be initiated to strengthen all these efforts. To promote such an environment for architecture, not only architects, but students of architecture and general people of the society should also be oriented to understand these issues and awareness programs should be taken to promote these ideas and thoughts.

5. CONCLUDING REMARKS

Charles Correa in defining architecture in terms of transformation stated, "Architecture is myth-based and these myths change with time; new ones come into being, are absorbed, ingested, internalized and finally transformed into a new architecture." In contemporary times, the context of the circle, mentioned above gradually is transforming into the myth of concern for environment and ecology coupled with technology. Thus the new architecture for Asia can be the blend of modernity and tradition, a synthesis of the mundane and the sublime. 'Self' as already depicted in ancient philosophy must be tuned with the surroundings while architect will also be a philosopher who would make an effort to achieve the metaphysical goals in the planned physical environment. It would be an act of fool to ignore the modern day technologies and concepts but we may certainly integrate the ancient wisdoms in our thought process and approach to design so that we may explore more and more to find another new meaning, a new dimension or a new vocabulary of architecture.

It is high time that we become aware of such issues and set the boundaries whether we would blindly adopt global designs and modernity or maintain a strong influence of our culture and tradition, whether we would let global consumerism and technology dominate



traditional wisdoms and spiritual symbolism. May be, what is needed is the blend that can create the new vocabulary and together a symphony of tradition and modernity may emerge linking the past and present and creating a new world of well-being for future. Finally, we have to remember that all we do goes to the well-being of mankind.

Each if the countries of Asia has its own tradition and building heritage. Again they have some common attributes belonging to the same continent. It is like the fingers, unequal and different in its attributes but together form the magic hand of ours to perform so many special functions. Each finger has its own power to heal through the powerful treatment called Accupressure, another sector of ancient wisdom. ARCASIA countries like the separate fingers are rich and powerful in themselves with their own attributes and resources. But together as ARCASIA they can move together with some common goals to achieve human well being maintaining at the same time, their own individual identity. The art of geomancy can be used in city planning, residential buildings or even in commercial buildings to suit the individual contexts. To integrate these ancient learning, ARCASIA architects can work and share knowledge; individual architects can execute those learning and integrate them in the lay-out, siting or orientation of buildings, entry and access, form and also the dimensions and details, interior layout, use of water according to the guidelines of these art of geomancy. To fulfill present day need, effective technology with the use of available materials as well as employing maintenance free materials, incorporating energy efficient sustainable design, like creating natural cooling system, introducing rain water harvesting etc. would benefit architecture as well as human lives to a great extent. ARCASIA countries as one entity can proceed to fulfill these objectives.

The importance of the ancient wisdoms would never fade away. There is also no conflict in being modern. But side by side to accepting modernity, using glass, steel or concrete or other new technological features and design forms, we should remember that it is the underlying sensitivity towards local tradition and context that is important. It is our responsibility as architects to, choose the path and we can do that with confidence if we accept our age-old learning, integrate our context ie culture and heritage and intelligently adopt appropriate technology. With the integration of the past and present knowledge, Asian Architects can inevitably excel and dominate the global arena. We create our own destiny to an extent; we either pay for it or get blessed. It's upon us to choose the path.



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Faithfully Unfaithful In Search of Personification of Form

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ABSTRACT

The rapid growth in the Asian countries during past two decades has resulted into a transformed built landscape. We all are witnessing unnatural pressure of development in culturally rich built heritage. Our cities experience the fast disappearing and struggling heritage, of its monuments, rituals, customs and myths, heading towards a crisis. It's a crisis of identity, of values and carrying forward great legacies of Art and Architecture. The rapid growth has distorted the meaning of our cities. The current day architecture is not in rhythm of what existed, and has not emerged out of its context. Context of tangible and non tangible references. Current day architecture is emerging out in an isolated situation devoid of common man's participation– its end user. Asian expressed visual environment for centuries emerged out of its climate, culture, traditional values, rituals, festivals, mythologies, attire, palate, literature, music, art, drama, and society. Architecture of past features at conscious and subconscious levels. Today the cities and architecture has conveniently ignored them as encumbrance. Today's cities are striving hard to wear a look of "Universal" conveniently expressed as minimal design, non interactive and has a stressful existence amidst multilingual, multidimensional Asian environment dumped on user. The Asian user with its metaphysical complexity and intrigue is amazed and embarrassed with this new landscape emerged out of nothing. Indian traditional architecture treatise urges architecture and architects must be multidisciplinary in their approach. Today we see aluminium wrapped glass vessels called as building does which neither welcome nor do they extend any participation. It is an urgent need to re establish the long lasted values back in today's architecture expressed intelligently to suit the need of an hour. This paper demonstrates and attempts means of application to derive architecture out of its heritage values, through four architectural works. Architecture today is practice in absence of faith or faith has been narrowed down to a commodity level.

Keywords:

Personify, Heritage–Tangible and non tangible, Substitution, Traditional craft, Climate, Sustainable.



1: INTRODUCTION



Figure1: Motif at entrance of traditional house



Figure 2: Play of light & shadow at Kailas Temple Ellora



Through past three decades we have witnessed a strange collision with the changed built environment. In our heritage rich landscape this new appendage has not appeared as a response to the culture, heritage or existing fabric of the society. We often see out of place forms have landed overnight. These buildings catering to new disciplines very often information technologies are like huge machines facilitating their basic needs. They are assembled like a PC wearing strange, alien, serious appearance. These mute vessels hold information process related living and non living objects. They wear a mass produced look and pop up in huge numbers in a short given/ available period. Mainstream architecture today is influenced and shows architectural elements borrowed from these

new aluminium and glass clad buildings. In words of John Diebold "the effects of the technological revolution we are now living through will be deeper than any social change we have experienced before".[1] An individual is plunged into a fast and irregularly changing situation, or a novelty- loaded context, however, his predictive accuracy plummets. In the process of such rapid development governed and driven by high speed information processing centres, the traditional architecture is not only being replaced, substituted but the new generation as a result has remained away from the legacy of design and sustained built environment. Architecture of a place must evolve out of its culture, local art craft and other forms of creative disciplines.

Architectural form and its evolution traditionally had been holistic and multidisciplinary. This latent and inherent varied potential with formal involvement of such disciplines has been the base of our Asian heritage. Traditional architecture has such an extended longevity and is valid even today in many contexts. Traditional architecture formally insisted to be evolved out of such interactive design process. As mentioned in ancient treatise on Indian architecture- Samrangana Sutradhara [2] - he who practices architecture must be well versed with nine arts such as - Kuvindak-

art of weaving, Kashthakaar- carpentry, Tamrakaar- coppersmith, Maalkaar- florist, Swarnakaar- jeweller, Charmakaar- art of leather craft, Kansyakaar- , Kumbhakaar- pottery



making. Such various forms of local art and craft and its formal association with creative process are responsible for evolution of traditional architecture which has stood the test of time. In India with the changing language, climate, palate, attire, religion, geography has had since long a direct impact on creative arts such as music, pottery, painting, performing art,



Figure 3: Traditional oil lamp

dance, products of day to day use, along with needless to mention the built form encompassing all these facets of life. With such frequent and changing expression of life has also changed the architectural form. Such evenly distributed changing visual landscape of manmade products, faith, and way of life has resulted into a picturesque, and truly distinct and customized expression in architectural form. This is the prime cause of traditional architecture has successfully sustainable in terms of its physical and metaphysical existence. For instance temples often expressed the way of life, social message through mythology depicted using the local art such as sculpture and dance. This helped bringing down the scale of structures to the common man's level of physical and cognitive perceptions. These large built forms indeed shared a person to person dialogue and were interactive. Each interaction of these temples established through its outer and inner form. Its outer form almost connoted the inside story. The outer form interacted with its user under the bright sunlight and play of light and shadow while the inner divine space prompted the onlooker to search for the light within. This transition of outer and inner being– both ways completed the perceptions of total physical and metaphysical existence of man. This was achieved through the transitional form gradually tapering to a point upwards from its wide deep rooted connection with the earth, accentuated and often exaggerated through extended, stretched and sprawling plinth. It was

Figure 4: Traditional beetle Nut cracker



Figure 5: Public transport vehicle around Delhi

very masterly crafted through use of minimal materials as minimal as just one – stone– local available stone. This monochromatic, singular and uniform choice of material has offered the best possible dialogue under the changing texture of sunlight, with least possible interference offering highest level of legibility. This suggests the true building material in order to establish the dialogue with its user is not only stone but the sunlight (refer to figure 2), since in absence of which the whole concert would not have been performed. With use of such timeless, bright, divine, omnipresent, and eternal and living– *chaitanya* – material the architectural form became timeless and divine. More than a mere dialogue it is a celebration of being together. This is truly sustainable. Indian products of day to day



application, irrespective of their scale have celebrated life through such variety of expressions. Products such as oil lamp (refer to figure 3), beetle nut cracker, (refer to figure 4) ink bottle have always expressed human life and philosophy through their form. Irrespective of the size such as a small product of day to day use or an entire temple complex or a town of the past have inherently possessed these values which extended beyond mere purpose of the product or built form, as if they were all in rhythm, harmony resonating the way of life of its user and society as a whole. Human life of a particular time and space was reflected spontaneously in these designs. Way of life, culture, and human responses changed over the period adapting newer and more and more comfortable means of existence. During last few decades this rate of social change and its anticipated response in architecture and other forms of art shows a clear mismatch. Since the form has not emerged out of the context, it communicates in a language which the user not necessarily aware of, for him it is analogous to a culture shock in his own land. Outwardly these out of context forms may appear “never seen before” or “New” at first sight, but they are neither interactive nor evolved out of the context. They are not in rhythm of its society. In order to achieve a sustainable built form, high architectural standards and quality of design must be at the apex of the goals. This will not only inspire its users and offer them a meaningful architecture but will propagate a strong message through out for times to come. In order to achieve a sustainable built form its visual impact must be evolved out of local signs and symbols of art form, and such built form will generate a sense of belongingness to its users. This is a natural desire, at times it is even reflected through an attempt to personalise a rural transport vehicle on outskirts of Delhi (refer to figure5). Such customized forms and meaningful spaces can be created by either substituting an established visual or behavioural attribute from local art, performing art, key facets of a personality, established architecture style, faith into the proposed design elements.

2: APPLICATION:

Through the following pages four examples with four different programmes of buildings are illustrated and discussed. In each case the evolution of form is inspired by four different sources of art forms and heritage of a place. All the examples in discussion though real life examples, they may be perceived as a model approach to design of built forms which may be multiplied in different time and space contexts. The brief description types of these examples are as under:

2.1: Name and Purpose of building: A training centre and day care health centre cum dispensary. Built for slum dwellers in Aurangabad. **Context:** A place close to Ajanta and Ellora caves and surrounded by many heritage structures. Named after a freedom fighter – *Vastaad Lahuji Salve*. It was intended by the promoters to develop this building as a



memorial in the name of freedom fighter, as a tribute. **Design Approach:** The form of the building uses various facets of personality of a freedom fighter and through process of substitution visual impact created. Further the end product also successfully achieves the status of a “Modern Monument” inspired by its context of heritage. **Location:** Central India. **Type of building:** Public building with day long changing utility. **End User:** Slum dweller, economically weaker and formally non educated people.

2.2: Name and Purpose of building: Proposed school of architecture building – an entry submitted for a competition, at Vijayawada, India. **Context:** A place with heritage structures around since second century. River Krishna – with a religious importance flows through the city. Place known for an established traditional dance form called – *Kuchipudi*– , also well known art of traditional– kalamkari– art form of painting. **Design approach:** A school campus of eight and half acres emerged out of a concept of a traditional town within a town. It demonstrates successful application of integration of art forms into architecture such as traditional paintings, dance form, and heritage of a place. **Location:** south India. **Type of building:** Institutional: Planning and architecture institute. **End User:** Students and teachers of architecture.

2.3: Name and Purpose of building: Private residence – execution started expected date of completion end of 2012 at Aurangabad, India. **Context:** A place close to Ajanta and Ellora caves and surrounded by many heritage structures. **Design approach:** Design evolved out of traditional house typology, local art and craft. Goal is to make a personalised statement, unlike a public building. **Location:** Central India. **Type of Building:** Residential single unit. **End user:** A family of six occupants.

2.4: Name and Purpose of building: Institute of disaster management, Istanbul, Turkey– an entry submitted for a competition. **Context:** A place with strong heritage context with diverse religious and social fabric. A place where two continents meet separated by a thin strip of water. Visual associations such as tulips, city of towers, Santa Sophia, blue mosque, ottoman calligraphy, occasional presence of Theodosian wall ruins whirling dervishes on one hand and frequent tsunamis on other. **Design approach:** Institutional building for training a common man against probable hazards of tsunami and equivalent natural disasters. It was also intended by the promoters of the competition to design a building as an icon and to impart adequate design features to serve as a regular tourist spot for domestic and global tourists. **Location:** Istanbul, Turkey, Europe. **Type of building:** Public building, an Institute and place of tourist interest. **End user:** Citizens of Istanbul willing to get trained in disaster management and tourists.



These four examples are chosen to demonstrate for their variety in typology, end user and for means of achieving the goal with common objective of derivation of architectural form as a response to heritage of a place– tangible and non tangible– as an essential tool. In the process it also reaffirms that with such variety of architectural form the monotony of expression may be avoided to offer a more contextual and meaningful architecture.

A Health and training Centre, Aurangabad India.



Figure 6: Exterior view of training



Figure 7: Site Plan



Figure 8: View of health centre-
front block



Figure 9: A Rangoli pattern

The building in discussion called “Vastaad Lahuji Salve – Health Center” situated at Aurangabad – India. – A context with history of marvelous Architecture since last 22decades. This project illustrates an example, as to how for the future the attributes of built form and environment be found within the soil, the user responses, and heritage of a place, rather than following out of context, distorted, “ Universal” set of images. The said building designed for slum dwellers, who cannot afford a luxury of space, benefits of wealth, glory/ wisdom of education and pleasures of community living. Project aims at all such issues. The building designed after the name of a great freedom fighter gives an opportunity to express a very “Customized” expression of built environment. This is symbolic model there could be many more explorations, multiplications and expressions. The built form address its end user– a slum dweller, and the form is derived out of personification of a great freedom fighter named Vastaad Lahuji Salve, the visual equivalents were identified and an abstracted interpretation of those attributes of personality were substituted in architecture. It is an attempt to offer a more context intense climate responsive, deep rooted in culture of a place and with a fragrance of heritage and culture of a particular location. The said building is a ‘Modern Monument” ready to face invasions of future social changes, technological abuse, and cultural turbulence. The user feedback during past many years has confirmed that the form is user friendly. Design originated with an idea of substituting personality features in architecture, using locally available material with available craftsmen. Windows in this building are protected using



concrete water supply pipes cut to required lengths with available circumferences. Floor and ceilings of the place made out of form finish concrete has inlay of traditional “rangoli”(auspicious pattern drawn at entrances everyday using colorful stone powder, based on geometrical structure in India) (refer to figure 9), calligraphic well wishing traditional quotes. Amidst such an ambience of graphics, monumentality and play of natural light it is observed that the end user experiences comfort and stress free living.

School of Architecture – Design Competition Concept Note [3]



Figure 10: Representation of Kuchipudi dance



Figure 11: Exterior view from street



Figure 12: A bird's eye view of campus

The new campus of proposed school of architecture, designed to respond to the local vibrations on one hand and offers very sensitively designed built environment to learn and to teach architecture and creativity. The campus has major streets, minor, streets, and open spaces analogous to a city and as you travel deeper can see more personalized space. This new city within a city has green areas as its lungs; there are arteries minor and major. The composition of high density, low density blocks and their silhouette paints a true picture of an urban-space. There are **Ghats**, plazas, community spaces indoor-outdoor and futurist expressions of architectural form. It is here in such an expression “Architecture” documents the culture of its inhabitants– a sensitized designer community. It is intended to learn/teach architecture through formal; and equally essential informal means. The formal spaces are gathered around a large informal “**Ghat**” (*Indian*

name for built river front often religious) – derived from **Krishna River**. One wonders which is more important the built or the un-built. The aim of design to establish a structures “**SAMVAD**” (*a dialogue*) between two aspiring architects in presence of Experts. Drawing inspiration from the past and the context, the new school of architecture offers an intelligent experiment on fusion of “Art – and Architecture”. It has its built spaces and personality of the building derived from, **Kuchipudi**(refer to figure 10)– south Indian dance form, the intricate **Kalamkari** (*form of south Indian painting*) art, the palate of the place, and the divine spaces of the temple complexes. All this has been conceived and imagined to be built



in the local stone. The new design achieves all the quantities of a monument alternatively means it has an element of **permanence** and divinity. As a response to the site its north façade stands proudly telling the story behind its making. The building is designed to be very **Iconic**, and the local person on the street will be proud of having such an innovative **Modern Monument** in the city. The process of design addresses a model approach to design of creative institute campuses and may be multiplied at various geographical locations. The common man will certainly develop a sense of belongingness with this new piece of art on one hand and shall surely nurture design qualities amongst its students. This iconic building will generate a sense of curiosity among the specialists and the resident of Vijayawada will always wonder the way it is made. The first impression of the building has an element of “**Surprise**” and innovativeness. It is highly “**Inviting**” yet intriguing.

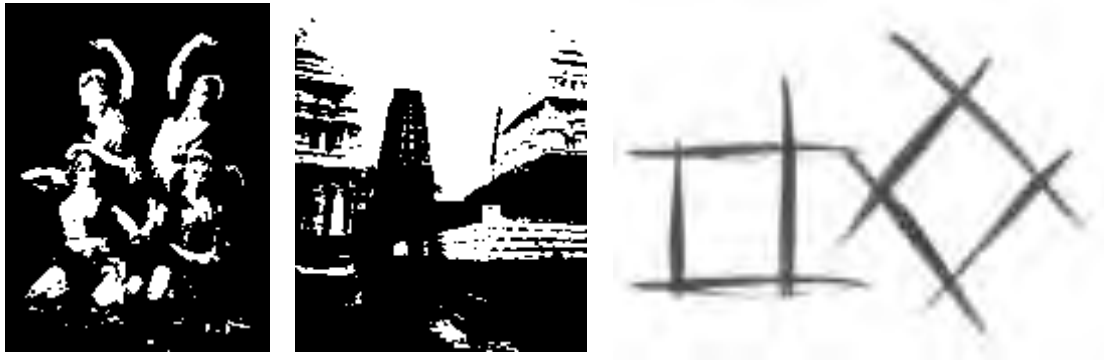


Figure13: Spaces between Kuchipudi dancers and temple complex

The proposed school is Customized, Original, “Not seen before”, and is a sheer outcome of response to context and the programme. It is one of the examples of “Indian-ness of design reinterpreted”. While one walks through the c\school and walks around it would be an amazing experience to meet the inanimate building elements, its spaces similar to Kuchipudi (refer to figure13) dancers narrating their mythological story.

Design of a residential building at Aurangabad – India.



Figure 14: rural women by N S Bendre



Figure: 15: view of traditional town- Nanded



Figure 16: water spout



Figure 19: A view from street

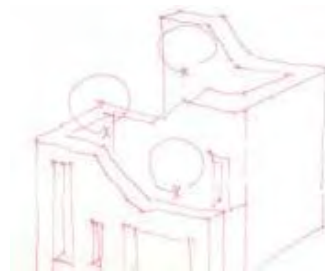


Figure 17: Conceptual sketch



Figure 18: A Bird's eye view

Private residential single unit for a family of six occupants. Dwelling for inhabitants from three generations. Originally from a peasant family now migrated to a fast developing industrial town of Aurangabad. Nostalgic about their past, wished their house to associate with one of the village houses. In search of the image and with prolonged study and documentation of countryside house generated an image of the house which

would resonate the image owners anticipate. To describe verbally the house with load bearing thick walls, made out of an exposed building material frequently basalt stone (deep grey matt in colour) or a local sandstone bearing brown colour with white spots in it, and thin bricks exposed form, with multiple terraces, dominating stairwell tower with a skylight. These countryside houses(refer to figure 15) have a very personalised character depicted through graphics of well wishing messages , or images from mythology, or water spouts resembling cow

head draining terrace water down to earth, with outer form of house very compact. Traditional houses and temples have gargoyles(refer to figure 16) made of stone depicted as holy cow head to drain sacred water through The place of construction is amidst the great legacy of architectural environment with Paithan – a traditional town, known for its religious importance and an important educational centre during 2nd century BC, with its unique treasure of wonderful houses called – *waadas*–in local language, Ellora caves built during 2nd– 8th centuries, Daulatabad fort, and the place of proposed construction itself, a famous fortified town with many heritage structure seen even today. The house form also draws its inspiration from a typically Indian saree and a speciality of this region of India, called as – *Himroo*– which has its design feature as the main cloth with six and nine yards long and approximately one yard wide. Main design variable components of a saree are the main body and its border. Mostly intricacy and embroidery of the border decides the quality of a



saree. Saree is traditional clothing for women and depicts tradition. The proposed house expresses itself as a typical saree clad woman, which has been a favourite subject for many painters such as painter N.S. Bendre's[4] paintings on rural life of Madhya Pradesh, India (refer to figure 14).

ISTANBUL DISASTER PREVENTION AND EDUCATION CENTRE, ISTANBUL, TURKEY.[4]

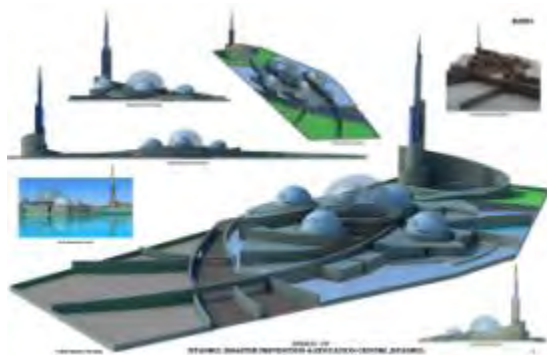


Figure 20: Bird's eye view of Institute

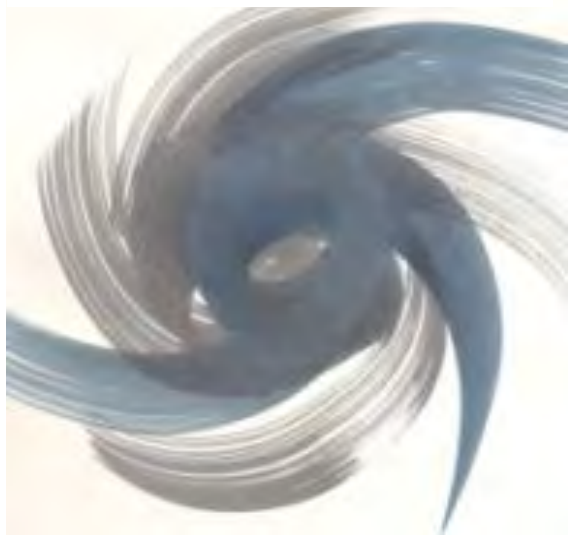


Figure 21: Calligraphic Representation of dance and tsunami

It was an enigmatic order of an Oracle to establish the settlement “opposite **the Blinds**”. It all began at **Lygos** twenty centuries ago. Till date the mystery of this land today called as Istanbul remains. It is indeed like a magic canvas changing its colors, forms and temperament. With the passage of centuries after centuries and

the procession continues to march ahead. It is not enough to express this wonder land as a mere “coincidence”. Here two civilizations meet, two cultures get interlocked, and two seas share their water and narrate the story of evolution, two beliefs flow in the blood of its inhabitants, two continents crooner and share their gossip and are amazed to be witnessing the glory of this place today known as Istanbul. It is an amalgamation of two styles, two directions, (E & W) miraculously separated by a strip of water. No wonder it was once upon a time the New Roman Capital and holds its pride– in a timeless masterpiece of Sancta Sophia. Monumental and monolithic as though, bearing celestial domes

arranged in pyramidal order. Sancta Sophia continues to share till today, after 15 centuries, its Spatial and Temporal order. It is like a cosmic mountain. Not to wonder such a land is blessed with a timeless philosophy of Mevlana **Rumi** Jelalluddin, since thirteenth century. This canvas as said earlier is ever-changing and today it exhibits a variety of Nostalgic



images of the city of its intriguing bazaars, the Spiritual geometry of **Ottoman Calligraphy**, examples of inspirations of **Aya Sophia** in the form of the Blue Mosque, the Galata Tower, The romantic Tulips and Divinity of spaces adored with natural light from above in its **Hammams**. No wonder it is declared the 2010 European Capital of Culture. What an amazing blend of two cultures. There is no boundary; it is hazy, truly ecumenical. The zoomorphic explorations of Ottoman calligraphy juxtaposed with Rumi's message to the world are indeed fascinating. And his **Whirling Dervishes**. His philosophy encompasses the entire humanity from a pagan to a fire worshipper and he invites them all to this land. Such an inviting gesture forms a unique feature of the proposed Disaster Prevention and Education Center of Istanbul. It invites all to share dialogue with one's own deep rooted self and connects them with nature and universe far beyond the worldly boundaries of language, religion and continent.

It is intended to construct a state of the art, edutainment complex and a Must See tourist spot in the form of an Institute for disaster Prevention and Education at Istanbul. One has to trigger our sensibilities not as a trained architect but beyond, in the capacity of a sculptor, painter, writer, calligrapher, philosopher, photographer and also a common man with prevailing common sense. The proposed form is seen through the eyes of Rumi, has been placed before Sancta Sophia in order to stand the test of time and offer a time tested safety and security essential for such Institute. It implies that the proposed building we intend to last for at least few centuries and be appreciated by its users. Care is that the proposal will not displace any major organ of the established bio rhythm of the city as a organism.

It is a coincidence that the proposed site is woven in between major and minor roads of the city fabric and demands that the building must be like a tree or a beautiful Tulip be appreciated from all its sides. The proposed form is a true sculpture. The designed building thus neither has a front or rear nor does it have sides, it is front all over. Proposal pays its tribute and respect to the great Sancta Sophia by organizing its hemispheres in the same

order and axis.

However it is now wearing a new expression as the passage of time demands it. The city has a legacy of great monuments and history of "co-existence". The proposal exhibits co existence of Art- Architecture. The plan is evolved out of calligraphy strokes depicted as **Theodosian walls**. These walls became live and grew up to form a building.



Figure 22: Plan form as a collage of influencing images



The plan form and its spaces have been evaluated on the merits of an abstract canvas. With its intermingling voids, forms, shades and textures. It may be obviously seen from the strokes of the plan form that it reveals the order of a Tulip petals on one hand and also the spirit whirling Dervishes on the other. In search of the local character and association to the context, Istanbul has a variety of imagery and inspirations to draw from.

Monuments of the past have taught us to obey order in the organization of activities, in terms of a strong axis, or lateral symmetry. The proposed building has an axis which is dynamic and it captures the psychology of the user and guides him all along. This “Metaphysical Axis” of the building is established from the point one gets down in the parking lot. As described earlier, the site is analogous to the meeting of two lands separated by a water body; one can see land–water–land with a tower driving the visitor walk through an axis which is unconventionally twisted and complex. The guiding axis of the building is in the mind of the beholder.

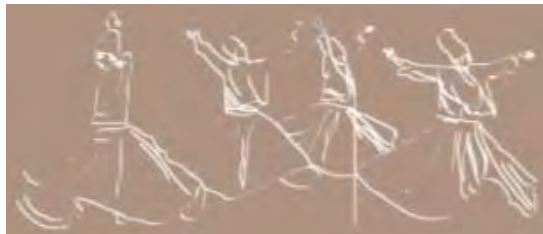


Figure 23: Roof plan with resemblance of whirling dancers and tulips

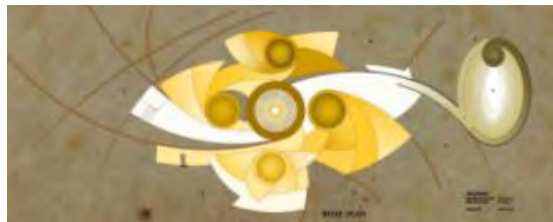


Figure 24: Whirling Dervishes

One may appreciate the junction of two pieces of land separated by a water body. These two pieces of land connect each other with the building catching its reflection in the water body. In fact while reading through the lines of this concept note it reveals that Istanbul has a lot to offer, it is full of Metaphors and analogies to influence an architectural plan. There are Theodosian walls, wild calligraphy strokes, and an element of Islamic Jaali over dome, whirling dervishes, celestial domes, Tulips and much more. On the other hand a performer looks forward to such occasions in life time to deliver. It may be noted that the built form though expressed as an Art form respects all the order and discipline of the legacy of monuments and by all means deep rooted in the soil and culture of the place. This plan form and volume has emerged purely out of the program, creative response of the context, the multifaceted and diverse cultural treasure. In a sense it is a true example of customized creative response.

Building is orientated East–West which is apt for Istanbul climate. Summer in city shows moderate climate condition where as winter shows critical months which are cold and



temperature goes down to 10°C to 0°C, for which Building profile helps to get direct solar radiation from South which will help to maintain comfort inside the building whilst reducing the required heating load. Also selection of building material which is partly stone and partly exposed concrete help as thermal mass technique to control heat flow through the building envelope. The screen- *jaali* over the main dome is an outcome of climate in Istanbul. It wears an intelligent climatic mesh responding to light intensity and temperature and accordingly either open or close with photo sensitive device.

Building design attempts to search for evolution of form using attributes which are based on philosophy, performing art, legacy of a place, calligraphy, unique geographical situation and tulips.

3: CONCLUSION:



Figure 25: A Vyala

All the examples discussed above demonstrated four possibilities of architectural design in four different situations for varied target audience. They are - a health centre derived out of personality of a freedom fighter in addition to heritage of a place, a single dwelling unit emerged out of image of a traditional Indian town reinterpreted, a dance form in combination of a traditional river front which has a specific religious importance and also has a heritage value interpreted as a school of architecture, and a disaster management institute visualized as a tribute to Rumi on one hand and plan form as a collage of Tulips, whirling dances, traditional wall ruins and calligraphy on the other.

World is full of such innumerable and unique associations, full of surprises. Built form perpetually served such varied and customized situations since ages. This is how civilizations have existed. Human life is influenced and dictated by such beliefs and situations. Architecture must reflect these all attributes and respect the legacy of a place in order to be in rhythm of its context in order to be meaningful, interactive and full of variety. Architects and designers must search for these fine connections with the surrounding, and reinterpret them intelligently using current technology. There are innumerable iterations and probabilities, devoid of which the world will asphyxiate in monotony. Indian temples have repeatedly depicted "Vyala"(refer to figure 25) in various forms, giving us a strong message: The message of Vyalas is the message of possibilities:" The face of one animal with a forehead of another, ears of third and horns of a fourth. Shoulders changing into curves of a still different animal. From face to feet- A continuous transformation. Galloping, prancing, whirling, and swirling in animate contortions. Indefinable in their variations- simply bizarre creations. The world of vyalas is a world of possibilities, variations, and mutations. Reminding us that ours is not the only world, there are other possibilities." In order to



express architecture in terms of life around us and the site it is essential to have faith. All great architectural masterpieces of the past such as Kailasa temple, Pyramids, Ajanta caves were results of great efforts and strong faith. Today diminishing faith and withdrawn participation of heritage values due to unexpected pace of life may lead us into an irreversible situation. It is thus very essential to evolve a truly comprehensive built environment which is intelligent and worthy of dignity and documentation in the pages of history which the generations to come will admire of. In the process of being faithful to grab opportunities of rapidly changing world are we unknowingly unfaithful to values of the past which have successfully stood against the test of changing times!

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Modernism and City Heritage: An Account of Architectural Features of the Building Facades at Old Dhaka, Bangladesh

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ABSTRACT

The Mughal built spaces of 400 years old city named Dhaka abridge the future with its ancient heritage and traditions. Every generation should be obliged to preserve the ancient buildings for learning. Old Dhaka is the place where we can find many buildings that represent the various architectural features of ancient periods. Some of these features are usually visible on the facades of the buildings. Type of walls or composite walls such as lime surki plasters or Chini-tikri, types of doors and windows and ornamentations are the key features of the heritage built forms of this area. Due to the influence of modernism, the building features are being changed with the course of time. New buildings with new modern look and functions are being frequently built and value of these significant architectural details is being ignored. As these old buildings are scattered within the old town of Dhaka, the buildings are not in control with a strong conservation rule. This paper addresses these architectural aspects of some heritage house building in a chronological order within 19th–20th century and gives an account of the elements that are being destroyed with the effect of modernism in the mentioned old city. In this regard, related literature on the history and architectural characteristics of old Dhaka has been reviewed. Some randomly selected buildings of various periods, for example, Ruplal House, The Mansion of Jatindra Kumar Shaha, Reboti Mohan House, Rose Garden at K.M Das lane, Lal Mohan Thakur Bari and Radha Sham Shaha Banik, have been extensively surveyed, observed and some rare features of these building are documented. The paper outlines some architectural elements that has been completely or partially changed for modernism and concludes with showing the effects of modernism on the significant architecture of an old city in the context of Bangladesh.

Key Words

Modernism, City Heritage, Architectural Features, Styles, Building facades



1. BACKGROUND

Modernism has shaped development pattern of city-buildings since the beginning of the twentieth century. In this modern or post-modern era, city heritage and its traditional architecture help to develop understanding of the past, enrich the present and which will be of value to the future generations [1]. From the point of view of history, art or science, the groups of separate or connected buildings within a city heritage usually have significant value because of their architecture, their homogeneity or their place in the landscape [2]. In Asia, heritage and modernity have given much less attention in literature as well as in practice [3]. Bangladesh has its old city (figure 1) named Dhaka which was founded in 4th Century can be mentioned as the heritage city. Dhaka first received principal status in 1610, when Mughals transferred the capital from Rajmahal to Dhaka, and renamed it Jahangirnagar. The Hindu Zamindar mansions are dispersed on and around Tipu Sultan Road, Narinda, Farashganj and Sutrapur. The establishment of the Municipal Committee in 1840 and of the Dhaka College in 1841 marked a new dawn for Dhaka. Backed by several positive forces, the city slowly re-emerged turned into a modern place under the European influence. The second half of the 19th century marked the beginning of the physical renewal; the city limit did not expand, but the Mughal city was transformed into a modern city with metalled roads, open spaces, street lights and piped water-supply [4]. The development of Dhaka till the last quarter of the 19th century followed the banks of the river Buriganga where the wealthy citizens built their magnificent houses like the Ahsan Manjil and the Ruplal House. The embankment of the northern bank and the construction of a promenade on it by the energetic Divisional Commissioner C.E Buckland made the riverfront a picturesque site and the Buckland Bund a rendezvous of the city's nature lovers (completed in three phases in the 1880s) [4]. The total chronology or growth of Dhaka city can be seen in figure 1.



Figure 1: The growing City in last 400 years and location of heritage city area of Dhaka [5]



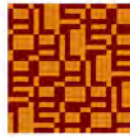
In case of architecture of Bengal, British colonial rule led to certain deviations from this evolution and attempts were made during the colonial period (1765–1947). In Dhaka no evidence remains of residential/house buildings from the Mughal period (1608–1765). Civic and religious buildings like fort–palaces, mosques and kuttras were generally the only buildings made of permanent materials before and during this period [6]. However, traditional house buildings still co-exist with the modern urban apartment buildings in Old Dhaka. Any analysis of architectural design inherently deals with the proportion, surfaces, and forms arranged in space as well as external architectural façades. This paper focuses only the architectural elements and styles of the façades of house and ‘Zaminder’ buildings at Old Dhaka and tried to show the effect of modernism in this heritage city.

2. OBJECTIVE

The objective of the paper is to address the architectural aspects of some heritage house building façades in a chronological order within period of 19th–20th century and give an account of the significant façade elements and the portions that have been completely or partially destroyed or modified with the effect of modernism. This paper also intends to show the overall effects of modernism on architecture of old Dhaka city in the context of Bangladesh

3. METHODOLOGY AND SCOPE

Literature related to modernism, heritage, old Dhaka and other historical as well as architectural aspects were extensively reviewed and assessed. Analysis, documentation and identification programme of facades of all heritage buildings in Old Dhaka require an extensive physical survey. Due to the constraints of time, finance and manpower, such an extensive survey was not possible in this research. However, after a wide-ranging reconnaissance survey, some representative buildings at various significant areas of Old Dhaka (figure 1) were randomly selected for further survey. As the changes in the façades elements of these old building can be easily identifiable, only those elements have been focused in the selected building. As building façade is the main focus of this paper, the changes of the traditional building facades were evaluated thoroughly. In attempting to understand the changes, the building facades were accomplished and examined by means of literature review, detail study of previous research, personal observations by the authors and personal interview in selective cases. Some old heritage city area were randomly selected – Sutrapur, Tatibazar, Forashgan areas were identified to find the traditional house buildings that had gone through some sort of transformation. Selected buildings are Ruplal House, the



Mansion of Jatindra Kumar Shaha, Reboti Mohan House, Rose Garden, Lal Mohan Thakur Bari and Radha Sham Shaha Banik (refer to Table 1).

4. SIGNIFICANCE OF THE STUDIED BUILDINGS AND AREAS

In Dhaka, Neoclassical style first appeared in the city's seventeenth-century churches, but it was subsequently applied to secular buildings as well. Eventually, by the middle of the colonial period, a new hybrid of Mughal and European-style architecture emerged. Even though brick was still extensively used, even in delicate patterns, it was usually plastered over with lime and mortar in the colonial manner to give the appearance of stone construction. The new style introduced such foreign stylistic elements as semi-circular and segmental arches; triangular pediments over Corinthian, Ionic or Composite columns; battlement parapets; traceroid windows; molded plinths; rusticated walls; and foliated decorative motifs. Colonial influences eventually led to the creation of two distinct new residential building types: the bungalow and the mansion. The bungalow was the first residential building type adopted by the British in colonial India [6].

Table 1: Significant information of the studied buildings (Source: N Ahmed and N Khan, 2007)

Sl.	Construction Year	Title	Location	Material	Structural System
1	1880-1900	House of Radha Sham Saha Banik	223, Lal Mohan Street, Tipu Sultan Road	Brick with Plaster	Load bearing
2	1880-1900	Ruplal House	Farashganj	Brick with Plaster	Load bearing
3	1880-1910	Lal Mohan Thakur Bari	38. Tipu Sultan Road	Brick with Plaster	Load bearing
4	1890-1910	House of Jatindra Kumar Saha (Jatin Babu)	3, Mohini Das Lane, Farashganj	Brick with Plaster	Load bearing
5	Late 19 th century	Rose Garden	Narinda quarter, K.M Das lane, Tikatuli	Brick with Plaster	Load bearing
6	20 th century	House of Reboti Mohan Das or Sada Bari (White House)	Reboti Mohan Das lane, Sutrapur	Brick with Plaster	Load bearing

Private occupants have demolished much of the inner block of colonial architecture in Farashganj. Ruplal House in Shyam Bazar has been occupied by traders [7]. The mile long Farashganj Road running East-West, starting from 'Sutrapur' up to the North Brook Hall (Lal Kuthi), once a treasure for traditional architecture, is now the centre of vegetable, spice,



timber and cement wholesalers. The building popularly known as the 'Rose Garden' was built by a Hindu zamindar 'Hrikesh Das' in the late 19th century at Narinda quarter of Old Dhaka. The garden has several classical marble statues. This tall, massive building is in good condition and stands proudly reaching the skyline of old Dhaka. Reboti Bhavan is situated in the Sutrapur area of Old Dhaka on Reboti Mohan Das Road, which was constructed on a one acre land by a Hindu landlord 'Reboti Mohan Das'. This house is one of the famous and grandest mansions of Dhaka built in the early 20th century [6]. The building contains about thirty-five rooms of varying dimensions. The house has five interior courtyards of various sizes and three others outside [6]. While considering Ruplal House or House of Mr. Armenian, the names of Ruplal and Raghu Nath, the descendants of Mathura Nath Das, come first who bought the house from Aratone in the late nineteenth century [6]. The complex can be approached from the main road on the north and by a private entry from the river on the south. It consists of three distinct 16 blocks: the most imposing western one of Ruplal, eastern one of Raghu Nath, and a central connecting block. The smaller central block which is probably the original part of the huge mansion is built in a bungalow pattern [6]. House of Jatindra Kumar Saha or Mangalabas (Goodwill House), Farashganj which is presently kabi nazrul College Hostel was owned by Zamindar Saha. This house has four inner courts. There are terraces on the south and southwest corner in the first floor while the western part rises by another floor. The house, same as the previous examples, contains all examples of the typical elements that were being used on the facades [6].

5. FIELD SURVEY AND OBSERVATIONS

5.1 Facades of Studied Heritage Buildings of Old Dhaka

A large number of Zamindar palaces in Bangladesh had meticulous façade ornamentation. Corinthian columns were abundantly used; which were engaged in the façade or took the load of semi-circular arches. The studied buildings are also blessed with some of these ornamentations (refer to table 2). Building scale, grandeur, and ornamentation were testimony of the owner's affluence and acquaintance with the colonizers who used this neo-classical turrets, arches, pediment, columns, capitals, foliated motifs, entablature, architrave, freeze and cornices in buildings [8]. Visible outstanding features of these impressive buildings were application of floral ornamentation in plaster, column and surface treatment by shaped bricks and employment of imported classical orders in the form of freestanding decorative columns [9]. Load-bearing walls and columns were constructed of clay bricks bonded and plastered with lime surki. Walls were much thicker compared to present day and ranged usually between 15 to 24 inches. Windows were often embellished with multiple





arches and did not have glass, but were of horizontal wooden planks, designed to open or shut by a lever mechanism according to the need [9].

Table 2: Comparative study of styles and elements of selected building façades (Source: authors and as referred in the text)

	Styles and elements of Facade	Front facades
House of Radha Sham Saha Banik	The House of Radha Sham Saha Banik at Tipu Sultan Road is the smallest among the studied buildings of the period. The two-storied building once extensively decorated now has the colonnaded entry facade on ground floor walled up. The most important feature of this building is the open roof terrace. The shading device in the exterior windows is a wooden shutter having two parts [9]	
Ruplal House	Ruplal block was designed in the Neo-classical style. The entrances from the north to individual blocks are grand in scale and disposition having double height Corinthian columns with pediment and entablature [8]. Its entry facing the front courtyard has no arches. The Corinthian columns are rather stout like Indian columns. The walls (25" thick) are Load bearing. Brick masonry is layered in walls. Lime concrete is used as the mortar and plastering materials. Three types of columns can be found: Neo-Corinthian, circular, squares columns. Arch serves as lintels made of bricks over the doors, windows, and also on the circulation passages. Finish materials are Marble tiles, Terrazzo, Red oxide, colored glass. Most of the doors and windows of the buildings were originally made of expensive wood with decorative designs, and have now been replaced by low quality wood, steel or mill steel sheets. Of the three blocks Ruplal is the most imposing one with neo Corinthian capitals, several different types of window details [10].	 
Lal Mohan Thakur Bari	In the House of Lal Mohan (Thakur Bari), there is one large courtyard having colonnaded veranda around which all the rooms are arranged. The exterior façade is highly decorated with different type of elements. The entry of the building features two freestanding circular columns having decorative base and capital. The colonnaded veranda has multi-foil arch supported by thin circular column posts. In the upper level exterior façade an extended veranda is supported by brackets has cast iron double post columns and railing. Kiosks at the parapet level have been constructed as embellishment [9].	
House of Jatindra Kumar Saha	The prominent features of the façade are the grand entrance foyer, distinguished with a convex podium protruding out and heavy square piers. This leads to a big veranda flanked by a stair and an exterior room on two ends [9]. Windows are seven feet high starting from the floor to the lintel level. Wooden shutter is used in the window and doors. Presently this building is being used as a hostel [9].	



Rose Garden	The building has elegant Corinthian columns. Originally there was a fountain, the structure of which still remains. The façade of the building is well maintained with white painted on the whole external surface of the building. Arch is used as lintels over the doors, windows, and also on the circulation passages. Windows are French louvered type or door type window with semi-circular arch and also sub-divided in the middle. Roof has perforated parapet. At the front façade there is moulded projection with dentils. Balcony drop is decorated with chain. Main entry has semi-circular arch which is decorated with stained glass.	
House of Reboti	The exterior, plastered in white, exhibits grandeur in scale, style and proportion. The house is entered from the south through a portico placed on four piers. Das's brother added the three-storied block using more geometric elements on the façade later to the north. Parapet is perforated and has moulded projection with dentils. The front façade has plastered corner with horizontal bands.	

Among the different orders used, the preference for the Corinthian style is easily visible. Intricately decorated wrought iron columns, carved wooden posts, use of wrought iron railings are among other features that gives this period a distinctive style. During this period some of the areas went through a wave of refurbishment in the front facade of the buildings. Roadside verandas came in as a new architectural element, covering up the setback spaces at street levels [11]. Variety had been achieved through the introduction of verandas, balconies, loggias, porches etc. The type of corner treatment with brick is typical in the colonial buildings. Moulded bricks have been used in the columns, capital projections, cornices etc. of different buildings. Arched openings were made over doors and windows and niches were recessed inside the walls to create storage spaces as well as to keep deities and other objects. Various types of columns with ornate capitals were used to decorate facades and inner courts.

Table 3: Three major styles and Observations on the significant façade elements (source: literature review and field survey)

	European style façade	Hybrid style façade	Plain facade
Characteristics	<ul style="list-style-type: none"> – Styles are usually 'Renaissance' or 'Georgian'. – Projected mass with bold detail is marking the corner of the house. – Series of Arches or Colonnade in equal distance are arranged. 	<ul style="list-style-type: none"> – Traditional elements and details fused with the European style are observed. – The concept of façade articulation used European principle in the most cases. 	<ul style="list-style-type: none"> – The plain façade is observed with minor or absent of details. – Some rear facades come with this style.



Elements	Observations on façade elements based on literature review and field survey
Column	Columns have been used in most of the studied buildings as newly introduced elements during the colonial period. Doric, Ionic, Corinthian, composite and hybrid style of columns are observed for both structural and decorative purposes.
Arch	Different types of arches as round, semi-circular, house shoe, lancet, trefoil, multifoil, Tudor, flat, ogee, segmental, Venetian arch etc. have been used in the buildings.
Door	Doors of various sizes and shapes are found in the old building under the study area. Door sizes vary from 3'-0"x7'-0" to 10'-0". Generally two numbers of wooden shutters are used. Various types of door like ordinary shutters, simple single planked, battened, paneled, louvered, two layer, bat door, combination of glazed shutters are also found in the houses.
Window	Flat beaded and arched type windows supported by lintels, steel angles or brick arch are used under the stud area. The window sizes vary from small to large one. French windows with flat or semi-circular arch headed are common features. Usually these French windows are subdivided at the middle and bifurcated into two parts. Sash windows are placed at outer faces of the walls.
Others	The projections and mouldings are used at floor levels to define the floors. These projections and mouldings are seen at the plinth, floor and at roof levels and act as cornice. Plinths of the studied building are usually high and visible. The height of the plinth usually varies from 1 ft to 4 ft above the ground level.



Figure 2: Glimpses of the façade elements (column, arch, door, window, etc.) of studied buildings
(source: authors)



The façade of the studied buildings were treated in European manner in most of the cases. The facades can be classified as three styles (table 3). Brick masonry in them expresses the solidness and the colonnades or arches of the house make the façade void and light. Façade of services are comparatively more solid. The buildings are generally symmetrically balanced. The vertical and horizontal features are balanced in most of the cases which create a state of visual equilibrium. Renaissance architecture makes extensive use of mathematics and geometry to draw a proportion system which can be noticed in some of the studied building. The building has narrow frontage with extensive depth, the unique characteristic of old Dhaka buildings, is found in almost all the houses. The short decorative free columns with bell shaped capitals, round pedestals and intricate surface decorations are usually noticed [12]. The case studies presented here from different parts of Old Dhaka to show how imported elements were used primarily to drape the exteriors of these mansions, and that a traditional layout existed behind these facades. This dominant intermixed nature of colonial elements and ornamentation are in complete contrast with the earlier traditional architectural ornamentation in these buildings which is essentially sublime and harmonious [12].

5.3 Modernism and Old Dhaka city heritage

Modern technology in the building materials and construction techniques played a very strong role in the transformation of the traditional houses [13]. In the urban area, the house form depends largely on physical limitations of the land, boundary conditions, materials and technology, climate, economic factors, changing social and cultural values that often have pastoral roots, and none of the factors are stagnant either in time or space. Modern technological factors which are part of modernism have tremendous impact on the culture, affecting the living pattern as well as the form of residential buildings [9]. On the one hand, the studied houses are changing and becoming places for income generation, while on the other, the traditional Souk or Bazaar is also transforming into a modern commercial setting. In search for the reasons for such transformation and changes with special focus on facades of traditional buildings, reasons are identified such as, modern life style, the diminishing of the guild system; the maintenance of traditional dwellings; the emergence of developers and their attractive housing compounds with all modern facilities; and finally the potential of the traditional dwellings to be converted into rental units for expatriate workers [14]. The traditional pattern of the business of Shakari Bazar and similar areas is that the shop owner's erected lot of bill boards in their buildings (figure 3). The architectural styles of the buildings are not visible for the display of the bill boards. The Shop owners should be made aware



regarding the bad impact of this so that they can be motivated for removing the unnecessary bill boards from the building [11]. The T&T and electrical cables are overhanging along and across the building. The overhanging cables undermine the aesthetic view, heritage image of the area. The cables should be concealed under the main walkway. The members of the host community have to understand the local heritage and culture at first hand and in this way the indigenous people should be involved in planning for conservation and tourism [11]. The value of the traditional buildings has though not fallen in many cases as they maintain a potential to be transformed into market places which are ultimately generating more income [15]. The major problem in transformation of physical changes is the installation of electric wires, water supply and plumbing that brought structural problems and a reduction of the aesthetic quality. Water, electricity and AC connections (figure 3) from the inner part of the house; changing the front facade of the building; and fixing sign boards, etc. have all been widely observed in the studied building [15]



Figure 3: a) Use of AC unit on old building façade b) Destruction and addition by modern building elements, c) old building covered by new under-construction structure, bill board and wires (sources: authors and internet archive)

After 1930, the overall planning of the building changed much due to the technological advancement in modern era. Beam-column structural system was introduced. Brick continued to be used as the main material but the wall thickness was reduced to 5-10". Various shading device were introduced to protect the building from the sun and rain. The older buildings, few examples that exist in Dhaka, besides being dilapidated due to age and lack of maintenance, are now being threatened by a surge of multi-storied development that has overtaken the City over the past decade or so in view of rising population and high price of land. Several old buildings have already changed ownership and/or the owner has contracted developers to demolish the existing building, an icon of antiquity, and make room for a towering block of apartments or office rental space [9]. The recent trend of air-



conditioned homes with tinted glass (refer to table 4) is adding a new dimension to the urban house, although Man's ancient yearning for light is still alive.

Table 4: Typical scenario of the studied area (source: field survey)

Case Studies	Adjustment/Change	Typical scenario
House of Radha Sham Saha Banik	New White painting, added electric and plumbing lines, plastic doors added.	
Ruplal House	Change of door and window material, verandahs converted to room with windows on sill height, added service lines, façade covered by commercial warehouses.	
Lal Mohan Thakur Bari	Verandah partially blocked by metal sheet, service lines added, commercial display board, new shading device.	
House of Jatindra Kumar Saha	Added service lines, verandah covered with wall to make service toilet, doors are renovated.	
Rose Garden	Painted partially, Some external doors and windows are renovated, service pipe added.	
House of Reboti Mohan Das	Added service and plumbing lines, modified external doors and windows, painting on walls and glasses.	

6. DISCUSSION AND CONCLUSION

These buildings which could have been part of our cultural heritage and recalling memories of past Dhaka are dying. The traditional Buildings of old Heritage City of Dhaka have potential to accommodate new functions and varieties of commercial enterprises either by partial improvement or reconstruction as they exhibit a certain degree of flexibility in the process of fulfilling the current needs of the dwellers. This study also revealed that the changes in facades of the traditional buildings are subject to not one single factor but a number of factors, where modern economy plays the prime role. It is understood that the impact of globalization and the influence of modern concept of the consumer society have an impact in every society. The changes in facades may occur but without respect of architectural values; therefore conservation of such dwellings are urgent and necessary. One can say that the process of transformation, like any living orgasm, grows and over time is changing and on-going but it should be also borne in mind that one should not also forget the past, traditional values and culture that is the root of identity. [15]. The architecture of city heritage with various traditional facades attracts tourists and thus, tourism can bring economic benefits to a country [16] Future visions (figure 4) should be there with using



positive and technological sides of modernism or postmodernism to accentuate the existing city heritage with promoting tourism. Only restoring the building facades aesthetically and intellectually may promote tourist attractions.



Figure 4: Future vision of the old heritage city of Dhaka (source: K. K. Ashraf, 2012)

Modernism is a socially progressive trend of thought that affirms the power of human beings to create, improve and reshape their environment with the aid of practical experimentation, scientific knowledge, or technology. From this perspective, Modernism encouraged the re-examination of every aspect of existence, from commerce to philosophy, with the goal of finding that which was 'holding back' progress, and replacing it with new ways of reaching the same end [16]. Richard Longstreth remarks that the National Historic Preservation Act came into existence at the time when modernism was dominating federal policy. International agencies such as the World Tourism Organisation have predicted that tourism numbers will continue to rise over the decades, particularly so for the continent of Asia [2]. In order to conserve at least a few of these old buildings as a reminder into the future of what was the past, it is necessary to garner sufficient public support by publicising the importance of the buildings in the City's history [9]. The emphasis on conserving original materials, the removal of inappropriate additions and the use of practical conservation techniques can restore the building façades and revive the historic streetscape within an urban renewal context (figure 4). Recently, in 2009, a government-formed expert body came up with a preliminary list of heritage buildings and sites in the 400-year old capital city for preservation. The list has been made in consideration of historical, aesthetic, scientific, social, cultural, religious, and political and heritage value of the structures and sites [7]. Multi-court mansions are no longer built in Dhaka. However, they deserve more study and attention, both as evidence of the evolution of local architecture and urbanism and as examples of good design in their own right. Restoring such buildings with the facades to their old uses or adapting them to new ones is not much practiced in Bangladesh. Further study of these mansions may form the basis for such conservation activities [7]. We need to be sensitive to the ways in which the institutions and technologies of modernity allow deeply rooted traditions to be endorsed.



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Reinterpreting Traditions for Cross-Border Practice in Design and Architecture

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As a renowned international tourist destination Bali allows us, as its residents, to have intimate contact with people from many other countries and cultures. In this era of the internet such interaction has become much easier and more intensive than even a few years ago. This interaction has particularly flourished in the practice of architecture as international ideas have come to blend with local Balinese architecture. At the same time, Balinese terms and ideas have been adopted for common use within the international language of architecture. This resulting fusion and hybrid style of design is now broadly used not only in the architecture of hospitality and the façades of building envelopes, but also more deeply in the concept of the proper use of space.

As architects based in Bali, we are naturally influenced by what happens in the general local practice of design. In the beginning of our careers and practices, we normally work as local architects to support international architects. We quickly learn from them the international standards of architecture, as well as methods of professionalism in architecture as a business. Indeed, we learn that architecture is not only a clear, practical business, but one that also brings the unique values of art and culture into the equation.

This solid basis gained from exposure to international architects has helped to guide us and improve our practices as local architects. We come to appreciate more deeply and begin to learn more clearly what is truly behind the physical aspects of local Balinese architecture. Thus, we can better understand and reinterpret our work for adaptation to the demands of new and changing life styles. We also apply this new, deeper understanding of Balinese architecture to our own designs and lifestyles.

Bali, as unique tourist destination, provides us the advantage of having contact with people from other countries, not only tourists, but also as potential clients. We receive appreciation for our designs, which often develops into offers to design projects abroad.

Since our organic understanding of Balinese Architecture goes far beyond just the visible building envelope and façade, we can easily create well-adapted designs that look and feel natural in other countries. Because we are used to professional “open minded-ness” regarding local traditions and practices, we can easily adapt our ideas and experience to blend well with local architecture worldwide.



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