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Masterplanning the Future

MODERNISM: EAST, WEST & ACROSS THE WORLD

The Proceedings of an International Conference
held at

**Xi'an Jiaotong-Liverpool University
Suzhou, Jiangsu Province, PR China**

on

18-19th October 2012

edited by

Austin Williams & Theodoros Dounas
published on 18th October 2012

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Front cover: Xixi Wetland Centre by Wang Yun, Atelier Fronti (photo: Austin Williams: 2012)

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FOREWORD

These proceedings document the work of a wide range of researchers, academics and experts from across the world, each presenting at the Masterplanning the Future international conference held in China on October 18th and 19th 2012.

These proceedings of the conference outline a variety of intellectual explorations relating to historical and contemporary situations, discussions and case studies, in China and around the world. As a body of work, and as a contribution to open enquiry, this is less an examination of how direct "conclusions" or "lessons" can be learned from different historical periods and social circumstances, but hopefully helpfully, the exchange of ideas and experiences facilitated by the Masterplanning the Future conference may help to stimulate a better understanding of architecture, contemporary and traditional urbanism; fostering critical awareness and challenging perceptions. Within a rapidly urbanizing world, the contributors look variously at whether advocacy for, criticism of, or rejection of modern design – as well as Modernist idealism - can go some way to help us understand the global urban condition.

Let's take the West, Africa and China as historic-cultural points on the compass.

The West: In early 20th century Europe, the appeal of Modernism was that it caught the zeitgeist of a social liberationist tendency. It divided opinion then, and continues to do so today. Post-modernist Charles Jencks considers talk of a zeitgeist to be pernicious (Jencks: 2002) and academic Westfall suggests that the impact of Modernist historicism to be tyrannous (Westfall: 2011). But whether in agreement or otherwise, Modernism operated within an era of social transformation: it was widely noted that it reflected an experimental age, in which designers had the self-assurance to try and to fail. In the course of the early years of the new century, risk-taking avant-gardism in the West seems to have been replaced - for better or worse - by risk-aversion. Does this current attitude reflect a maturation from the age of innocence shown by early Modernists; or is it a sign of a loss of nerve in the contemporary period.

Africa: As it usurps Asia as the most rapidly urbanising region in the world, many commentators, such as Mike Davis, use the African continent as a cypher for their disillusion with the modern world. The vision of the African city as innocent and about to be ravaged by modernity, recalls the view of Oswald Spengler who linked the decline of Western civilization with the rise of the new. In contemporary critiques, modernism in Africa reflects a cultural colonialism rather than a progressive developmental model (Avermate et al: 2010), with opponents advocating against direct planned improvements in living standards; Koolhaas, for example, celebrates his observation that "in Lagos there is no choice, but there are countless ways to articulate the condition of no choice" (Koolhaas: 2002). Many in Africa are striving for a new way modernity, but is there just cause to kick against the Eurocentric model of development just because of its colonial past? (Araeen: 2003) When writers problematize "when modernism... transplanted to Africa, being not endogenous, it grafted poorly to existing life structures" (Agwuele: 2012), there is an implicit reverence for the economic and developmental gap. Modern life did not transplant into the relative poverty of Africa, they say, because Africa wasn't sufficiently developed to accept it. So how are we - or they - to square this underdevelopment circle?

China: Continuity and change have long been the hallmarks of Chinese development throughout the centuries. As such, a synergy between contemporary and traditional needs is conjured up in the abstract notion of "Modernity with Chinese characteristics" (Esherick: 2000). Conversely, the Masterplanning the Future keynote speaker, Professor Wang Yun, director of Atelier Fronti bemoans Modernism's "erasure" from China's collective memory. Is there really a harmonious way to balance the needs and desires of the past and the future? Or does China's current epoch exemplify the somewhat antagonistic rise of progress, sometimes codified as social modernity.

These abovementioned vignettes are simply placed here as illustrative models, however, the contributions within these proceedings are much more detailed, specific - and engaging - and are chosen as papers that will stimulate contention, discussion and argument.

We believe that these proceedings, initiated by Masterplanning the Future's "Modernism: East, West & Across The World" conference, are an excellent opportunity to take a lead in a debate that will change the way that architecture and urbanism is understood and discussed in China... and further afield.

As the conference convenor, I, together with co-organiser, Theodoros Dounas, are delighted to have published these works which I hope will get the fullest credit and critique. As presenters and contributors to the academic conference, I believe that you have opened a window on the modern condition.

Austin Williams
XJTLU

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Sustainability: Recycling the Modernist Paradigm

Buildings as tools of efficiency from west to east

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Keywords: Sustainability; functionalism; efficiency; factory; waste

Efficiency – a modern vein of thought

Melvil Dui, cut out four letters of his given name (Melville Dewey), for the primary sake of making its spelling more efficient. In the early twentieth century a cultural craze in the US celebrated “efficiency” as a value through organizations like The Efficiency Society of New York, which sponsored talks and promoted industrial production. “Dui” was one of the society’s serving presidents (he also invented the Dewey Decimal System). As an idea, efficiency was sifted through society’s cultural sieve, and left a fine dusting of its presence everywhere - in almost every realm of modern life.

Efficiency, as a principle, even found its way into the architectural practice. Historical accounts that celebrated “being modern” in the western world were ushered into the architectural discipline through influential figures such as Sigfried Giedion, Le Corbusier, and Albert Kahn. This agenda was propagated through the mediums of: ideas and rhetoric, design principles, and physical projects. The argument of this paper will focus on how these modernist arguments, values, principles - and even buildings - formed during this period have a strikingly familiar set of undertones that resurface in the contemporary discourse of sustainability.

The idea of being efficient was once a heavy fixation for functionalist arguments at the turn of the twentieth century. However, “efficiency, far from a universal, age-old notion, evolved continuously”, as academic Thomas Princen points out in his historical exploration of the etymology of efficiency (Princen : 2005). Its changing meaning aligns with contemporary

issues, “...its ancient origins in philosophical questions of causation to the physicists’ notion of work to the economists’ concern for market performance to the engineer’s desire for a neat, managerial order, efficiency has adapted to meet social needs.” (Princen : 2005). Following in this vein of thought, the argument for sustainable buildings often utilizes the term “building performance” to regulate energy and resource savings via measurable and quantifiable efficiencies. For architecture and urbanism, the historical roots of this logic can be found in the modernist discourse; while today it finds a present home in the agenda of sustainability. Standards, functionality, and efficiency are pillars of this modernist paradigm that formulated “the growth of a new tradition” in reaction to the industrial revolution which with, “the abrupt increase in production brought about during the eighteenth century by the introduction of the factory system and the machine, changed the whole appearance of the world....”(Giedion : 1967) . Texts by many modernist architects explored these issues and many saw the industrial revolution’s “... effect upon thought and feeling was so profound that even today we cannot estimate how deeply it has penetrated into man’s very nature, what great changes it has made there.” (Gideon : 1967) The presence of efficiency, in the argument for sustainability of the built environment, often is not questioned but rather swept under the rug as an assumption. Thus, Giedion’s observations on industry seventy years later are not all together out dated. He actually raises very pertinent issues that still speak to the contemporary state of cities and

societies around the world. Currently, industrial systems of production - and their architectural counterpart: the factory, are "so profound," in their presence that they seem to seamlessly penetrate into and intertwine with existing social and cultural value systems across the globe: take China for example. Currently there are an estimated 200,000 factories at work in the Pearl River Delta region of China alone. The presence of the factory system is actively, and fundamentally changing China and its relationship to the rest of the world in many complex ways.

Industrialization, and its spatial products grounded within standards, efficiency and functionality (such as the factory and on a larger scale urbanization) represent thoroughly "modern ways" of living. From the architectural practice's point of view, modernism has had a long term infatuation with industrialization and the profound changes it has brought along with it. Giedion claimed that the "whole appearance of the world" has changed in light of industrialization's influence, and indeed it has. However upon close inspection, the contemporary practices that outline sustainability have remarkably similar roots to modernist thinking in the United States, "where the new methods of production were first applied, and where mechanization is inextricably woven into the pattern of thought and customs." (Giedion : 1948) When taking a closer look at arguments for sustainability it becomes apparent just how deeply these "pattern(s) of thought and customs" have become embedded in the way that we approach living in the world, from West to East. The factory as a typology is also quite significant to the contemporary context of China as it symbolizes the "industrialization" of Chinese society - which carries with it loaded ideas of "progress" and increased global economic power. "The pursuit of modern utopia has spread in contemporary Chinese cities in the past 10 to 15 years like a raging fever." (Rong : 2006). A similar logic of utilizing industry/industrial production to achieve economic success parallels values and strategies in Western culture, "In 1994, policy changes and China began embracing cars as a "pillar industry" to stimulate industrial and economic expansion." (Sperling : 2009) Along with the economic changes in China, the physical characteristics, civic and urban organizations of the nation are following suit. It's not just the factories producing the cars, or simply the cars themselves, but additionally it

is the implications that follow these aspects of activity. "Shanghai is building 11 satellite cities. As residents move away from the dense city center, jobs will follow. Cars will become more practical, even necessary in some cases. It's already happening. If allowed to, cars will accelerate this trend, creating a new suburban reality built by and for cars." (Sperling : 2009) These dramatic changes will permeate into more remote dimensions of lifestyle, as well as public and personal health. Of course the process of "industrialization" and "development" are very broad and general terms, however the phenomenon of urbanization and dramatic changes in lifestyle, social and physical organizational structure of Chinese civilization is a very tangible reality for a significant portion of the world's population. "The automobile is at the heart of China's economic growth and modernization. The Chinese government designated cars a pillar industry in 1994, with remarkable results. Since the start of the millennium, growing wealth has led to soaring car use that's remaking cities and lifestyles. If China follows America's car-centric model, it could by itself add another billion cars in the twenty-first century." (Sperling : 2009) Understanding how some basic and seemingly positive, ideas (of standardization, functionality and efficiency) inspire this type of lifestyle from West to East becomes invaluable to explore - especially in light of consistent reminders, often attributed to the Brundtland Report in 1987, to think about "our common future." But what is so "common" about our future?

Zhou Rong, a Chinese writer remarks that, "... with their lack of systematic research and deep understanding of the history of modernization in other countries, the Chinese neglected the imperfection and self-contradiction of modernity, and easily established a utopian model of modernization focusing on the grand vision of inventive city wonders." (Rong : 2006) However, the inherent contradictions of modernism also do not seem to have been recognized by the West either - especially when it comes to contemporary arguments for sustainability. A specific example of this can be found in the renovation of the iconic Ford Factory into a sustainable facility.

Standards and functionality: a modern invention

French architect Le Corbusier proclaimed: "We must create a mass-production state of mind." (Le Corbusier : 1924) This still seems to remain the frame of mind for sustainable projects, despite the argument that they will facilitate alternative futures. As a microcosm, the original Ford Factory plant embodies these modernist ideals - and is itself a symbol of faith in standards, efficiency, and functionality.

Emphasis upon man and the machine, in both production processes and the products themselves, is seen as the means through which to create a desirable future: a modern society. This society would be unfettered by the weight of history - the dream of a truly new and independent era.

Architect Albert Kahn originally began designing the Ford Factory in 1909, concurrent with modernism's architectural influence. The factory's architectural form and spatial layout were continuously optimized and developed for the next thirty years alongside Henry Ford, and many engineers and factory managers to achieve an higher efficiency rate of production. Kahn's original factory embodied Ford Motor Company's values of efficiency of time, form, construction and spatial organization. This efficiency was dependent upon a methodically planned advancement of goods through the specialized buildings of the factory, starting from raw materials and ending with the final assembly of the complete car - including its cardboard box for shipping (Figure 1).

Pioneering the design of a single floor factory by eliminating the multi-level building type (which required the burden of lifting heavy goods to the top most floors) was created through Kahn's architecture. However this original plan that facilitated the assembly line does not transform dramatically in architect William McDonough's sustainable renovation. Thus, creating efficiency was the primary factor underlying all design decisions made in the conceptualization of the modern factory, differentiating it from its eighteenth century precedent. Designing a factory in such a way that the space was malleable, and constantly reorganized, facilitated the rapid integration of new innovations in mechanical equipment and manufacturing processes. This in turn became the primary spatial feature that allowed for the production processes to culminate into the iconic assembly line method of work replicated around the world ever since.

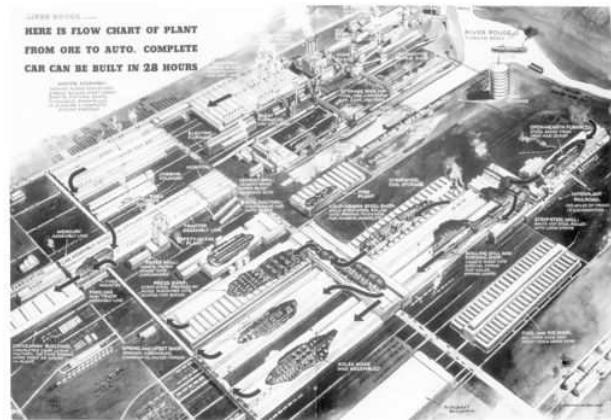


Figure 1 : Diagram illustrating the efficiency of the spatial organization of the inner-workings of the Ford Factory. From the

As an expert of industrial factory design, Kahn created a factory that minimized the interference of the building's envelope and structure upon the internal functions of the factory. This innovation in architectural construction technology, along with the Kahn System of Reinforced Concrete, instituted an influential model of work management for the modern industrialized world. By 1928 the factory's spatial organization had been optimized to such a extent that every forty-nine seconds a new, complete car was produced. The Rouge was the first factory in the world to manufacture raw materials into an entire range of sub-assemblies and components for its final product on one physical site. In this sense the architecture of the factory became the functional framework of the Ford enterprise. Its primary role was to calibrate the efficiency of space between man and the machine on the factory floor. The architectural design served in every sense to support the internal workings of the factory and, to limit waste in its many forms. The Ford Factory became exemplar of Adolf Behne's argument in *The Modern Functional Building*, "that architects were much more likely to produce good buildings by liberating themselves from formal notions and setting their minds on fulfilling function, that is, buildings were again seen much more as tools." (Behne, 1927) The efficiency of industry resulted from faster production processes, a rigorous organization of space and dimensions, and an increased economic ration of work to production of automobiles. These factors all facilitated record levels of mass-production, which in turn influenced contemporaneous

social and political dimensions of American society in numerous ways.

Standards and function yield efficiency

Moritz Kahn, Albert's brother, established in The Design and Construction of Industrial Buildings that the factory's sole purpose was to "house an efficient layout of mechanical equipment." (Kahn : 1914) A key counter part to efficiency is the elimination of waste, which is a concept found within the sustainable arguments for optimizing building performance. A direct quote from Henry Ford describes how waste was conceptualized and mitigated within the layout of the factory,

"We measure on each job the exact amount of room that a man needs; he must not be cramped - that would be waste. But if he and his machine occupy more space than is required, that is also waste." (Bucci : 1993). Ironically, "waste" accumulating outside the walls of the factory was never considered, and subsequently, the factory site was redesigned and renovated to become "sustainable" by William McDonough in 2002 because it could no longer legally function due to environmental contamination levels. The assembly line structure has remained nearly unchanged in principle from Albert Kahn's original designs in the renovation. The factory now produces F-150 trucks, which despite the renovation, upholds values of industrial production - a glaringly obvious paradox. However there are many more subtle nuances that can be found in the project's re-planning and execution that highlight a very specific set of values and logic symptomatic of modernist architectural arguments.

Before going into the details of the renovation, it's key to draw a parallel here to the context of contemporary China. After only thirty years of intense industrial activity in southern China, severe environmental degradation has become apparent. "Natural assets, namely, water, air, soil and biodiversity have been reported by the World Bank and the United Nations to be seriously and irreversible damaged." (ed. AI : 2012) China is already facing issues that the Ford Factory in the US is cleaning up after seventy years of operations. China has not been "industrialized" for nearly half as long. The Pearl River Delta region is home to 200,000 factories, and "The PRD has become one of China's most polluted and ecologically

disturbed urban constructs." (ed. AI : 2012) At the height of the Ford Factory's operations, 100,000 people worked at the site. Some factories in China have over 400,000 workers located at one site (such as Apple's Foxconn factories). Some Chinese factories are four times larger than Ford's site of production in the early twentieth century. Essentially the region has become a gargantuan web of industrial activity that serves not just one nation (like Ford did) but the whole world (*ibid.*). China has been able to achieve a short-term goal of rapid economic wealth generation through this "efficient" use of its population, in the sense that, "...interprovincial migration has become more concentrated and more "efficient" in redistributing population," into urban settings for factory and service oriented jobs (ed. Meng : 2010). The redistribution of China's population from rural to urban is inextricably linked to China's process of rapid industrialization during which, "Four hundred million people have migrated to cities from rural areas," (ed. AI : 2012). All of these changes reflect China's rapid generation of wealth, and it's growing international economic presence. But once factory work begins to migrate to another developing country, will the prospective "future" be as disoriented as the current "sustainable" arguments seem to be?

Sustaining efficiency?

In sustainable terms, the science of nature has been employed as an objective framework in the Ford Factory renovation in order to facilitate the building's efficient environmental performance, to both clean-up the toxins on the factory's site and facilitate a new generation of automobile manufacturing that is less poisonous to human and environmental health. In this project, William McDonough is recognized, through his past work, as an expert possessing the knowledge, experience and abilities to re-design the factory complex as a sustainable one. However, McDonough does not critique this paradigm of industrial manufacturing through the architectural solutions of his renovation, as he claims. Instead, he breathes new life into an existing paradigm and ideological platform. Ironically this sustainable factory is still dependent upon the very paradigm of industrialization that he critiques. In his manifesto Cradle to Cradle he writes, "But modern industries still operate according to paradigms that developed when humans had a very different sense of the world." (McDonough : 2002) Yet, he actually re-

instills this paradigm of modern industry by allowing it to function again. McDonough's new diagram (of the "sustainable factory") highlights the external functionality of the renovation, pointing out the elements of the building external to the factory floor that qualify the renovation as sustainable. The system of rainwater management exterior of the building envelope illustrates the factory's architectural ability to clean and filter rainwater with its ten acre green roof, regenerated landscape and bio-swales. (Figure 2). However, there are no statistics or data on the amount of water that they claim to be able to clean. It is primarily this externalized process that is highlighted by the project. Nothing related to internal organization or function of the factory is represented, as there are no interior views or information on the production processes themselves. The presentation of the sustainable renovation is directly inverse to that of the River Rouge flow chart that represents the inner-workings of the factory's functionality. (Figure 1).

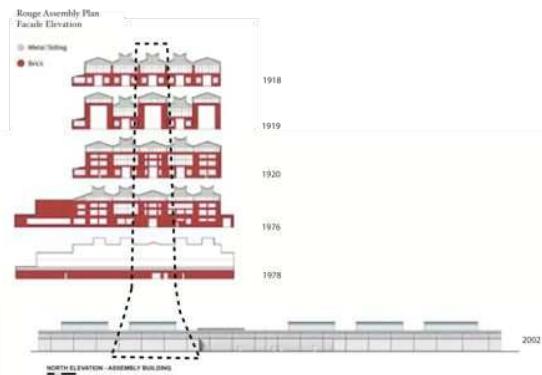


*Figure 2 : Diagram of the sustainable renovation illustrating exterior qualities of the project.
(Provided by WM+Partners)*

The innovation of the free-plan by Kahn has been subsumed into this renovation. The movement of the materials and components through the workshop in both the 1905 plan (by Albert Kahn) of the Packard Building and the 2002 plan of the Ford Factory do not show any dramatic change in evolution. Much has remained intact and unchanged. The architectural organization of the space of the assembly-line is still configured to have materials enter into the building at one end, feed through the assembly-line, and exit out the other side of the building in a single directional flow of production. Although McDonough's assembly building design adheres to the modernist functional

ideas of spatial organization in order to reinstitute the efficient production of automobiles in a tradition assembly-line organization, he did express his (unsuccessful) intentions to address the problems inherent within the product itself, "we're especially interested in manufacturing flexibility for the opportunities it provides for disassembling cars and trucks so that materials may be continuously reused in a closed-loop cycle." (McDonough : 2001) However it is this detail - the product itself - which calls attention to the ironies latent within the renovation. McDonough also highlights his use of light-wells to bring natural light into the factory, and has layered employee support facilities above the assembly line. However natural lighting and employee support facilities were also an essential component of Kahn's design. See figure 3, which is a comparison of the different evolutionary stages of the Ford Factory, (the building drawings in red were provided by McDonough's firm). Notice that the final building elevation in 1970 looks remarkably similar to that of McDonough's sustainable building renovation. This is another piece of architectural evidence that illustrates the overly ambitious claims McDonough makes about the innovation of this sustainable project.

In both the functional and the sustainable factory the figure of the architect has played a critical role in the manifestation and implementation of this desired idea of efficiency. This took place through the design, form, and space of the Ford Factory. Tracing this re- appropriation of efficiency found in functionalism to its modification in sustainable architectural projects illuminates the



*Figure 3 : Diagram comparison of the sections of the Ford Factory through time.
Drawings were adapted from WM +Partner's drawing material provided.*

problematic conditions residing in both sustainable and functional architectural discourses. Disciplinary knowledge developing around the discourse of sustainable building practices tends to recycle these residual pillars of efficiency, functionalism and standards grandfathered in from modernist values as can be seen in the Ford Factory's aging skeleton.

Efficiency's legacy

Efficiency is typically perceived as a positive term itself, perhaps as the end-goal of the engineer or of industrial production (to achieve a higher efficiency rate of production for example). Yet, efficiency functioned as a pillar supporting the modernist architectural agenda - and coincidentally remains a key conceptual support in the sustainable architectural agenda.

However despite its influence, it lies dormant with respect to critical questioning. The primary conceptual link between sustainable building performance, promoted by the current discourse on sustainability, and modernist functionalism is primarily that of efficiency. The Ford Factory - in both its internal mechanisms and management of work, as well as its physical construction of space and movement of materials across the globe and into the mechanized belly of the factory was heavily dependent upon efficiency as an underlying value. The factory "efficiently" digested raw materials into complex physical machines. However, it went beyond being a principle for organizing work and productivity in the West, "efficiency was elevated from a economical and managerial principle to a broad social principle" (Princen : 2005). And this change in mindset is directly linked to the rise of industry, "only when humans organized themselves to extract resources on a large scale for industrial production in the late 19th century and early twentieth century did this particular idea ascend to the status of dominant managerial principle" (Princen : 2005).

In fact Morris, Albert Kahn's brother, described the architect's role as an "efficiency expert" and compared the logic of the factory to that of a library where more and more shelves could be continually added in - as an ever expanding enterprise essentially limitless in scope. And this perception of limitlessness seems to be one of the fallacies embedded within the value of efficiency. Being efficient in many senses was extremely popular in the early twentieth century; 69,000 people attended an efficiency

exposition in New York in 1914. Publications and societies in the United States blossomed in the wake of industrial production (such as titles as: 100%: The Practical Magazine of Efficient Management, and Greater Efficiency: Journal of the Efficient Society) and the idea of a person specialized in knowledge about how to be "efficient" went from being a principle of management of work and transcended into an overall social value just as applicable to individuals. This value has permeated so thoroughly into our cultural psyche that it seems hardly worthwhile or even possible to question. However, my argument along with Thomas Princen's, is that it must be brought into question. Princen calls out the precise problems with efficiency, as it: "requires a relentless subjection of means to immediate ends (what can be done fast and cheap)" This seemingly "cheaper" way of doing things, has other costs - social and ecological - that are often forgone or ignored. Yet it remains "nearly synonymous with "productive" "useful" and has spilled over into nearly all "good" realms of modern life" (Princen : 2005). Looking at it's manifestation in contemporary China, we see on a much smaller scale, the Dongguan Ideal Automobiles factory established in the Nancheng District of China. This automobile factory employs 100 people, and was built in the early 2000's. It sells an estimated 100 cars per month. Unlike the iconic Ford Factory it does not produce all the parts for the cars on site, however it has inherited the organizational logic of the assembly line method of production. It has two production line buildings onsite and can store up to 800 cars. The scale and specificity of the factory complex is not identical to that of Ford, however it is important to point out – that the underlying principles that underpin the production process and motivation for achieving efficiency in the factory's current production, via assembly line, remains unchanged in principle, and stands as a contemporary example of "recycling" these principles into the modern context of China. It seems that this method of production is accepted to the extreme, such that nearly one hundred years later it is still implemented into modern life as the way forward.

Limits to efficiency

A curious twist in history came about in 1942 the title emerged called: Can Our Cities Survive? This book presented an analysis the ABC's of urban problems according to a highly managerial and modernist planning and

architectural logic. What is key about this reference is that it presented research about the inhabitability of cities, and questioned their fate nearly seventy years ago. The title itself is representative of the concerns of the time. Questioning the ability to sustain a way of life based on industrial practices and organization was already brought to the fore of questioning nearly two generations ago, yet it is being replicated at ever more extreme scales in "developing" nations such as China. It almost goes without saying - if this isn't a cause for concern than what is? In fact, the CIAM study identified the Ford Factory as a symptom of urban problems, that contributed to air pollution and deterioration of the quality of life for those living nearby. On a page of the book an aerial picture of the plant is displayed spewing numerous clouds of smoke from its various stacks and underneath it states: "On its 1,200 acres...in its dozens of divisions, the Ford Plant at River Rouge (Detroit) stands as a complete and concise cross-section of modern U.S. Industry... New trends in planning do not favor the construction of this type of huge factory, especially in the immediate neighborhood of a big city." (Sert : 1947) In this analysis the displacement of the negative effects of the factory, by keeping it distanced geographically from a big city, was the primary solution sought by functionalist architects and planners through use of bands of greenery (or the "green band"). This fact highlights that the actual industry itself, how it functioned, what it produced, and its ultimate purpose was not fundamentally questioned by the functionalist/modernist discourse - and this is a primary aspect that I would like to point out as still not being questioned today. This is highly apparent in the Ford Factory's renovation. Functionalist planners and architects saw the impacts of industry and understood the environmental problems caused by the plant, and suggested a strategy of displacement, rather than restructuring or rethinking on a fundamental level.

International concerns over "industrialization", "development" and "growth" of cities all over the world are escalating immensely, yet often times these problems strongly echo those identified in 1942 when CIAM's studies were conducted. The plurality of scales and places around the world at which this type of urbanization is taking place are so immense and rich with complexity, that it is often incomprehensible to understand, breakdown and systematize into a completely "knowable" set of conditions. And thereby it becomes

harder and harder to approximate and generate solutions to the problems that surface in our cities, communities and everyday lives. Has much changed in the way that these problems are conceptualized, identified and addressed since the 1940's? How far have we really come in dealing with problems of "urbanization" and the built environment?

Sustaining modernization?

Does the contemporary construction of the argument for sustainability have something to offer? And if it does, whom does it serve? As we have seen, the modernist architects of the early twentieth century tackled these types of issues. One of their ideas that represented this type of thinking was that of the functional city. However this notion of civic life, broken down into four distinct and compartmentalized areas of being into "work", "transportation", "dwelling" and "recreation" was symptomatic of the desensitized effect that modernism - founded on values of: production, efficiency, and, standardization, - created through a model of reality that delaminated the human condition from the practice of planning and architecture. In essence these strategies were insensitive to social, political and cultural aspects of everyday life.

Sustainability is a term that seems to be on everyone's mind, and many aim to foster "sustainability" through their current activities, planning and agendas. In the realm of the architectural practice it has an odd way of presenting itself. Often sustainability is referred to as a current crisis to address. In a sense, it is as much the urgent crisis modernism was in its efforts as an agenda to break away from tradition. However, in order to make a true departure from modernism, sustainability should make it a priority to depart from values of efficiency, standardization, and functionality. Transportation, mobility, population and urbanization, supplies of resources and waste generation are all general themes that fall under the umbrella of "sustainability" for the architect and urban planner. However, as a topic, sustainability remains ambiguously defined, and often times is interpreted to fulfil existing economic or commercial agendas, rather than outlining and developing distinct new ways of living. It struggles to pinpoint a cohesive argument that does not recycle these key elements of the modernist paradigm - and has wholeheartedly grasped onto values of efficiency, standardization and functionality as pillars to base its goals upon. The modernist

movement, despite its drawbacks, had a clear set of priorities in the West, and a more-or-less cohesive central set of goals. Sustainability's lack of a coherent, singular meaning, partly has to do with how the term became popularized through international political reports and agendas - it has been intentionally left open to interpretation.

Sustaining standards

Today, defining sustainability for the built environment takes its primary form through green building standards and rating systems such as LEED in the US and BREEAM in the UK. (China's answer to this is the 3 star rating system that was implemented in 2008.) Yet these standards are essentially a code of efficiency that allow for productivity to be glorified. Standards were just as important to the modernist agenda, as they directly facilitated in the creation of industrial scales of activity. In a section of *Towards an Architecture* titled: *Eyes That Do Not See... III Automobiles*, architect Le Corbusier highlights precisely how standards were necessary to guide the "modern man" and his way of life: "We must see to the establishment of standards so we can face up to the problem of perfection. The Parthenon is a product of selection applied to a standard. Architecture works on standards. Standards are a matter of logic, of analysis, of scrupulous study; they are based on a problem well posed. Experimentation definitively fixes the standard." (Le Corbusier : 1924). Standards became a form of architectural knowledge during this time period through its own form of writing, and continue to play an essential role in crafting the 'sustainable agenda' for architects. What is important to consider in light of all of this, is that the idea of consumption itself is culturally conditioned and the argument that "science is shadowed, at a constant distance, by its own anthropology" (Braun : 1998) seems to be ignored by standards, functionality, and efficiency. As objective as science or standards try to be, they are fundamentally bodies of knowledge formulated by the human mind; just as consumption, no matter how regulated and controlled it can become, it is still a cultural and human act informed by human value systems.

Looking towards the future

Despite the fact that the terms "modernism" and "sustainability" are in many ways historically disconnected (as one is not directly derived from the other) they share some surprisingly similar ideological roots as we have seen. However, modernism had a clear and rather unified vision for the future - despite the fact that it was ultimately abandoned as a formal agenda by the architectural practice. Sustainability's claimed departure from conventional practices, lacks a coherent agenda and vision for the future. It remains tangled, disjointed, and often presents weak answers to some of our most complex problems. By recycling the three pillars of modernism identified in this essay: standards, efficiency, and functionality - sustainability as a discourse has not been able to effectively create a cohesive argument or novel set of visions for the future.

Have these pillars of modernism so profoundly affected our values and thinking about the built environment, that we can no longer immediately discern their presence and influence upon our own current arguments, goals, and visions of the future?

It certainly seems so.

In 1967 the Hudson Institute published the title "The Year 2000: A Framework for Speculation on the Next Thirty-Three Years." This study outlines many highly researched speculations on what the future of the world would be like in 2000. The study points out that: "6. Efficiency no longer primary" would be a key change (Kahn : 1967). Obviously this prediction has yet to be realized. It precisely highlights that if a true paradigm shift is to take shape, we will have to take efficiency off of the pedestal modernism placed it upon. Currently the construction of sustainability as an argument for the future has not succeeded in doing this, or in instituting new values replacing efficiency, and mechanisms of functionality and standardization.

In fact, I would argue that our obsession with efficiency has become even more pronounced, and is carried forward through contemporary arguments of sustainability. The inherently destructive cycle of creation that efficiency affords is not unlike the ancient symbol of Ouroboros: a snake eating its own tail. When efficiency is no longer the driving value it may be possible to break this perpetual recycling of the modernist paradigm, and open up new potentials avenues of reinvention. Until then - in both the east and west - we will be tracing the footsteps of Melvil Dui.

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The Variations of the Sectional City

Arcades, Infrastructure and Urbanisms of East Asia

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Keywords: sectional city, infrastructure, congestion, grade separation, network

Introduction

This research suggests ways to investigate emerging Asian urban artifacts through their cross-sections. The inquiry takes off from a perspective framed by Rem Koolhaas' "1909 theorem" of "meadows aloft" and Walter Benjamin's Paris arcades, both of which captured a liberated sectional dimension independent of the master plans (Koolhaas 1978; Benjamin 1982). My research seeks to translate such a perspective into the emergent urban scene of East Asia. It explores sophisticated spatial interventions to mediate the conflict between infrastructure and property. The volume, chaos and density of Asian mega-cities has contested the traditional dualism of interior/exterior, public/private, nature/artificial and figure/ground. It cultivated a type of wisdom in creating spaces in extreme conditions. These urban interventions investigated in this paper unfold social tensions, forces and conflicts of a city and their spatial consequence in a form which cannot be captured by masterplans. This research intends to contribute to both an urbanism of contemporary Asia and a broader narrative of a congested urbanism which is not merely limited to the Asian cities (Figure 1).

Outline

The idea of understanding contemporary global cities through sections is not new. Recently there have been plenty of remarkable architectural works in which sections become a prominent strategic tool, as illustrated by the works of OMA, MVRDV, Diller Scofidio + Renfro and Wang Shu. There is a trend that this strategic tool has transmitted to larger urban-scale interventions, as illustrated by the New York's High Line Project. However the tool is being used in the absence of a well-established historical, social and cultural consciousness. A cross-section is not only an analytic tool but an incubator for potential urban processes. In the age of skyscrapers the section has become independent of the plan ever since the Z coordinate was conquered by the steel structures and elevators (Benjamin : 1999). Meanwhile, the increasing grade separations in urban centers determined that the multiple flows of crowds have been a prominent agent in shaping the space. The enhanced internal communication of a segment of urban area by elevated and underground passages forms a networked urban enclave. In many cases in the following discussion, the sections reveal the potential space-time richness in an urban artifact, as investigated by Benjamin in his Arcades Project. As sociologist Dieter Hassenpflug indicates, Benjamin's study of the Paris arcades represents "an awareness and knowledge of the city by and through itself" (2001). Arcades represented the urban codes in cities of great volumes, density and chaos. The intense intermeshing of programs and uses at different horizontal levels forms the

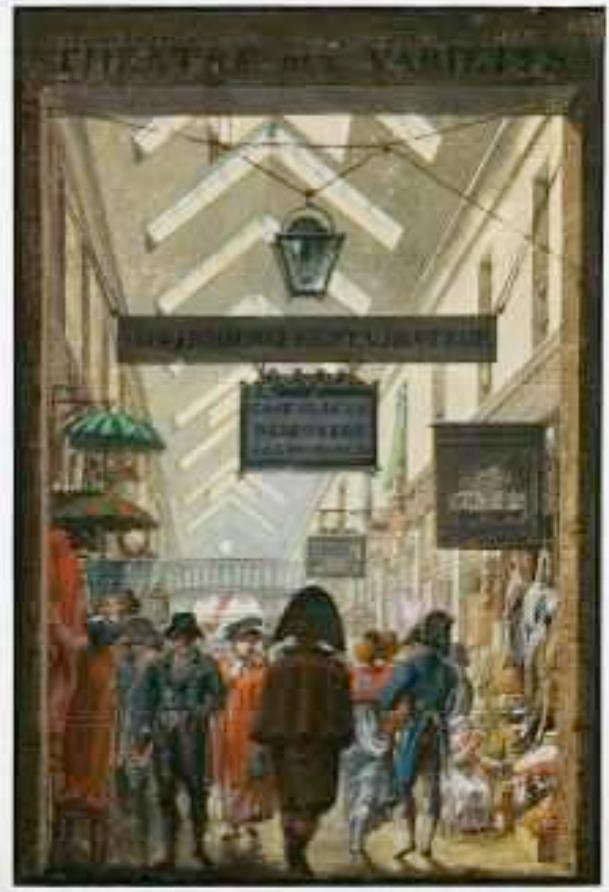
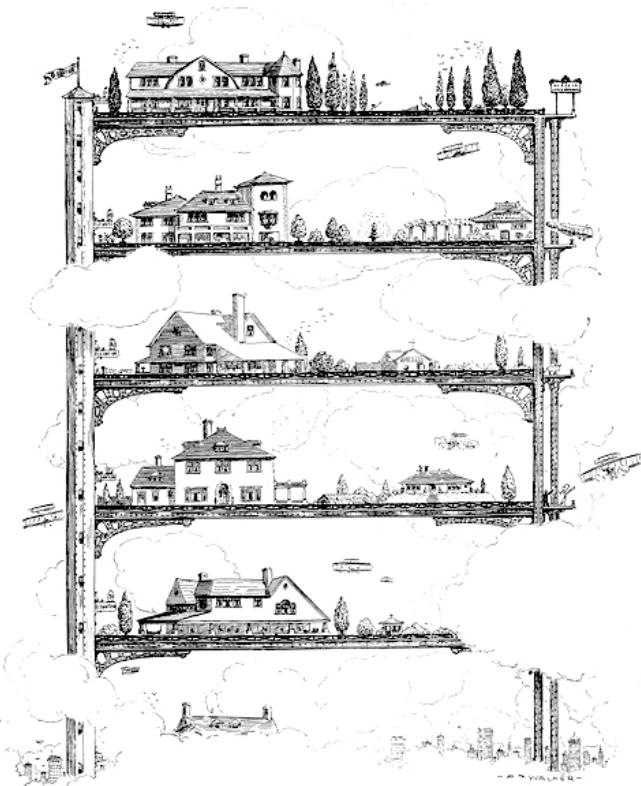


Figure 1 : Shopping Arcade des Panoramas in Paris. Debucourt, Philibert Louis, 1807.



"BUY A COZY COTTAGE IN OUR STEEL CONSTRUCTED CHOICE LOTS, LESS THAN A MILE ABOVE BROADWAY, ONLY TEN MINUTES BY ELEVATOR... ALL THE COMFORTS OF THE COUNTRY WITH NONE OF ITS DISADVANTAGES."—Celestial Real Estate Company.

Watercolor by Rem Koolhaas' "1909 Theorem", featuring a mega-structure providing multiple virgin grounds

inescapable milieu of contemporary megacities.

The scope of this research is twofold. First, it intends to situate the urbanism of East Asian cities in a broader narrative of the urbanism of congestion in the era of globalization. Second, it attempts to seek a lens to glimpse the coding and decoding of the emerging East Asian public spaces in the region's shift to service-oriented, postmodern economy. The discussion focuses on the concept of sectionality as both the urban code of the Asian cities and the tactics of this interpretive and comparative study.

With the still fermenting crisis of global capitalism the labour-rich economy buttressing the East Asian miracle, first in Japan, then in the Four Tigers and Mainland China, has come to an end. For the past two to three decades the production-oriented Asian economy has undergone a shift from the sheer volume and speed to a more humanized quality. The spatial consequence of this shift is the rise of Central Business Districts (CBD) and mixed-use commercial spaces as engines to stimulate the

slowing-down regional economy. Followed by the rise of CBDs and shopping centres is the ubiquitous malling of streets, plazas and transit spaces. As Peter Rowe suggests, the major cities in this region were undergoing a turning point from "modern" to "post-modern" from the 1990s and more evidently in 2000s (2011). Meanwhile, the relatively autocratic Asian regime feels increasingly necessary to yield to a rising middle class who is indispensably intertwined with emergent consumerism and tourism. Cities on the Pacific Rim witnessed physical transformations of their major urban environment to a more recreational and scenographical identity. For instance, the Cheonggyecheon Restoration Project converted a highway corridor into a linear water park through Central Seoul. In Shanghai the New Bund Project demolished a highway off-ramp above the historical Bund and transformed the Bund into a folded and terraced waterfront promenade. A common characteristic in these urban interventions is that the sectional dimension became a vital and independent factor in making stratified,

beautified and scenographic urban terrains. This physical transformation is guided by a collective provision of modernity and contemporaneity.

My research would concentrate on a few types of urban interventions mostly in Hong Kong and Shanghai. Hong Kong and Shanghai are the two densest cities of Greater China and are both experiencing a radical physical transformation due to the shift to post-modern, service-oriented economy from 1990s and well into 2000s. They form a model which is being emulated by less advanced cities in Pacific Rim. Meanwhile, they are a magnifying lens to glimpse an urbanism of crowds which is applicable to other major cities in this region. The selection of the studied sites and actions intends to be representative but not exhaustive. They represent the well-known urban centers in this region and cover a broad range of typologies and scenarios. The combinatory approaches of architecture, engineering, planning and landscape are evident across the transformations of these sites. Each category contains a group of cases in different contexts but of similar spatial settings. The cases are selected according to the criteria below:

- The relative spatial novelty of the studied urban interventions;
- The complexity and mix of the programs and events in the sectional dimension;
- The references to the spirit of Benjamin's arcades;
- The public perceptions and visions about the studied spaces.
- The locations and contexts of the studied spaces.

In regard to their spatial contexts, five typical scenarios have been identified and will be investigated in details:

1. Roundabout Scenario;
2. Waterfront Esplanade Scenario;
3. Sky Marketplace Scenario;
4. Covered Ground Plaza or Beneath-eaves Scenario; and
5. Podium Rooftop Scenario.

The study concentrates on the formative moments of these sites and the stakeholders which constantly shape theirs spaces. The cases represent social and infrastructural necessity in the disguise of modern and metropolitan veneers. These sites are indicative of the emerging consciousness of middle class in this region for the past two decades. Usually the forces shaping these spaces are coincident with the transformative moments in the regional political history. In

most cases the interventions take place at the edges, peripheries or interstices in the private realm, or in multi-purposed spaces publicly owned (Figure 2).

The purpose of this research is not to profile a stereotypical urbanism of Greater China or Pacific Rim. The study should avoid being trapped in the over-emphasis of the cultural specificity of the region. It presents generic attitudes and wisdoms in reconciling the ever-growing density and increasingly tight inhabitable space. It suggests a path to examine the cross-cultural comparison between well-known Western models and emerging Asian cases in similar conditions. Through the case studies, particularly on the sectional deployment of these spaces, my research attempts to argue that volumes, height, density and proximity were not blind numbers but vital scenarios once the Z dimension acts as an active element in design and planning.

Historical Context

As a congested city for centuries, Paris bore witness to two ways in which public space were created. First was through Baron Haussmann's interventions. The cutting of great boulevards created a clearly defined spatial hierarchy and privileged the spaces along the boulevards over the backstreets. Second was through the flâneur, or stroller, in the form of arcades. The construction of arcades transformed the mute alleyway between two building blocks into a content-rich, panoramic space. However, Haussmann's boulevards ended the age of arcades and transported the flâneur from the arcades to the newly-formed department stores. The networked arcades constituted what this paper defines as a "sectional city." Fourier saw the street galleries as a fledgling "Phalanx" made of enhanced internal communication—multilevel passages and continuous peristyles (1982). Arcades symbolized an architectural intervention to knit a self-contained enclave. They reproduced a miniature city life and planted seeds for self-organized public network in the capitalist metropolis. Such an architectural invention ensured the permeability for a public space and entertained people's imagination of a traditional market street. Thus, by conforming to the existent urban fabric and topography, the sectional approaches became an active player in promoting social values. In

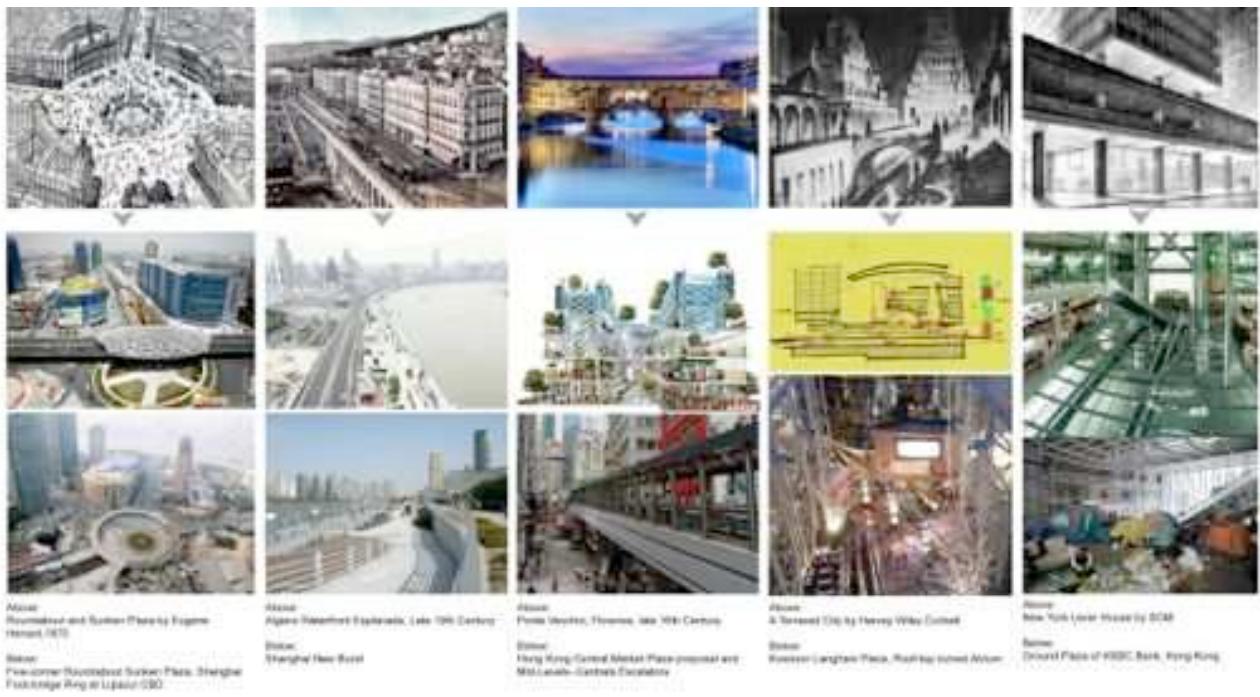


Figure 2 : An image diagram showing the five studied urban scenarios.

other words, the arcades invented a civic space rather than inherited one. As a result of the recent wave of mall development in the consumer economy across the world, public life is being further removed from conventional downtown streets to the enclosed shopping gallerias. In East Asian cities such as Hong Kong, the prevalent mall construction is a conjured economic instrument to refigure the post-colonial city as a new consumer mecca. The chaos and mess on the streets seemingly justifies the privileging of interiorized pedestrian network. In the functional perspective the ubiquitous malls are where Hong Kong's social life occurs. Meanwhile emergent spaces as alternatives to shopping gallerias are mushrooming around the edges, borders and peripheries. However, these ambiguous spaces—on the footbridges, sunken squares, rooftops—staged a new vision beyond the mutual alternation of avant-garde and kitsch, or privatizing and occupying. With that said, the aim of this paper is to revisit the architectural rationale that the 19th century arcades invoked and to re-examine this rationale in the production of public space in the urbanism of crowds today. It seeks the reconciliation between opposing forces and emotions on a dynamic, inclusive and volumetric edge.

The record-breaking amount of skyscrapers emerging at the turn of the 20th century transformed the way in which public spaces were constructed. In "Delirious New York" Rem Koolhaas advances a "1909 theorem" — the Skyscraper as a device for producing unlimited numbers of virgin sites on a single metropolitan location (Koolhaas : 1978). He observes that the Downtown Athletic Club is an instrument of the "Culture of Congestion." Each platform of this 38-story structure is devoted to a distinct plot for intensifying the human intercourse. The vertical composition of these programs obliterates the human consciousness of height and constitutes an enclosed urban ecology. The Downtown Athletic Club is not merely a skyscraper with repetitive floor plates. It stacks inhabitable, artificial grounds to create a cabinet-like mega-structure. A historical review of arcades and skyscrapers helps conceptualizing the "sectional city" defined above. In "X-Urbanism: Architecture and the American City", Mario Gandelsonas finds that the New York Skyscrapers represents a city "where the section becomes independent of the plan" (Gandelsonas : 1999). As Gandelsonas suggests, the master plan which is used to maintain a visual integrity cannot fetter the disorderly growth of the city in its vertical dimensions. In this research the section is not only a neutral vertical slice but also a volumetric and eventful stage. A section of an urban segment can be loaded with activities and encounters. In congested urban areas where the space of the city is partitioned

and gridded by borders, walls and floors, the cheek-by-jowl situation pushes all human intercourse to the contested borders. Hence, sectioning can be rather seen as a planning and design tool permeating the heavily floored and walled urban space and to discover the volume, dimension and internal structure of the edge. And by this intervention it constitutes a body of knowledge of the city without a master plan.

Literature Review

The recent economic success of Asian cities on the Pacific coast has been long characterized as an outcome of real-estate speculation and infrastructural boom. Seeing the emerging Asian cities as a conglomerate of pastiche, stacked volumes and conflicting objects constitutes the thesis of Rem Koolhaas “Great Leap Forward” (2001). However, this production-oriented perspective is not relevant to the urbanism of East Asia now when the regime is undergoing a turning point to service industry. By virtue of the shifting appearance of East Asia urban territories, a couple of researches on contemporary Asian urbanism can be considered to be insightful, if not yet

comprehensive. Gandelsonas’ *Shanghai Reflections: Architecture, Urbanism and the Search for an Alternative Modernity* focuses on the impression of the “alternative modernity” in Shanghai’s rapid restructuring since the early 1990s but did not provide a convincing definition of such a “modernity” (Gandelsonas 2002). Besides, only a few scholars identified architecture as a positive participator in reinstalling the public sphere in congested urban conditions. “The Making of Hong Kong: From Vertical to Volumetric” by Barry Shelton et al and “Cities Without Ground: A Hong Kong Guidebook” (to be published) by Jonathan Solomon et al are two recent works which soundly discuss the architectural characters of civic spaces of Hong Kong in relation to sectional configurations. Few texts were able to contextualize the Asian experience both in a broader historical narrative of urbanism of crowds and in sectional urbanism. In general, the emphasis of Asian cities’ cultural and social particularity in existent literature risks hindering the cross-reading of the Asian scene and the developed knowledge and narratives of the earlier generation of global cities.

In the context of East Asia, the discussion of sections has been more and more relevant to

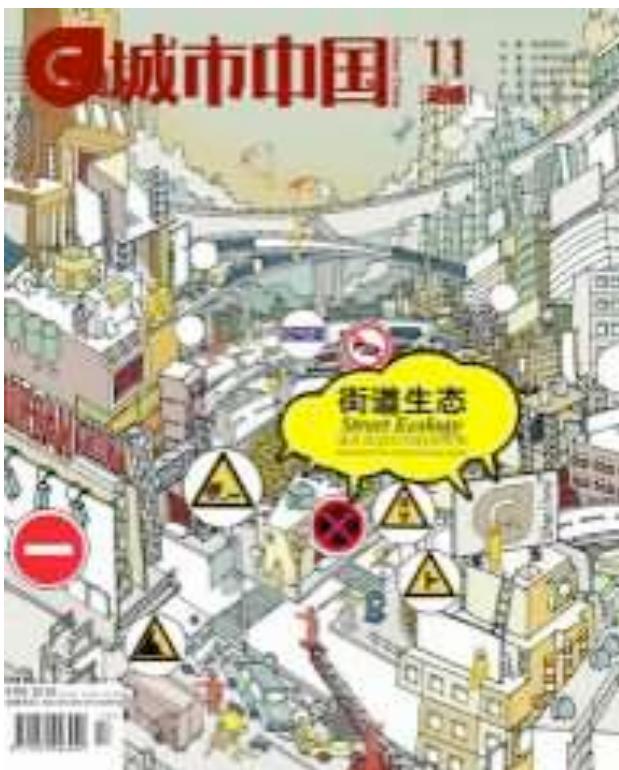


Figure 3 : The Covers of *Urban China*

its urban realities. These researches are usually under the aegis of mega-structures, skyscrapers and transportation, a vision advanced by the 1960s Metabolism. By virtue of a region-wide unfamiliarity with criticism, the utopian rationale of Metabolism in Japan is uncritically accepted and treated as a pragmatic theory. A whole issue of *Time +Architecture*, an academic journal sponsored by Tongji University of Shanghai, was devoted to the subject of section. *Urban China* is a worldly known trade magazine which constantly explores the informal urbanism and its related disciplinary reflections (Figure 3). Architect Zhang Weiping's recent book "Invisible Logic: Hong Kong", as Asian "Culture of Congestion" is a fine piece of scholarship focusing on the architectural pragmatism in Hong Kong. In this book sections are used as a powerful tool to present the spatial strategy of Hong Kong. Besides the published texts, exhibitions, competitions and forums sponsored by mass media were important platforms for attracting public attention. However, these separate endeavours have not been soundly conceptualized to form a body of systemic knowledge.

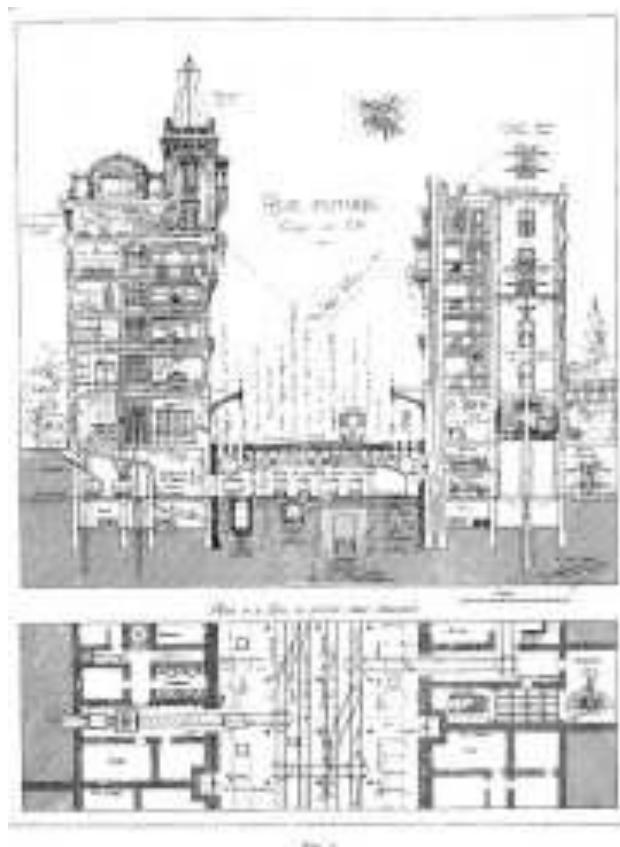


Figure 4 : Eugene Henard and Wiley Corbett's futuristic proposals for a multi-level city

The purpose of the literature review is to locate this research within the urbanism in relation to density, verticality, mobility and public space. It seeks to find a joint point between the discourse of the "Culture of Congestion" and Asian urbanism. The vision of a city of skyscrapers was enthusiastically delineated by visionaries including Eugene Henard, Harvey Wiley Corbett and Raymond Hood and was conceptualized by Rem Koolhaas in his discussion of the New York "1909 theorem" and Downtown Athletic Club in "Delirious New York" (Figure 4). Edmund Bacon initiated an urbanistic project concentrated on sectional organization of movement systems but such a vision could not redeem the decline of public sphere (Bacon : 1976). The deformation of public spaces have been further investigated by Michael Sorkin, Margaret Crawford and Trevor Boddy in "Variations on a Theme Park" (Sorkin ed.: 1992). Besides writings on the decline of public spaces, a considerable amount of scholarship has been dedicated to the study of the privately owned public spaces. Such works include Jerold S. Kayden's *Privately Owned Public Space* and William Whyte's "The Social Life of Small Urban Space" (Kayden 2000). The two works



reexamine the blurry distinction between private and public realm but do not draw our attention to the spatial quality of these publicly used private spaces. All these works point to a more innovative urban design instrument which conceives of the public space beyond master plans, disciplinary borders and mute numbers.

Case Studies

The Urban Context of Hong Kong and Shanghai

The recent economic success of Asian cities on the Pacific coast has been long rendered as an outcome of real-estate speculation and infrastructural boom. The sharp rise of Asian cities has been seen as a spectacular drama which heavily relies on real estate speculation. The sheer volume and intensity of Asian cities along the Pacific coast exposed a ruthless aspiration for spaces and services. And in turn the revenues produced by the real estate speculation can fund more complex, heavy-duty civic facilities. Seeing the emerging Asian scene as a conglomerate of pastiche, stacked volumes and conflicting objects and information constitutes the thesis in Rem Koolhaas' "Great Leap Forward". However, such a narrative flattens the rich history of modernization of Asian port cities and simplifies the morphologic change of specific sites and spaces. Taiwanese architect Liu Yuyang in the Chapter "Politics Guangzhou" in Great Leap Forward concludes that the urbanization of Chinese port cities appears as a form of "concessions" or "special economic zones" (SEZ) in contemporary terms. Those semi-autonomous economic zones always cater to an elite group of people and bring in intensive investment in highways, subways, malls and transit hubs. Although every piece of land within the concession has been zoned for certain governmental or private uses, these parcels are not necessarily so used. As the colonial concessions were enhanced by expanding roads and internal adhesion, the new elite enclaves are demonstrated by networked internal communication. Such a networked urban fabric also reveals the collective imagination of modernity and prosperity. Eventually, density and proximity starts to be treated by local regimes as a positive factor to capitalize on instead of an issue to be addressed.

The urban narrative of many modern Asian cities is twofold. The longing for a metropolitan

identity was always intertwined with construction of everyday spaces of footbridges, sheltered marketplace, promenades, arcades, and numerous pocket spaces. Both modern Hong Kong and Shanghai originated from the geo-political margins. The two cities stemmed from a type of special administrative regions due to the Treaty of Nanking signed in 1842. Acting as China's gate to modernization, both of them have cultivated a degree of commercialism which prevented the implementation of a comprehensive urban plan. Neither of them preserved enough open spaces accessible to all social classes. After 1949, the victory of the communist party in the civil war drove waves of mainland Chinese in an exodus into Hong Kong as the default refuge. At the same time, immigrants from inland China flocked into Shanghai with the communists' takeover. Due to different social factors, the twin cities witnessed rapid population growth over two decades in the post-revolutionary period, with the residents doubled in each city. Under this circumstance, the two cities developed a super-functionalism in architectural practice. Every inch of leftover spaces and logistic zones were exploited to accommodate relatively privileged uses which could not be imagined in New York or Chicago. The research examines a couple of categories of urban interventions which took shape in different scenarios and weaved up approaches of architecture, engineering, planning, and landscape. Each category covers a series of cases in different contexts but bears prototypical resemblance. The cases range from piecemeal to systemic urban interventions intended and shaped by the public. As formerly discussed, they were indicative of a variety of strategies and attitudes toward the existent conditions. In most cases the intervention took place at the edge or periphery of the private property, or on uninhabitable zones of public works. Through the case studies, particularly on the sectional deployment of these spaces, the paper argues that volumes, height, density and adjacency were not blind constants but variables which could be manipulated by active design and planning.

Both Hong Kong and Shanghai today have built an advanced public transit network. Today half of Hong Kong's population live within a 500 metre radius of a transit station and the whole city were serviced by a thick "carpet" composed of trains, subways, escalators, cable cars and double-deck buses. A Hong Kong walker might always find himself either entering or exiting a metro station. Meanwhile,

Shanghai was served by the longest metro network in the world and more than a thousand bus routes. The Shanghai 12th Five-year Plan indicates that currently 71% of central Shanghai residents lived within the 600 metre radius of a metro station. More than 30% of the residents opt to take the public transit for traveling. The ambient public transit cultivated a pedestrian culture and a traversable urban fabric which is reminiscent of the experience of Paris' arcades.

Selected Case Studies: Shopping Atria as Civic Spaces

This case study examines networked social spaces as an outcome of the city's efforts to knit the society together and to demonstrate a metropolitan identity. In many Asian metropolises, density and crowds are not only merchandised but also advertised as a cultural icon. The giant shopping atria have become ambient interfaces between the city and its movement systems. Not all shopping atria function as public spaces but those of Hong Kong definitely do. Hong Kong's shopping atria, usually clustering and sitting on the labyrinthine MTR metro stations, are playing the role as the concourse of Grand Central Terminal does in New York. Every step of the pedestrian passages was been motivated and articulated to pose a dynamic ambience for ceaseless commercial activities. Jon Jerde's practice in Japan, Hong Kong and Shanghai mix the Victor Gruen suburban mall experience and Hilberseimer's futuristic vision of towers on podiums. For instance, the Langham Place shopping center in Mong Kok represents the latest attempts to maximize the leasable and productive ground in the compressed urbanism. The atrium of Langham Place is an outcome of creative conformation to the building coverage. Sitting in a parcel with a floor area ratio of 15, Langham Place features a grand atrium on the podium top which connects to the top terrace by the longest interior escalators of Asia. The multiple-staged atria can suck the pedestrian from the metro station below and pump them to every corner of the vertical labyrinth. The whole space has been engineered as a giant compressor for encouraging human encounters. Likewise, the roof garden of the Elements Plaza of Hong Kong, which is on the same podium top as the Kowloon MTR station, is another example in which privately owned spaces are programmed

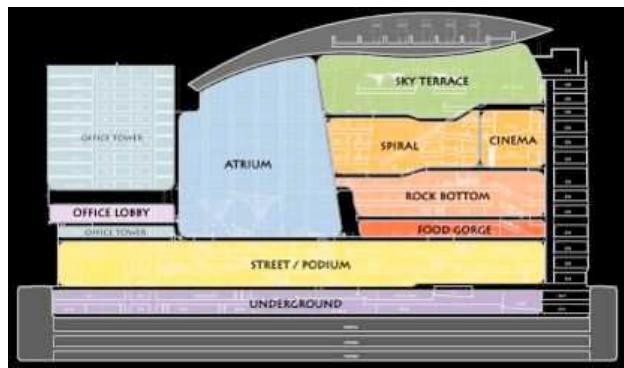


Figure 5 : Section and artist rendering of Langham Place atrium

for public use in a continuous movement system (Figure 5).

Footbridges and Sky Malls

In most cases the civic spaces in Shanghai and Hong Kong were initially engaged with a single function, such as passages, markets, levees or roundabouts, etc. And over time they began to include more programs and connect to each other to form multi-purposed, multi-tiered urban destinations. For instance, The 1938 Bauhaus style Central Market and the footbridge network were joined in 1994 to form an endless flâneur experience. The Hong Kong footbridge was born in Central of Hong Kong in 1970s to provide multi-level accesses to the mushrooming shopping malls. In doing so more ground spaces could be saved for the public. Some segments of the footbridges were integrated into a network of retail gallerias, and

have been turned from a passageway to a multi-purposed gathering space. In 1993, a unique form of footbridges, the Central—Mid-levels Escalator, was built to shorten the commuting time between the business area of Central and Mid-levels. In 1994, the second floor of the Central Market was converted to a segment of the Central Escalator Link Alley Shopping Arcade and as a starting point of the Central—Mid-level escalator system. The Central Escalator Link Alley Shopping Arcade became a trail to explore the internal ecology of the Hong Kong concrete forest. The trail of arcades is reminiscent of the Vasari-designed bridges and passageways running from the Palazzo Vecchio across the River Arno and through the Ponte Vecchio in Florence. In both cases a channelized path became the seeds of a passage-turned public space (Figure 6).

Figure 6 : The Central--Mid-levels Escalators



Shanghai Municipal Council of the International Settlements started to lay turf grass on the foreshore of Huangpu River. In 1920s the Bund was exclusively the foremost communal space for the international settlers. To prevent the floods a concrete wall was built by Japanese occupants in 1940s and was elevated and extended for a couple of times in the following decades. Because of a sense of semi-privacy provided by the concrete wall (almost the height of the breast!), the Bund became the most popular dating site for young Shanghai Chinese in 1970s. In 1993, the embankment was expanded outwards into a broad promenade and was elevated, which is almost one story above the sidewalk of the riverfront Zhongshan Road. The promenade was in fact sitting on a concrete box supported by deep piles. The space of the box beneath the paved promenade started to house more



The New Bund

In Shanghai, the embankment of the Bund, a mile-long elevated ridge along the Huangpu River, was turned into the most elegant promenade in the 1920s. The Bund used to be a muddy towpath before Shanghai's onset of a Treaty Port city. Not until early 1880s did the

retail and dining spaces which were open to the Zhongshan Road. Thus the Bund was partitioned into two levels connected by ramps and stairs—a chaotic retail zone along the one-story high arcades and a relatively elegant dating promenade atop the concrete chamber. In 1996, the Yan'an Elevated Expressway was constructed, with an off-ramp hovering above a segment of the promenade and converging with the Zhongshan road. The off-ramp

increased the sectional complexity of the Bund and acted as a new landmark only for 12 years, until it was demolished in 2008 to retrieve a pedestrian-friendly promenade (Figure 7) .

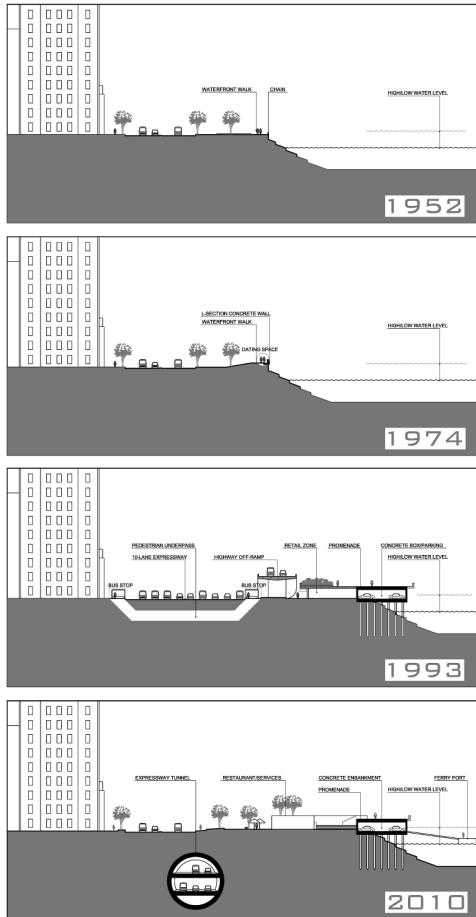


Figure 7 : Sections showing the transformation of the Shanghai Bund

Conclusions

The East Asian “sectional cities” are occasioned by both collective visions and realistic needs. The intensively networked urban terrains serve as a podium supporting an agglomeration of competing spectacular towers, blocks and landscapes. The concept of the “sectional city” reveals the passions and struggles of East Asian city regimes in converting their urban images into destinations of services, attractions and experiences instead of merely production centers. The exploration of the “sectional city” intends to contest the stereotypical narratives of emerging Asian cities as instantaneous collage

of ever-expanding architectural elements and conflicting cultural signs. It concentrates on the internal logic of specific sites and actions and their relevance to established urbanism of congestion in a general sense.

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Reviving the City and Identifying Approaches to Sustain Growth

Lessons from Contemporary Policy-driven Strategies and Urban Changes in the UK

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Overview

Many authors and researchers in the field of urban studies have analysed urban policy. This analysis can be used to evaluate the impact of policy in the face of continuous and rapid urban changes and to help elaborate strategies that might reverse decline. This research paper, being part of a bigger research project (and a report), describes the role of policy-driven urban strategies in the UK and identifies the successes and failures in producing urban transformations. This study explores the conflicting theories underlying the different urban strategies in terms of problems and solutions; and in particular, it aims to identify successful policies and creative initiatives that conceive mechanisms and approaches to revitalise particular urban quarters (e.g. urban cores and inner cities). Its focus on the social, economic and environmental aspects of urban growth reveals the novelty and relevance of various programme initiatives. This study consists of three overlapping sections, starting with the background study about contemporary policies and urban change and then looks into two selected case studies in the UK. The final part of the paper will scrutinise particular examples of urban changes (i.e. urban regeneration and urban renewal) as well as evaluating the related policy-driven strategies and will propose approaches that can be applied to the contemporary urban changes.

Introduction

In the growing race of interests towards urbanisation and rapidly-approaching socio-economic interventions, cities often experience decline, deprivation or decay and face various challenges that can have major impacts on society, which then lead towards further manipulation of the overall urban growth and stability. In urban studies, it is crucial to identify such urban pressures or problems and propose solutions that can help towards the improvement of urban policies. As a result, this study exploits directions in which policy-makers and designers can enhance the quality of life, revive the city's socio-economic values and sustain urban growth. In this respect, the major aim for this paper is to analyse urban problems through the analysis of deficient policies and to identify policy indicators and initiatives that maintain and develop strategies to achieve urban growth. Akin to this endeavour, McKay and Cox (Cox : 1979) argue that:

"There are two fundamental failings in British urban policy: The failure to relate and to integrate different policy areas ... The failure to examine the welfare and distributional impacts of policies".

This suggests that policy failure has been part of a repeated cycle and that insufficient lessons are learnt from mistakes, compared to effort put into new governmental interventions. Certainly, urban policies have had to deal with new pressures – mostly socio-economic related – but such elementary failures have played a major role in durability of our contemporary urban problems; for which Oatley (Oatley1998) points out that the

persistence of these problems is due to a lack of response to societal needs and to short-term strategic actions. Thus, the paper partially aims to meet the policy dimensions of urban changes by reversing decline of our towns and cities. This study will briefly analyse two UK cities of Derby and Nottingham for their success and failure in urban changes. The information for the case studies is accumulated from the local plan reviews and other relevant policy documentation, as well as professional observation and research. As a result, this paper investigates how policies can become a failure or success during periods of urban growth and constant urban changes and also explores approaches to growth and decline, which would ultimately apply to the current urban developments and growth in the rapidly-urbanising developing countries. The following research questions have been posed to analyse this topic:

- What are the roles of policy within urban failure or success in the face of urban changes?
- What measures and mechanisms enhance quality changes in respect to urban change?
- How can policy-driven strategies promote urban growth and halt decline?

The purpose of this paper is not necessarily analysing the political aspects of urban changes; however, it seems to be inevitable to face the significant role of urban policies as major players for our urban changes. The final outcomes of this approach are not to weaken the role of architects and designers, but rather to enhance their understanding in order to contribute to policy decisions that produce effective strategies towards urban changes. Accordingly, we could perhaps refer to what an anonymous social scientist expressed in a poetic way as a caution (Quoted by Friedland, 1982):

"The reason why cities are ugly and sad, It is not that the people who live in them are bad, It is just that the people who really decide, What goes on in the city live somewhere outside".

Understanding Urban Policies towards Urban Change

Urban policies, through both traditional and enhanced urban programmes, generally aim to

promote growth and reverse decline.

Traditionally, there have been inputs for economic restructuring are currently envisaged to enhance social, political and economic factors of urban changes (Cochrane, 2007). Atkinson and Moon (1994, p. xi) enunciate that urban policy, whether successful or not, always participate as rudiments of urban changes:

"Cities are continually changing and adapting in the face of economic pressures; at times they prosper, and at other times they decay. Urban policy is centrally involved in these changes. It seeks to foster prosperity or, more often, to bring about a return to prosperity and moderate the impact of decay".



Figure 1 : (Relationships between policy responses and policy actions - Adopted from 'The politics of Urban Change' by McKay and Cox, 1979)

The impact of urban policies can be highly significant in terms of urban change and is mainly based on two fundamental objectives of "employment opportunities" and "residential attractiveness" (Figure 2; Hambleton and Thomas, 1995,). (Berg et al : 2007) identify the areas that need to be considered for urban change: economic competitiveness and social cohesion need to be encouraged; transportation to create prosperous linkages; retailing to enhance industries and economy; residential to promote quality of life; and cultural/heritage to revive the sense of place. These are part of the fundamental vision behind the original framework of urban policies; but has any been successfully accomplished?

Policy Framework and Urban Change

Planning professions and policy makers have been involved with regulating trends of urban change, particularly with the adoption of Keynesian policies. Since then, many programmes and themes have been introduced and developed within a similar policy framework. Thus, the governmental interventions tend to differentiate various strategies in order to shape their policy agendas (Ward : 1994; Kitchen : 1997). Major policies, such as privatisation, regeneration,

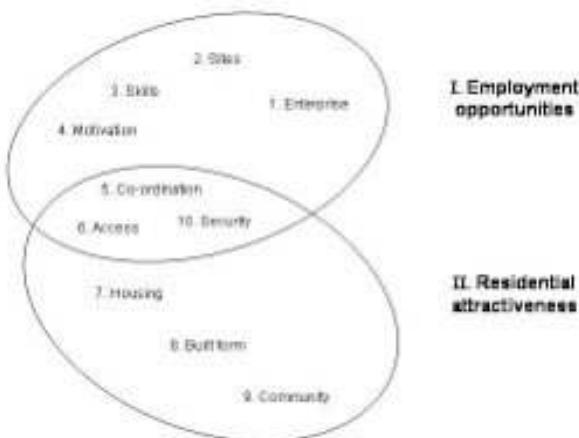


Figure 2 : (Higher-level and lower-level policy objectives - Source: Hambleton and Thomas, 1995, p. 42)

sustainability, etc, are generally initiated by one party and are emphasised by another at different stages. But overall, they are all socio-economically formed and are intended to tackle the crisis of their times (Cochrane : 2007). Economic restructuring, due to deindustrialisation between 1960s to mid-1990s, brought new challenges and introduced urban regeneration schemes throughout the UK. Population loss in most UK cities, or so called "Counter-urbanisation", also became a vital challenge for different parties, as its effects on urban living became highly visible. Social polarisation as one of such effects on social composition maximised urban decay and deprivation since mid-1970s (Berg et al : 2007). Majority of UK cities then faced new challenges after 1970s economic downturn and national recession



Figure 3 : (Major Aspects of Urban Change)

Between mid-1970s to end of 1990s, there was an increasing economic emphasis towards the social balancing and urban policies reflected upon these emerging challenges. For instance, since the mid-1970s, social equity issues have dominated urban spatial strategy, reinforcing

the socio-economic and land-use dynamics of urban policies. The need to maintain a secure economic base was risen to enhance the socio-economic potentials in order to reverse the urban decay and deprivation. Since the 1990s, long-term socio-economic strategies and urban transportation became the dominating issues for many local governments. These were later the main inputs in the shift towards structuring urban locality and urban sustainability (Kitchen, 1997, pp. 211-2; Cullingworth and Nadin, 2002, p. 297). In the UK, the growing globalisation movement and socio-economic integration has impacted on patterns of policy framework for the past three decades and a major concern to revive urban democracy has initiated new strategies and policies in the same context. These inputs aim to boost economic, environmental and social enterprises to recreate a sense of place and achieve a significant degree of society participation (Hambleton and Thomas, 1995, p. 9). Moreover, it is believed by many authors (Blowers et al., 1982, Kitchen, 1997; Cochrane, 2007) that effective policies and thoughtful strategies could produce demonstrable progress and that policy tools could enhance the quality of society changes and urban transformations.

Tools of Policy for Urban Change

Since the late 1980s, as Cochrane (Cochrane 2007) indicates, trends in the current rapid society change and urban transformation are mainly due to rise of city competitiveness. Some perspectives such as improvement of social and physical environment led towards economic competitiveness nationally and for the larger cities, internationally towards possible entrepreneurialism (Ward : 1994; Oatley : 1998). Therefore, the majority of the newly-adapted urban policies re-structured their framework to develop policy-driven urban changes in a more connected approach. The opportunity arose for policies to operate within a national approach, which then emphasised upon policies for urban growth; but did not develop any tools to tackle urban decline. One of the other most powerful tools of urban policy, as Kitchen (1997, pp. 142-8) points out, is regeneration; which developed into a market-led programme in the 1980's. He acknowledges the four main objectives of regeneration as:

To revive economy of the area – in particular, local economies and industries as the key assets; To Improve social and physical aspects

of the environment – revitalising the structural, functional and image obsolescence; To enhance accessibility and connectivity to promote well-organised circulation within the area; Manipulating the area's land-use, housing stock and planning targets.

In this respect, we can argue that urban regeneration, both in theory and in several successful applied cases, and as long as it is not used solely politically, is one of the most powerful tools of policies for urban change. Its concern for the concept of revitalisation is principally through recreating the urban structure by and within the available assets of the urban environment. This inventive theme is not, however, the only catalyst. Privatisation and participation, which were mainly initiated by the Conservative government in 1970s, have also contributed with major policy decisions at different times but were sometimes undetectable.

For the past two decades, a new set of urban policies (e.g. predominantly the Labour-based

policies) have reflected in changing social standards, that have been exploited either to promote innovative dynamics or to enhance adaptations in ways of living (Oatley : 1998). Therefore, such government interventions developed into regional demands rather than the original aim of promoting quality of life. In addition, as it is asserted in the "Urban Design Compendium" (English Partnerships, vol. 2, p. 41), "policies and strategies have potential to reinforce sense of identity" nevertheless "it is possible to identify the assets worth protecting and build them into policy, even if neighbourhoods cannot always be saved from unwanted change". However, this policy has not been adopted by many UK local governments and many urban changes have occurred in respect to the theme of globalisation.

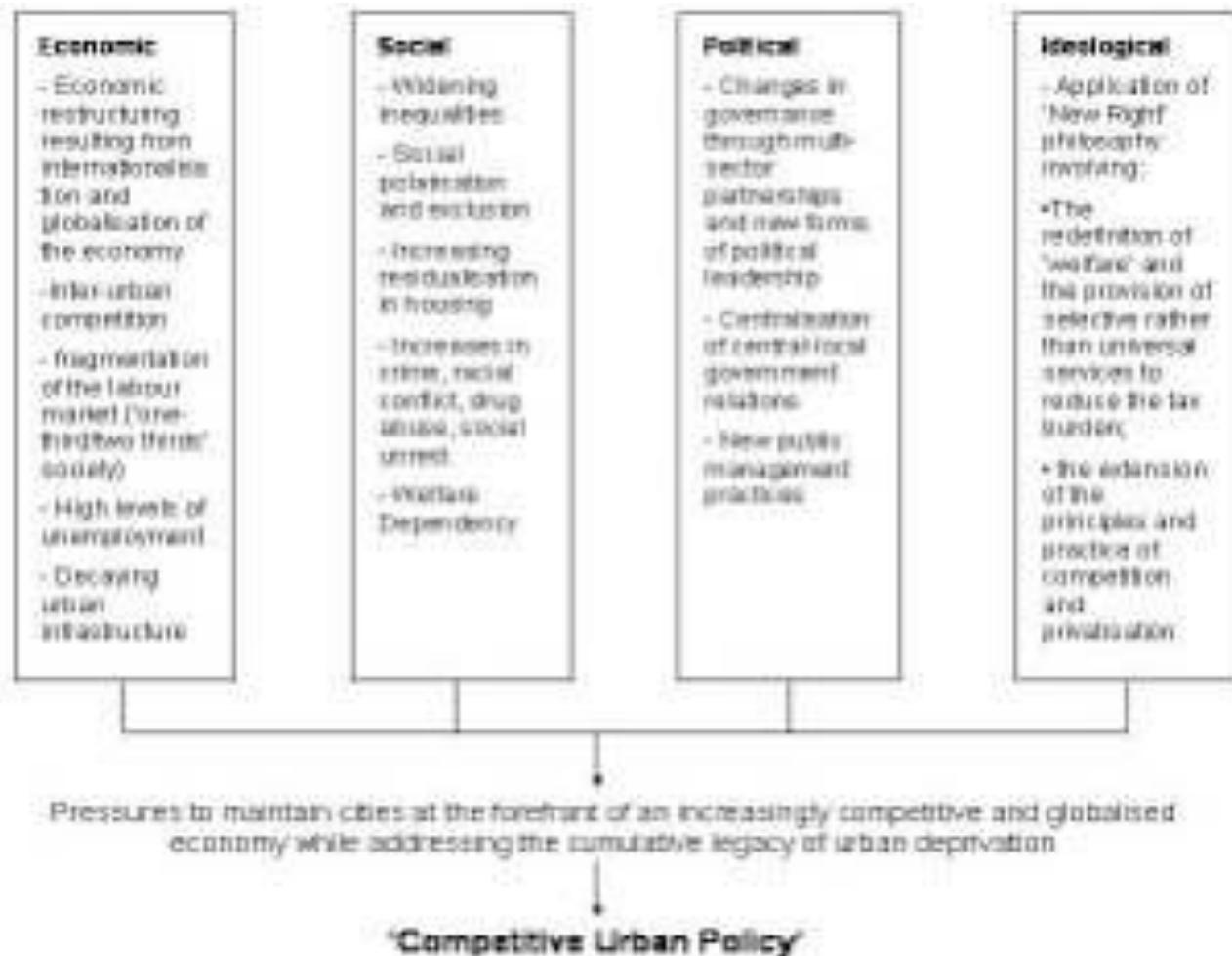


Table 1 : (Processes shaping contemporary urban policy - Source: Oatley, 1998. p. 202)

Urban Policies: Success and Failure

Many systematic attempts were undertaken by different government parties but none has yet ever managed to measure up with notions of well-being and liveability in the face of overwhelming deprivation and urban decay. For some cases, certain strategies might have confronted urban decay through operating specific socio-economic themes; but for many UK cities these are still the major urban pressures.

Since de-industrialisation, social depression and perceptible social segregation, such as unemployment and social inequity, are the most evident urban problems that signify policy deficiency. Back in 1997, the new Labour government proposed to sustain the prominence of private-public partnerships and community integration. Conversely, it empowered the land-use and pro-planning schemes in order to recreate the base of national economic; therefore further inequalities occurred (Blowers et al, 1982, p. 125). The inclusive physical and structural system, as one of the well-known approaches since the end of the Second World War, could not fulfil the substantial needs of urban environments anymore. More importantly, we are now living in more integrated and sociable places rather than in the prototyped individual environments. Relatively, Ward (Ward : 1994) asserts that the most effective cause of urban decline, has been structural:

"The main source of decline was broadly structural, so that inner-city areas contained older industries and less efficient plants, more vulnerable to closure or job loss".

This also reflects on the theory that policies acting as restrictions have often fragmented possibilities of re-using the vacant and deprived areas (Blowers et al : 1982). They simultaneously deteriorated processes of renovation and revitalisation of the key urban environments. Therefore, lack of integrated structural and socio-economic inputs at certain times became a vital need, when major urban changes were under process.

Catalyst for Change: Growth versus Decline

For Blowers et al (Blowers et al :1982), cycles of growth and decline are distinguished differently within global and national contexts. Consequently in the UK, such growth and

decline resulting from constant urban changes are not any exceptions:

"When the system is defined on a world scale, the cycles of growth or decline become explicable; when treated from the viewpoint of one nation, they often seem random".

UK"s urban problems since the arrival of Keynesian policies could be simply divided into six systematic - but interlocked - stages (Blowers et al :1982; Ward :1994; Atkinson and Helms : 2007):

- *Post-war immediate needs to rebuild and recreate the whole nation as well as re-establishing the economics' stability through industrial and immigration;*
- *Lack of quality injected to the rebuilt and revived areas in face of having the fragile private-public partnerships; Lack of renovation progress and secured funding for developments;*
- *Urban and physical decay as well as economic decline;*
- *Cultural decline, socio-economic pressures as well as lack of qualities and liveability in urban environments;*
- *The emergence of urban sustainability, and finally, the recent economic recession.*

Of all urban problems for the past half century or so, we could witness a throughout "urban decline". Consequently, many researchers and professions consider urban decline to be the major failure of urban societies/areas (Blowers et al, 1982; Ward, 1994; Berg et al., 2007). Due to the fast-advancing technology and socially-related factors adapting and changing rapidly, taking control of urban growth has become a challenging issue (e.g. for policy makers and planning professions). In addition, in the face of unpredicted urban changes, political parties and local governments experiment with theories and consider themes as catalysts for urban growth.

Some themes and responses to socio-economic needs have created a period of success and some have left the urban failure untouched. For instance, immigration with concerns of urban growth once revitalised many of our inner cities. Vast areas of UK's major cities became vacant due to deindustrialisation but the political response to such rapid transformation supported many against decline (Ward, 1994, p. 262). In subsequent decades, such radical political

decisions supported different approaches towards growth of enterprises within those newly-created societies. If this did not happen we would have had different inputs and approaches. In respect to both scenarios, it is hard to imagine cities without changes. Finally, whether urban changes turn into growth or decline, as Ward (Ward : 1994) asserts, society's enthusiasm and policy system ought to shape intellectually.

Case Studies: Cities of Derby and Nottingham

For this research study, two rival cities – Derby and Nottingham – are chosen as the comparable case studies because of their diverse policy frameworks and outcomes. The perceptible competitiveness between these neighbouring cities is believed to be affecting the major sectors of their urban design (e.g. in political, economic and social). Consequently, Cullingworth (1999, p. 180) argues that regional economies generally grow in a similar and comparable way within the sense of competitiveness, even though their strategies aim for different solutions. This objective,

therefore, adds an intellectual significance to the value of the selected case studies in terms of evaluating their policies as well as their success or failure.

These two major urban districts have been in constant change since the rise of the industrial revolution and have been performing, more or less, as the integrated elements of the same theme. Nevertheless since the period of deindustrialisation, the extracted outcomes from their policies have become more apparent. This is commonly due to rapid urban changes occurring predominantly in urban cores and inner cities of the UK's major cities, for the past few decades. Hence, this study would focus on evaluating the growth and decline of these urban environments as well as developments undertaken by various approaches in these two - somehow connected - cities. The author believes that this assessment would then contribute to analyse policy-driven strategies and urban changes in order to promote programmes of urban growth and reverse urban decline.



Figure 4 : (Relationship between Core Strategy Chapters and Sustainable Community Strategy 'Cities'
Source: Development Plan Document: Core Strategy Issues and Ideas Paper, by 'Derby City Council' – February 200'

City of Derby: Introduction, Policy Context and Strategies

City of Derby, as one of the major urban districts in the East Midlands, is one of the most vital centres within the whole region. It was once one of the main cores of the industrial revolution and still embraces several major manufacturers and industries. Derby has gained the city status in June 1977 (The Times, 1977-July-29). Therefore, since the early 1980's, Derby has faced rapid transformation; one of these big changes is the newly built shopping centre, which has been completed in autumn 2007.

Derby's local government's approach towards the new developments and regeneration has been more of pro-planning schemes and has developed towards the economic competitiveness within the region. In recent years, in particular, their approach has also considered such strategies to manipulate urban living qualities and secure an urban renaissance. Derby's major programmes generated by the Labour government are mostly long-term schemes; therefore often experience changes within their policy framework. The renewal proposals for the core of the city centre have decreased the effect of the private-public participation within the rapid urban changes. They have promoted single-roofed developments as a mechanism for providing a new urban identity to the City of Derby. Urban sustainability, on the other hand, has encouraged some of the Conservative-based policy inputs to maintain liveability and social cohesion, but includes developments and revitalisation proposals within the city centre and the major inner cities.

In a general sense, protection of the socio-economic equalities in the society has always been a major challenge for the policy makers in Derby. The socio-economic differences between Southern and Northern parts of the city centre are not representing the hierarchy but the inequalities within the society and the urban economic structure. Berg et al (2007, p. 385) acknowledges that such unbalanced economic restructuring is a result of the process of urban renaissance:

"The process of urban renaissance has begun and core cities have come through the worst of economic restructuring. However, national policy is intended to make English cities as economically competitive as the most successful cities in Europe".

Urban policy, however, is believed not just to impose economic regeneration but also to restructure the city socially as it tends to manage the urban crisis in order to halt its decline at certain times and with certain environmental dimensions (Atkinson and Moon, 1994, p. 18). Nevertheless, Derby's local government plans to move step by step by responding to the community's need at first and solving the problems later. The policy inputs from the last Labour government have rapidly restructured the city's economy and have given the opportunity for Derby's city centre to develop into a self-efficient urban district. The "vibrant economy" has been the most fundamental concept in Derby's recent changes and what the council is aiming to achieve is the economic prosperity, particularly within the centre of the city (City of Derby Local Plan Review : 2006).

Derby's local government also considers the Government Guidance about "Quality of Life" to assess that poor fabric and damaged urban environments harm the urban qualities and community well-being (City of Derby Local Plan Review : 2006). This theory issued a new challenge for the government in order for them to differentiate between the substantial and unworthy urban values; and at a same time, let the urban changes to take place.

Urban Change and Policy: the City Centre of Derby

The recent urban changes taken place in Derby's city centre have been the response of policies to society demands and economic competitiveness. Cochrane (2007, p. 97) refers to these changes as activities undertaken by the essential components of the city's image:

"The city is being reimagined - or reimaged - as an economic, political, and cultural entity which must seek to undertake entrepreneurial activities to enhance its competitiveness".

The other major aspects, such as structural inequality and economic depression, are also considered as the most influential factors for the policies of Derby's central developments. As Morris (Morris : 1997) argues, cities with sole industry or no specific dedication to industries are more likely to experience long-term decline in their major urban environments. For Derby, this was not an exemption as socio-economic pressures have been the major inequalities since the mid-1990s. The



Figure 5 : (The Spatial Layout of Derby's city centre; towards the North, is the Cathedral Quarter and towards the South (orange) is the Westfield Shopping Centre - Source: Own Photo from DCC Map)

regeneration schemes, since evaluation of such problems, have treated the economic depression in price of the cultural values. The activities undertaken by policies of regeneration demonstrate the real approach (Atkinson and Helms : 2007):

"While policies of regeneration have focused on the recycling and modernisation of adjacent and deprived areas...the reality has often been ...to retain private developer interests as well as prospective buyers".

Securing the urban renaissance, on the other hand, did not integrate effectively within the framework of policies in Derby. Problematic systems, such as dominating a wrong focal point, deficient transportation management and lack of spreading the commercial values within the core of the city, introduced further challenges and newer urban inequalities (Morris, 1997; Atkinson and Helms, 2007).

City of Nottingham: Introduction, Policy Context and Strategies

City of Nottingham, famous for the Robin Hood legend as well as its esteemed lace-making production, is both a unitary authority and a city. The overall Nottingham urban area covers all the adjoining suburbs and districts beyond the city's historical boundary (www.nottinghamcity.gov.uk– retrieved on 27-07-09). The city of Nottingham obtained the city status in 1897 and is now known for its thriving city centre, which includes the fifth

most popular shopping hub in the UK. It is believed that Nottingham is city of creative industries and has many active points where local people contribute explicitly. Nottingham, alongside its neighbouring cities, has experienced many changes in the past few decades. In general, the foundation of the policy framework and major urban programmes in Nottingham has focused on regeneration schemes and social inclusion to enhance the city's developments in a sustainable approach (Nottingham Local Plan, 2005, p. 5). The local government has developed a series of mixed strategies and approaches towards the city's socio-economic growth.

The major objectives of different local governments have changed throughout the city's growth. For some, reduction of inequalities and for some, economic efficiency has been the major urban challenges. Hence, urban changes in Nottingham are mixture of dynamic policy-driven strategies (Atkinson and Moon,:1994; Hambleton and Thomas : 1995). The process and management of urban changes in Nottingham reflect on the society's economic and social demands, and intend to develop new programmes in order to promote well-being, quality and sustainability within the city's major environments (Nottingham Local Plan, 2005, pp. 5-10). The city's major industries have grown radically for the past two decades, despite having the economic trends illustrating 20-25% of industry loss in Nottingham since 1995 (Office for National Statistics – UK Economic Trends, 2007). Nottingham has not considered a certain theme throughout its recent changes, but has enhanced the urban potentials and has developed in partnership with private and public forces. As well as a major economic base in the UK, Nottingham has transformed into a major creative centre. Such strong economic competitiveness (e.g. both nationally and within the European context) has emphasised the social cohesion and social integration, particularly in the city centre and some of the vibrant inner cities (Atkinson and Helms : 2007).



Figure 6 : (Nottingham city centre's zoning & districts - Source: Author's Photo from NCC Map)

Urban Change and Policy: the City Centre of Nottingham

In recent years, the local government has specified three major regeneration zones, towards the South, the East and the waterside of the city centre. These deprived and disconnected areas are within the poor fabric of Nottingham's city centre (Nottingham Local Plan, 2005, p. 36). These districts are expected to regenerate by private sector property development, which is expected to motivate the other economic benefits. In a similar context, Hambleton and Thomas (1995, p. 2) point out that "Government has emphasised private sector property development as an approach to urban regeneration believing that such a strategy would stimulate wider economic benefits". Thus, we can argue that the local government predominantly operates within the framework of zoning to consider responses to certain community demands and detailed characteristics as well as design of the regions within the city centre (Nottingham Local Plan, 2005, p. 33). The mixed-use developments are encouraged widely to reduce the chance of deprived and vacant areas, as many cities have previously experienced after the completion of their new developments.

Since 1997, the approach from the local government has increasingly concerned the urban renaissance and the urban sustainability themes. At the same time, it intends to distribute urban qualities within suitable public-

private partnerships. Therefore, the government considers mixed-use and complementary developments to secure the city's renaissance and sustainability (Nottingham Local Plan, 2005, p. 35):

"City Centre sites are strategically important by virtue of their location and size, and their development will make a major contribution to the continuing renaissance of the City Centre. Development proposals should therefore, wherever possible, comprise a range of compatible uses".

Consequently, the author elucidates that community safety within the city centre of Nottingham has been achieved through the creation of vibrant and liveable urban environments. The local government allocates a certain dedication to its recently-grown industries and has also introduced city centre commercial-living districts to provide more opportunities for city's vitality. Finally, the most noticeable achievement of Nottingham's city centre is endurance of a sense of place in face of the many urban transformations over the past two decades.

Comparison Analysis of Derby and Nottingham

For Derby's case, its policies until a decade ago, have always taken a side between social and economic approaches and until the New Labour's arrival, none of the policy inputs yet attempted to establish a mixed approach to balance the social and economic aspects in Derby's changes. Nevertheless, the recent Labour government's policy inputs for Derby conceived more of the national policies and were, therefore, concerning the economy (mainly the retail; as a shopping mall) as the primary strategy to enhance Derby's qualities. For Blowers et al (Blowers et al : 1982), indoor shopping centres are merely chains of individual and detached stores under a single roof, unless they can contribute to hierarchy of other shopping centres in the city and then to increase the chance of reversing decline within the neighbouring areas. However, for the City of Derby, the pressures for many years by the economic decline were not eliminated by the new economic restructuring as there was no significant hierarchy towards social and recreational consideration in the city.

On the other hand, for the City of Nottingham, the primary urban changes were based on

reflection of local economies into characterised and sociable environments. Retailing as a progressing industry since the 1980s, not just regenerated the central core's real estate but revived the concealed characters and the infrastructure of the communities (Logan and Swanstrom : 1990; Oatley : 1998). The city's policy makers manipulated major qualities of "Accessibility, Legibility and Variety" (Bentley : 1999) to re-establish hierarchy and prosperity throughout the interlocked communities of the city. For the local government, each urban environment is recognised to have its own individual demand and capacity. As a result, for some regions, recreational provisions have become a boosting industry and for some, local economies remain as the key assets. Contrary to Derby, Nottingham's local government has always protected or developed industries towards a purposeful hierarchy to attract investment and competitiveness. Although the selection of initiatives and local enterprises in Nottingham has become a long-term approach, its boundaries are apparent; it is effectively developing; and it responds to different communities more considerably. This allows for the urban changes to emphasise upon their mechanisms and as Cochrane (Cochrane 2007) acknowledges, "seeks to identify outcome goals rather than output measures". Policy-driven socio-economic approaches in Nottingham have not merely stabilised city's changes but have responded to certain communities and economic competitiveness in a broader extent in order to achieve social cohesion and environmental sustainability. Unlike Nottingham, lack of connectivity is still the key problem for the intensifying urban decay in Derby's city centre (particularly for the cultural part); and poor transportation management is insufficient to make up for the lost values. The transportation system in Derby does not contribute to the city's constant changes, whereas the two well-located transportation centres in Nottingham have enhanced the social cohesion in face of the rapid urban changes (Nottingham Local Plan, 2005). It is certain that the failure of the public services to supply the adequate connectivity and legibility in Derby's city centre is of the unplanned transport policies' inputs. Lack of society's flow does not conflict socio-economic deprivation but forms major polarisation within the disconnected districts. The transportation proposals for the Eastern part of the central core have been concerned with the creation of major hubs, while the volumetric dimension of Derby's city centre appear not having such

development capacity (City of Derby Local Plan Review, 2006). Therefore, the unequal and imbalanced distribution of inputs retains the inconsistent socio-economic exclusion. For Nottingham, on the other hand, all quarters within the city centre are linked by the public transport system; thus, population density is maintained in respect to hierarchy of the circulation. Such transport management, lacking in Derby's centre, preserves the social control; and what Derby's new retailing system has essentially lacked (e.g. according to its conflicting socio-economic factors) is a connected approach to consider the creativity of industries within the existing activities.

Urban Changes: Urban Regeneration versus Urban Renewal

Ward (Ward : 1994) argues that since regeneration, some central land-use deprivations have been reduced. The forces from tools of policies, as he declares, were to protect the city's functions and enrich the growth with the fabric's innovations. For Derby's case, this did not happen. The clash of functional and physical demands for the local government, turned into dominance of a senseless shopping mall while the rest of the city led to further deprivation. Functionality is an essential element in city's changes, but not through the creation of unbalanced shopping malls (Atkinson and Helms, 2007):

"A city needs an Oxford Street the same way that the body needs an oesophagus or a lower intestine: It's not exactly pretty, but it does a job. Shopping malls, by contrast, are about the removal of sensory choice from the physical environment. They create a uniform orderliness the better to concentrate consumers' minds on the merchandise. They offer choice in abundance, but only on things you have to pay".

For Nottingham, in contrast, shopping malls have been successfully integrated with the surrounding environments as the city centre's capacity allows for such possibilities. The sizes of the shopping facilities in Nottingham are well-balanced within the city's overall fabric, while in Derby, its new shopping centre has seized a big portion of the central core. The abrupt urban renewal scheme in Derby's centre into a single retailing plan has shifted the whole city's structure into a visible – but not a vivifying – composition. In the recent changes, the centre's existing social, economic

and physical characters (Friedland : 1982), which could have enabled regeneration schemes taking place, were simply not considered thoroughly. Compared to Derby's renewal programmes, Nottingham's regeneration schemes have, by far, enhanced the available mechanisms in order to reverse inequalities and revitalise the urban environments. On the other hand, the inequalities in many inner areas of Nottingham still remain significant.

Further Discussion: Lessons from Policy Failure and Success in the UK

Policies operate within a political structure and are constantly influenced by the problems and possibilities of a society. An advance in policy tools is a response to certain partnerships and demands of different communities. It is also a response to the urban challenges that could generate appropriate programmes and strategies. For Berg et al (Berg et al : 2007) the source of such strategies and challenges depend on the national perspectives, within which, certain priorities and pattern of spatial



Figure 7 : (Safe and attractive streets, squares and parks that are filled with people make successful cities. Nottingham has created one of the most extensive networks of pedestrian streets in Europe, and has given pedestrians priority over traffic throughout the core of the city. Where walking routes once crossed busy roads through threatening subways, there are now direct crossings on the shared surfaces. In the next five to ten years, twelve new squares are planned for the city.) (Source: City Centre Masterplan for 2005-2015)

and economic developments are formed. They refer to the emergence of issues and challenges from national perspectives, such as “social problem, balanced urban system, infrastructure and national housing, accessibility and the environment, sustainability and Cultural Heritage” (pp. 23-25), as the major sources of the regional and local policy systems.

The success of policies appears through parallel and mutual social and economic approaches of the society. Therefore, socio-economic priorities are set and urban changes – with sufficient amount of participation – take place. Oatley (Oatley : 1998) generalises the fundamental priorities for urban growth that potentially influence the policy inputs and decisions:

“Key priorities [for growth] include strengthening local and regional economies, increasing economic opportunities for deprived areas, transforming urban environments into safer, greener, more healthy places to live and work, rebuilding neighbourhoods, enhancing the quality of life and ensuring that sustainable development takes place”.

Therefore, it is this series of particular social and economic responses, with which governments need to enhance the growth of communities. Hence, Cochrane (2007, p. 87) asserts that social demands are as important as economic problems and also adds that governments need to exploit and distribute their strategies consistently in order to respond to the local needs effectively. In contrast to the policy success, issues of failure in policies can be expressed as a continuous cycle of problems and deficient responses; and in general, it is the inadequate inputs of certain policies and their constant conflicts and changes, which preserves the enduring decline and deprivations. Consequently, Berg et al (ibid) argue that the foundation of our urban failures has remained unchanged for the past two decades and ultimately, highlight these problems as the influential elements of shaping the unmanageable urban decline, in which “a powerful centre and weak periphery, lack of metropolitan government, limited regional organisations, and increasingly complex urban governance” are apparent.

Moreover, many authors (Robinson and Shaw, 1994; Oatley, 1998; Berg et al, 2007 and etc.) conclude that, since the 1970’s economic downturn, urban policies have failed in many UK core cities and metropolitan districts. For the inner cities and edge of city centres in

particular, urban policies have not yet reversed decline, nor have they decreased the crime rate, poverty, unemployment and homelessness (Robinson and Shaw, 1994, 232). More than a decade on, most of the inner cities in UK’s major cities are still in deprivation and are even more insecure than they were in 1970’s and 1980’s. Policy-makers have perhaps been overly concerned with policy strengths but achieved too little in shaping manageable urban growth.

Conclusions: Towards Reviving the City and Sustaining Urban Growth

*„If to do were as easy as to know what were good to do, chapels had been churches, the poor men's cottages princes' palaces“.
(Merchant of Venice, Act 1, Scene 2 – Quoted by McKay and Cox, 1979, p. 14)*

From combined economic, social and political perspectives, cities are the most fundamental assets of growth. Hence, it is a major requirement of cities that strategies and programmes impose a constant cycle of change. As a result, policies are now aimed at harmonising the urban environments to stabilise the socio-economic growth. All governments have either focused on an approach to growth by strengthening urban policies and programmes or by reversing their effects (Blowers et al – 1982, p. 171). Policies are identified by local, regional and national governments as the most effective tools for urban change. Since the rise of Keynesian policies, many themes have been in process; “Urban Sustainability” and “Urban Renaissance” are currently the themes aimed at stabilising the economic and social strength of urban environments to emphasise regional and local growth according to enhancement of socio-economic provision (Cochrane : 2007). However, it is not expected that the urban problems created since 1950’s will all vanish in a sudden, but it is anticipated that policies will shift towards manipulating quality of life and sense of a place in our cities. It is also important to note that policies should not necessarily be a fixed approach towards strategy-making for urban changes but can, in fact, become articulated in a cycle of development to address the issues of decline and deprivation in the city. Hence, this study argues that strategies such as urban renewal



Figure 8 : ('Nottingham is unique amongst the core cities in retaining its medieval character. Limits on the city's expansion up until the mid 19th century mean that buildings from all periods of the city's growth sit cheek by jowl in the dense core of the city. This eclectic mix of styles is the essence of 'Nottinghamness'... The historic character of Nottingham was at its peak in the 1930s since then it has been undermined to an extent by unsympathetic development, highway engineering and the decline of the areas adjoining the city centre... Nottingham has experienced considerable growth in recent years and the council has produced the Nottingham City Centre Masterplan to shape and guide this growth.' - Source: Nottingham Urban Design Guide and City Centre Masterplan, 2005-2015)

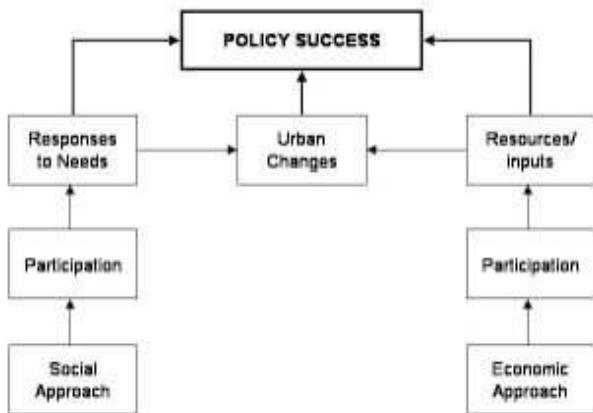


Figure 9 : (Key Issues on Policy Success and the Parallel Strategy for Social and Economic Approaches)

do not allow flexibility in improvement and achieving a cycle of development for identifying and undertaking the urban pressures that often occur over a period of time. It is also argued that city promotion comes with quality in productivity; therefore, cities seek to promote their images and identities while “image promotion and marketing seem to be becoming ever important” (Kitchen : 1997). The urban policies and their perspectives are clear in terms of forming cities in response to societies and theories of sustainability. But the author argues that for many UK cities, what is emerging is the unforeseen economic, health and social problems that are either effects of

failed environmental transformations or are themselves creators of the false environmental changes. What is required urgently is to invest broadly and encourage capable and existing industries in order to reverse the market failures and halt decline. In addition, policies need to face sudden changes of communities and extirpate the source of enduring problems (Cullingworth and Nadin : 2002):

“What is crucial [for urban policies] is to identify the forces which have created the problems and to establish means of stemming or redirecting them... Though the current rhetoric of urban policy is about partnership and strategy, the reality is an agglomeration of initiatives and agencies which even the professional is hard passed to comprehend”.

Accordingly, many national forces for regeneration and development (e.g. English Partnerships, Urban Task Force and etc.) have introduced approaches towards liveability, sustainability, social cohesion and economic attractiveness, within a national context; and none has yet expressed a national approach towards urban deprivation and economic decline. Even though such policies are delivered, despite lack of current policies in face of tackling decline, it appears unlikely that “future attempts at remarking, revitalising, and otherwise rebuilding British cities will turn away from value of tracing out these [interlinked policy agenda from regeneration, policing and disorder] connections” (Atkinson and Helms, 2007). It is also arguable that future policies

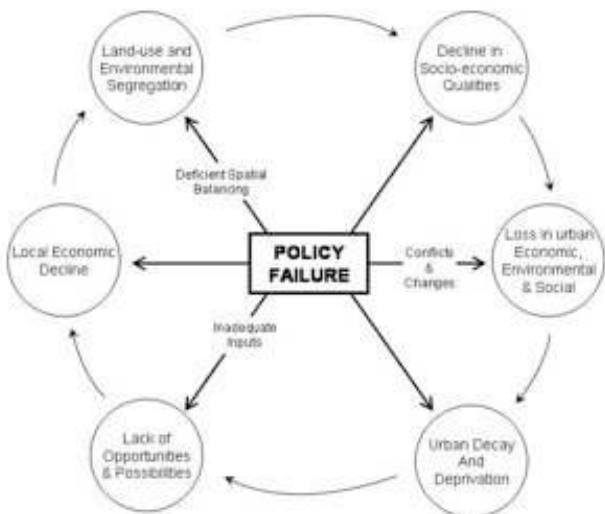


Figure 10 : (Key Issues on Policy Failure and the cycle of inequalities and losses in urban growth

and urban changes would focus on symbolising certain inner cities as well as reviving characteristics of the cities. Finally, the author acknowledges that any policy statement on alternative urban changes always sounds like a carefully crafted political product. However, policies (particularly the urban policies) in coming years become aware of the impacts from the integrated approaches; and they, themselves, would seek to embrace the public influence on their decisions.

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The New Public Space in Chinese Cities: Problems and Causes

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Introduction

Since the early 1990s, Chinese existing cities have largely rebuilt themselves in less than three decades. How have the reconstructed cities served average local people? Public space is the domain all residents are “free to use,” disregarding their income levels and social characteristics. Public space helps to reduce tension and promote exchange among different social/economic groups. This is particularly important to Chinese cities because, while the average total income for an urban household was \$447 per month in 2006, 60% of the urban families only made from \$124 to \$384 a month on average (China Academy of Social Sciences, 2007). Even in Shanghai, 77% of its families make less than \$430 a month (Shanghai Municipal Office : 2007). The above beliefs serve as the foundation of my criticism.

The Chinese urban renewals have fulfilled the government’s and corporations’ needs for economic expansion. However, the same cannot be said of public spaces used daily by ordinary residents. For example, newly developed large green spaces or shopping centers like the 140-hectare Century Park or the XinTiandi of \$150 million in Shanghai are either too far away or too expensive for the majority of average folks to frequent.

Meanwhile, urban redevelopments have brought the least improvement to the public spaces relied upon by most Shanghai urbanites, such as sidewalks to nearby markets, pocket parks close to their apartments, and a few indoor recreational facilities maintained by the state. In some areas the situation has even deteriorated. A random sampling of the able-bodied elderly in a Tianjin neighborhood showed that 80% of them stayed at home during a holiday (Liu, 2007). A 2007 study in six of the largest

Chinese cities found that 53% of children spent their after-school time in their own apartments, with an additional 29% at their friends’ homes (Zhou, R. : 2007).

This paper will classify the problems into three categories, window-dressing, privatization and gentrification, and will analyze their key symptoms and causes. The paper will also suggest solutions whenever the issues can be remedied within the design/planning disciplines.

Two side-line observations could be made on cases mentioned throughout the paper:

1. With the Chinese cities becoming increasingly wealthy in general, it is odd to observe this period of stagnant or even declining supply of public space for low- and middle-income residents. This phenomenon may be unique to any society in its early stage of transformation from a welfare system to a capitalist one. This may have implications to other developing societies.
2. Readers may find that some terms this paper uses to describe the problems were used frequently by the critics of American and European urban renewals since the 1950s. (Jacobs : 1961; Anson : 1981; Sorkin : 1992). In the reconstructed Chinese cities, however, these terms signify new phenomenon and causes unique to the Chinese political system and culture, just like a virus that mutates into new strains in different environment.

Window-dressing

One tends to observe this problem in those “mayor’s projects” developed by the local government. Many of them are urban nodes such as squares, major parks and large buildings. Because many of these projects aimed at showing off the administration’s accomplishments to upper-level officials,



Figure 1 : The oversized open space in the front of Wujin District government building, Changzhou, Jiangsu Province.

frequently become mere fake facades that have little to do with local residents' needs.

Symptoms of Window-dressing

- Fewer but larger Nodes

Precisely because the motive is to impress a few passing viewers without real improvement of the entire city, the planners have to concentrate resources on a small number of locations, and the dimension of each project has to be huge to catch the eyes (Figure 1). In 1997, the city of Chengdu in Sichuan Province constructed a 5.4-hectare Tianfu Square in the densely inhabited old city center. Large lawns were created by relocating numerous families, cutting down nearly 100 old trees and demolishing one group of famous historical buildings which had survived the Cultural Revolution (Xu, W., 2009). Even for a small town like Beipiao, Liaoning Province, a city still under the poverty line, it nevertheless gave itself a 2-hectare Century Square, except that wheat had to be planted in place of grass, due to lack of funds (Jin, 2004). A study found that the 12 squares in the largest Chinese cities (provincial capitals) had an average area of nearly 13 hectares (Wang, Y. 2002, pp. 98, 100).

Most Chinese cities are densely populated. Window-dressing projects often took place in the urban centers. It is no wonder that the extravagant sizes of these developments resulted in large displacement of existing residents in renewal projects and rapid depletion of arable land in new towns, a scarce resource in China. The city of Shanghai removed about 4,000 families in 2001 to carve out a 4.4-hectare Taiping Bridge Green Space in one of the most crowded areas of the inner city. In another high-density area, 1,358

families had to pack up in 2005 to make room for a 3.85-hectare Eastern Shanghai Green Space (also called Jiangpu Park) (Xu, X., 2005).

In addition, most Chinese urban residents walk or ride bicycles to a public amenity for daily uses. Spreading a few such developments across a great distance limits the use of these facilities to only people who live or work nearby. In some cases, the massive resources consumed by these projects ends up only serving tourists, changing the nature of these places from community spaces to tourist attractions.

- Insensible Location and Design

These show-case projects alienate common people further with their estranged relationship to the surrounding city. Their locations tend to be either in the administration or business centers of a city or in the suburbs, disconnected from mature retail streets or residential areas where pedestrians concentrate. For example, the Lujiazui Park in the Lujiazui business district, Shanghai, is surrounded first by multiple lanes of automobile traffic, and next by skyscrapers which are all offices. Urban designer Richard Marshall rightfully pointed out that the park "is simply an ornamental space lacking in the ability to nurture social interaction. . . ." (Marshall : 2003).

The architectural layouts of these places are often tailored to a few government-sanctioned functions, such as official ceremonies and parades, or simply to create a magnificent backdrop for a governmental building facing the park or square. Therefore, architects of these projects often adopted a symmetrical plan and a cold classical monumentality. To



Figure 2 : The aloofness of a new public space in Beijing, China Millennium Monument (1999)

stimulate a strong visual impression within a few minutes, many of these parks or squares are dominated by stone-paved surfaces or lawns. Such an imitation of European plazas serves to highlight their openness as against the surrounding dense constructions. To reinforce their grandiose posture, these developments often lack sun-shading, benches, intimate subdivisions, and food vendors (Figure 2).

- Prohibitive Management

It is no wonder that, as the front yard of the city, these public places often have heavy surveillance to regulate users' behaviors. In some other cases, the management of public facilities limits people's uses simply because the officials do not care to serve the public. For example, the various municipal departments and city-owned enterprises established more than 40 museums in the past two decades. However, a majority of these facilities only open to pre-scheduled groups at limited time spans. An average citizen must submit an application to be "approved by the administration" before his/her visit (Ding and Chen : 2006).

Chinese cities traditionally lacked large public nodal space such as the plaza. Therefore, today's urban residents do demand more squares and parks. However, the window-dressing projects have failed to alleviate the shortage in supply. This explains why, in a seemingly modernized city, we still can observe less wealthy residents assembled at the sidewalks to socialize.

Causes of Window-Dressing

- Political System

Window-dressing clearly is a phenomenon unique to non-democratic societies. To please the local voters, an elected city government seldom uses tools like imminent domain to displace large amount of existing residents, unless it is for urgent infrastructural problems. In contrast, administrators of all Chinese cities are appointed by provincial or national government. Because under current state directives, a mayor is chiefly expected to raise his/her city's Gross Domestic Product (GDP) and to attract foreign investment, it is no wonder that some city officials took a shortcut to use show-case projects to impress their superiors and investors.

- Outdated Aesthetic Concept

Window-dressing projects often adopted a Western or Chinese classical style that emphasizes a solemn manner because both the officials and the designers clung to traditional aesthetic concepts. With the long cultural isolation from 1949 to 1978, a majority of the Chinese society, including governmental officials, intellectuals and common citizens, still believe that buildings symbolizing the state or the nation must appear authoritative.

Such an antiquated concept is a far cry from the understanding of power and the state in modern democratic societies. The latter is well stated by the urban theorist Peter Rowe, "a certain monumentality and boldness of scale need not carry any of the expected authoritarian or official symbolic references and have a distinct absence of miranda and credenda" (Rowe : 1997). Obviously, the disparity in aesthetic concepts reveals the differences in culture.

- Ignorance of the Characteristics of Chinese Cities

Many administrators confuse modernization with Western architecture, attempting to imitate Western urban forms in Chinese cities. They failed to understand that many Asian metropolises have the following unique characteristics: higher population density, larger overall size of a city, smaller quantity of public space, more intensive use of public space, the lack of a systematic structure in the public space (such a structure has shaped many European cities since the Renaissance), and the lack of large nodes like the square (Miao : 2001).

Chinese officials and designers also fail to notice that most of the famous European cities are located on latitudes higher than the major part of China does. Comparing with Paris which has an average high temperature of 24 degree centigrade in July, the same readings in most major Chinese cities stay around 32 degrees during that period. Therefore sufficient shading in summer is critical to the success of parks and squares in Chinese cities.

Accordingly, solutions based on local conditions should be sought to creatively improve the public space. In another study, I have suggested several urban design principles tailored to the high-density of Chinese cities (Miao : 2001). For example, large amounts of small nodal public spaces which displace no, or fewer, existing residents could be created to provide any resident a green space within 500 metres from his/her apartment. Dense users will be better served



Figure 3 : The mini-square in the small Caoyang Park, Shanghai, built in the 1950s.

by lots of paved surfaces under trees. We have observed such a practice in today's Hong Kong or Tokyo. The pre-renewal Chinese cities (constructed from pre-19th century to the 1950s) also contained many successful design ideas (Figure 3).

- Ignorance of Available Research

In the past half a century, industrialized countries have cumulated large amounts of empirical data on residents' behaviors in public space, and have developed design guidelines accordingly (Whyte, 1980). Unfortunately, to many Chinese planning and design professionals, learning from Western precedents tends to mean imitating the graphic composition of Western "star" architects' schemes and their artistic "manifestos." Ignored is evidence-based research aimed at daily functions.

Privatization

Western urban studies on the privatization of public space have focused on how private corporations use semi-legal methods to limit citizens' use of public spaces which the city entrusted their development and management to the private entities (Sorkin, 1992). In this investigation, the term also refers to two new phenomena in Chinese cities.

The first has to do with the ways a private commercial development damages social life in adjacent public spaces in order to maximize its short-term profits. Even though the local government often partners with the private developer, the aim of these projects is chiefly profit. This differentiates privatization from window-dressing. The second expansion of the term describes how the government abandons

its duty to service and protect the public domain adjacent to private commercial establishments.

- Symptoms of Privatization

1. Street-front Architecture That Destroys the Street

The traditional (formed before 1950s) retail hubs in many Chinese cities, such as the Eastern Nanjing Road area in Shanghai, have developed spatial forms that interact with urban life harmoniously. Unfortunately, during the urban renewals, the developers often ignored those "old" patterns, catering toward their clients' demands for homogenous neighbors and a "luxury" appearance. For example, buildings along the retail streets used to be multi-functional, with shops on their first floors and office and residential uses on their upper levels. Now most of the new buildings fronting the street are uniformly office towers or hotels. These urban blocks become ghost towns after business hours. The various small shops with affordable prices along the sidewalk were often replaced by one high-end function such as a bank or a lobby that occupies an entire block, making the sidewalks unable to attract users of diverse social groups even during the day. The street façade of a traditional retail street used to be punctured by many pedestrian entrances such as "lilong" (small residential compounds) gates and shop doors, and "transparent" surfaces such as retail counters and colorful display windows. Now, the new buildings tend to have large areas of fixed curtain walls showing a large real estate agency. Linear "squares" are often planned between the curtain wall and the sidewalk, used as parking lots (Figure 4). Streets with



Figure 4 : Comparison between the new (right) and the old (left) sidewalks of Middle Yunnan Road, Shanghai

such “opaque” edges do not welcome pedestrians, poor or rich. In some of these existing retail cores, the redevelopment even merged several small blocks into one super-block to realize the self-completeness of a mega project. The closure of existing streets and alleys not only carelessly erased the urban structure so critical to many residents’ orientation, the detours also hit pedestrians the hardest. As the collective consequence of these mistakes, a rich street life formed through more than a century disappeared forever in these established urban centers.



Figure 5 : Shoppers resting on the steps in a Shanghai commercial street.

Commercialization of Public Space

The tide of privatization also invades the public-owned areas (such as the sidewalk and the railway station lobby) and privately-owned spaces to be used by the public (such as the indoor streets in a mall). Local government often neglects its duties to provide free resting facilities in these areas and to guard the public spaces against private encroachment.

As the most overlooked, but potentially lethal dereliction, many commercial hubs lack a hierarchy to distinguish basic public functions (such as circulation and safety needs) from the commercial ones. The same can be said about the infringement upon sidewalks by private businesses.

Even though the redeveloped commercial streets are filled with department stores clad in marble and glass, these areas have not acquired much if any free public resting space, such as Shanghai’s Huaihai Road. In areas with an exorbitant land price, reconstructed buildings facing the streets were built close to their old footprints. In other cases, increased public space was given to roads. The sidewalks remain narrow. In such a minimized public domain, it is difficult to find a shaded place to sit down (Figure 5). Wangfujing Street, a Beijing shopping hub, was completely renovated in 1999, but 70% of its visitors complained about the lack of sitting space in a survey after the renovation (Wang, L. et al. : 2007). Meanwhile, the renewal increased the heights and plot ratios of buildings along the street drastically. This plus the fast growth in urban population and tourism contribute to today’s congestion in mature commercial centers, making them worse than before (Wang, Y.N : 2007).

One example is the recreational facilities developed by the state before the 1980s. From the 1950s to the Reform, Shanghai built a number of Workers’ Clubs, District Cultural Centers and public libraries in its commercial core areas. Residents loved these facilities that combined recreation, arts, and adult education in oneplace. These free or low-admission price facilities, often with extensive landscaping, complemented the dense commercial activities around them, generating multi-functional urban centers. However, since the 1980s, the municipal government has required these facilities to be financially self-sufficient. During the urban renewals, most of these institutions used their land to construct new buildings, collecting rent from commercial tenants (Li & Ye : 2007).

As a result of all these developments, malls, teahouses, KTVs, and other commercial establishments have dominated the top choices of venues for Chinese urbanites’ recreational activities during weekdays and weekends. Public facilities, such as parks, museums, libraries, and senior and youth centers have disappeared from the list (Zhang : 2007; Jin, Q. & Lou :2006).

Gated Communities

Privatization has also manifested itself in the residential area of a city. In the past 30 years, the faces of Chinese cities have been altered mostly by acres of gated residential developments. The original urban structure in which individual buildings were connected by public streets has been replaced by a city made of many small “cities.” These are walled compounds each containing 2,000-3,000



Figure 6 : Deserted city streets outside of a Shanghai gated community.

apartments. Such an urban pattern differs from those of both traditional Chinese cities and most modern Western cities which China tries to imitate.

Gated communities were born out of the over-emphasis on a single function—security, a need prompted by rapid increase in income inequality. However, gating in practice has failed to eliminate crimes committed by intruders (Miao : 2003). Meanwhile, even in neighborhoods with high population densities, one can see few people on the public streets around a sealed residential quarter, due to the lack of pedestrian entrances and street-front commercial facilities (which are either gated in or concentrated at the gate) (Figure 6).

At the same time, the faux “public” spaces inside the gated compounds have not functioned as planned because the semi-private internal streets, shops and clubs do not have enough quantity and diversity of pedestrians to support a social life. As a result, residents prefer to drive to city commercial centers, making those jammed areas more crowded. The traditional neighborhoods contain many valuable lessons to solve this problem. In the *lilongs* of Shanghai (compounds of townhouses built from the 1920s to the 1940s), each compound has an unguarded gate. Because a *lilong* contains only 46 families in average, the city street nearby is vibrant with people from the frequent pedestrian entrances. Following the precedent, one may suggest an alternative solution. A few residential buildings can be grouped to form a walled “defensible cell” directly connected to the public street. With many such small “cells” feeding pedestrians into the street, the latter will hopefully resume its role as the stage for public activities.

Stealing Public Space

There has been outright private encroachment of public territory in Chinese urban renewals. Many Chinese municipalities have awarded developers a floor area bonus if they provide public space in their projects. For each square metre of public space, the developer can construct one to three square metres of floor area on top of the allowed amount (Shanghai Administration Bureau, pp. 33, 55). In many cases, however, because the municipal agency “entrusts the developer with the management” of such spaces, the developer or their tenants often use implicit or explicit means to limit public’s use of these territories, (Carmona et al : 2008). Well-connected entrepreneurs even encroached upon spaces completely owned by the public (Figure 7). For example, private condominiums and houses in Chinese cities often illegally wall in the section of public river bank or lake shore in front of them. A 2005 investigation estimated that in a single year Beijing lost about 293 hectares in its 38,877-hectare public green space to private encroachment, such as constructing rentable buildings in the green space (Jin, S : 2007).

Causes of Privatization

The Laissez-faire Government and the Apathetic Public

In today’s liberal democracies, most social groups of a city agree on a principle that common citizens own the public space in the city. Reflecting this belief in city politics, the development of urban space is best accomplished through the negotiation among three parties: the elected local government, the civil society, and the private interests (Rowe : 1997).

However, Chinese cities never have had such a liberal democratic tradition to act as a stabilizing factor. Different from the autonomous European bergs, most Chinese cities started primarily as administrative, taxation and military centers established by the emperors or other national governments. Being appointed from above, the municipal government has less incentive to worry about its civic services than about its superiors’ assignments. Having grown up in Mao’s revolutionary years, many current officials also lack the knowledge and skills to run the daily functions of a modern city. Consequently, the government often does less or does not know what to do in the development of public space. For example, to reduce their own workload,



Figure 7 : The expanded sidewalk at one of the busiest corners of Middle Huaihai Road, Shanghai should be used as a public resting area, instead a cafe occupied it.

governmental agencies limit residential developments to large-scale, large-investment projects, creating a city dominated by huge gated communities.

Supposed to be a key participant in the tripartite bargaining over public space, the civil society in Chinese cities is still in its infancy (Lu : 2008). Given the long history in which common citizens are not allowed much institutionalized power to decide civic affairs, Chinese urbanites have developed a culture that emphasizes private well-being over civic pride and responsibilities. Voluntary groups are seldom formed to pursue major social issues unless one's vital personal interests are violated (such as forced relocation). With two of the three players either weak or absent, it is no wonder that private developers and market forces have dominated decision-making in public space.

The Shortsighted Capital

Due to two unique characteristics of the Chinese private sector, its role in developing public space often becomes ambivalent. First, without a stable legal framework that protects private properties permanently, private capital tends to focus on the short-term return.

Secondly, in a market economy only 30 years old, many Chinese businessmen lack sophisticated knowledge and tend to rely on a few simplistic techniques they learned from their limited experience.

Therefore, private developers or tenants often fail to understand that their ways to chase instant profits may produce long-term damage to the larger urban environment, which in turn

will damage their own development. For an example, the large, shady London Plane trees have lined Huaihai Road since the French Concession era (1849- 1943), giving a graceful touch to the famous shopping street in Shanghai. Oddly, the CEO of a major retailer asked the government in 2006 to remove these trees. "Sidewalk trees should serve the commercial function," he claimed, "tree crowns block the architectural features of street-front buildings and store signs" (Yan : 2006). Another businessman concurred: "In developing major commercial streets, the most appropriate measure to embody the 'people-oriented' principle should not rely on how luxuriant the sidewalk trees grow. Rather, all designs including landscaping should follow "commerce as the utmost criteria" (Zhou, Y. : 2006). Obviously, these Chinese entrepreneurs forget that people come to a public place not only for consumption, but also for socializing, recreation and learning from each other. Even for the purpose of attracting visitors to stay and to buy, a public setting must be multi-functional.

The Professionals' Negligence of Previous Research

Similar to the case of window-dressing, many Chinese planners and architects show little interest toward the numerous lessons cumulated in the developed countries, covering the functional composition of street-front buildings (such as the frequency of doorways), sidewalk, street shared by pedestrians and vehicles, block size, forms of street grids, and defensible measures.

Gentrification

One may find this tendency in both government and privately developed projects. The scenario tends to occur in well-established commercial core areas. The developer arbitrarily assumes that their new facilities will mainly serve high-income residents and other privileged minorities, such as tourists and elite artists, alienating the less wealthy majority of urbanites who used to be part of the patrons of these core areas.

Gentrification as studied in the West used to mean poor residents in downtown derelict houses being replaced by middle-income home buyers through renovating those neighborhoods (Lees, et al.). With public space as our subject matter, this paper focuses on

things happening in the public domain only. The term “gentrification” is used here because some scholars have called similar phenomena in the West “commercial gentrification” (Lees, et al.). Gentrification has been viewed ambivalently in the West, probably because middle-class people have benefited from it (Hall.). The same cannot be said of the China cases where the majority of urbanites are losers.

Symptoms of Gentrification

- The Uniform Upgrading of Mature Commercial and Public Centers

After the renewals, most of the traditional shopping streets popular among Chinese low- and middle-income urbanites were either replaced by high-end ones, such as franchise stores of Western brands, or marking up their prices to pay for the higher rents. The across-the-board upgrading alienates the majority of the public in these urban centers which used to be more diverse. Making things worse, those new upscale establishments tend to monopolize the most accessible locations or even an entire building or block. In Shanghai, for example, six large department stores sit next to each other in the 0.74- square kilometre retail hub of Xujiahui, and four shopping centers occupy a 1-kilometre section of the well-known Western Nanjing Road, with less than 50 metres between each other (Wang & Guo : 2007).

As a result of the elite pricing, one tends to find that salespersons outnumber customers in the magnificent atriums and indoor streets of some malls (Figure 8). The movie theaters were the most popular indoor recreational venue in pre-Reform years. Today they may have only 2-3 persons in each auditorium after their transformation into multiplexes that charge \$11.40 for each ticket. The social/economic homogeneity of the cliental eliminates any possibility to stimulate contacts among different social groups of the urban community, as a traditional public place will do.

From 2000 to 2006, the back-alley street Wujiang Road became famous in Shanghai for its numerous affordable and local-style eateries built on vacant sites along the street. Even though located amid polished office towers and malls, Wujiang Road served droves of low- and middle-income diners (10,000 persons per peak hour), supplementing the high-end commercial uses nearby. Started in 2006, the redevelopment of Wujiang Road has replaced the existing tenants with retail stores like Levi's



Figure 8 : The uniformity of high-end retail tenants in a mall on West Nanjing Road, Shanghai.

and Nike (expensive to local standards), and upscale eateries like Starbucks and Iceanon, charging a rent of minimum \$3 per square metre per day (a 100% increase). Local media reported that many residents lamented the disappearance of local flavor and diversity from the new Wujiang Road (Zhao : 2008). Mature commercial cores are formed through a long period of participation by the majority of the urban community. Public resources have been used to create buses to support these centers. The well-recognized locations in collective memory and good accessibility are critical to low- and middle-income residents who cannot afford a car. The rent for new commercial space does not compensate for the hidden public resources the elite businesses sit on but do not use. Even when the high-end tenants can afford to operate in red ink for a while, they are simultaneously wasting public resources and damaging the larger urban community. As a contrast, successful retail centers in the West tend to

contain stores catering to customers of varied income levels and social characteristics. The even less defensible cases of exclusive pricing happened in public facilities which are supposed to be not for profit. Even after today's cities became so rich, many Chinese municipalities not only continue charging admissions to public-owned parks, museums and gymnasiums, but also make it less affordable. For example, a migrant worker in Urumqi, Xinjiang, complained to the media that his family visited the city park only on the 2007 Labor Day when the park was temporarily free. Prohibited by the \$4.3 admission, it was their first visit since they arrived in Urumqi three years ago (He : 2007). With both private and public facilities raising their thresholds, it is no wonder that, in 2006, 51% of Chinese players of on-line games, which is a cheaper form of recreation, belong to families with a monthly income that is less than \$143 (Hou : 2007).

- The War Against Street Markets

When most of the established commercial hubs become too expensive, where do less affluent residents go for their daily shopping? They go to street markets, peddlers gathering along the sidewalk or stalls in makeshift buildings on temporarily vacant land. However, in the name of beautifying the city and regulating the market, Chinese municipal governments have waged many campaigns against these markets since the 1980s, ranging from simply banning to relocating the hawkers to formal market buildings. Formed in 1984 as the first of such establishments in Shanghai, the Xiangyang Market had attracted tens of thousands of local residents and foreign tourists daily with its inexpensive and trendy clothing. The City closed it in 2006 to allow the construction of an "all-weather, fashionable shopping and leisure consumption place," leaving near 1,000 small vendors plus their employees to wonder how to survive (Cai & Li : 2006). Nevertheless, the government has often failed to win the war. From 2004 to 2005, the Putuo District of Shanghai confiscated 984 unlicensed hawkers' goods, only to see 456 new ones popping up in the streets next spring (Guo, et al : July 2006) (Figure 9). From 1979 to its relocation 22 years later, the famous flower and bird market on Jiangyin Road received as many as 100,000 visitors a day. In 2001 it was relocated to another place by the government. However, a "ghost market" had persisted on Jiangyin Road as late as 2006, despite multiple raids by the City (Guo, et al.: November 2006).



Figure 9 : A spontaneous street market in Shanghai.

The endurance of street markets suggests that they represent issues far more critical than the aesthetic appearance of a city. Lacking capital and skills, the majority of unemployed local residents and immigrants from the countryside find that peddling is one of the few choices they have to make a living. 68% of workers laid off by state enterprises in Shanghai went into self-employment (Xue : 2006). 44.4% of the unlicensed street vendors are formerly unemployed (Guo, et al.: July 2006). Because a formal market hall charges a stall rent and other fees that often amount to about \$ 2,850 a year, street peddling can be seen as the major venue to create jobs for the unemployed with little initial cost. Secondly, the low-prices offered by street markets fit into the needs of the majority of urban residents, who care about the \$0.14 difference for each kilogram of string beans. In fact, produce vendors in some market buildings even moved back to the streets because they had failed to compete with peddlers (Dai & Xu : 2008). Finally, an established street market is part of the collective memory, it takes the urban community many years to form such a cognitive landmark, and it will take just as long to erase it.

Street markets do have their problems, such as an untidy environment, infringement upon pedestrian space, noise that disturbs nearby homes, questionable quality of their merchandize, and occasional frauds. But these are primarily the result of the government's non-existent or ineffectual regulation (such as using bouts of fining and banning as the only method to regulate). They are not the necessary byproduct of a street market, as

evidenced by the many crowded but orderly street markets in other Asian countries. With an alarming unemployment rate of 9.4% among the urban population in 2008, Chinese cities need more job-creating spaces with low rents (Han, 2008). Cities should use vacant lands and other facilities with minimum improvement costs to supply more temporary or permanent retail spaces. For example, the government can keep a portion of the sites vacated by relocated factories and postpone their being leased to developers of high-end projects. Old industrial structures do not have to be demolished or converted to "design centers" which only serve a narrow slice of the population. Even some new buildings could delay the subdivision and interior finishing of their first floors that are adjacent to urban streets. Spaces created in the above three suggestions can be used to support small businesses with nominal rents. All these require the municipal governments to sustain some loss in revenue. But this is not without precedents in China. In the slow period after the 1997 Asia financial crisis, Shanghai City delayed bidding on part of its vacant lands and temporarily converted them to green spaces. If the city can subsidize landscaping, it certainly can do the same for job creation. Fortunately, some neighborhood committees have already started experiments in this direction, such as converting disused railway tracks into market spaces.

- *The Disappearance of Old Buildings*

Nowadays, economically advanced cities, such as those in the Yangtze River Delta area, are starting their second and third renewals, tearing down buildings constructed as recently as the 1980s. This approach has accelerated gentrification in the public domain.

Walking around Shanghai's commercial areas, one will often notice that the most popular restaurants and retail shops, all priced toward the mass market, tend to be located at the first floors of aged, street-fronting buildings with low rents. The old buildings are mostly six- to seven-story public housing projects built from the 1970s to the 1980s. The retailers usually pay a monthly rent of \$143 to \$286 for a one- or two-bedroom apartment (50-60 square metres). The small garden between the building and the sidewalk will be roofed to form a commercial space that extends into the back (the original apartment). Part of the back area will be used as living quarters for the shop owners who often are immigrants. The sidewalks next to these old buildings frequently

have the most vibrant urban life. By contrast, the commercial spaces at the bottom of the speculative high- risers completed recently are often monopolized by businesses with wider profit margins but fewer patrons, such as real estate agencies, banks, and jewelry stores. Sterilized by the high rents, a street dominated by such establishments tends to be a dull environment, both socially and economically. As first argued by Jane Jacobs during the 1950s-60s Western urban renewal, it is necessary to keep a certain share of old structures in the building inventory of a commercial area to prevent a full-scale gentrification of the public place. Not aiming at historic preservation or aesthetic appearance, this approach will help to maintain the provision of affordable commercial spaces for low-end retail or services, so that these urban centers will fulfill the diverse needs of different social groups (Jacobs, J. 1961, pp. 187-99). Jane Jacobs' suggestion has additional significance to Chinese cities, because the Chinese downtowns have witnessed a faster growth of service industries that have various profit margins and rent-paying abilities.

- *The Marginalization of Pedestrians*

Urban renewals that promoted private automobiles at the expense of pedestrians and mass transits can be seen as a form of gentrification, because most Chinese urban residents cannot afford a car. In 2006, every 100 Chinese urban families owned only 4.32 cars (China Academy of Social Sciences, 2007, pp. 153-4). Beijing, the city with the highest car ownership in China, had about 1.3 million privately-owned cars in 2005, but the number amounts to only 10% of Beijing's population (INS/Asahi Shimbun, 2005).

The prejudice against pedestrians expresses itself most saliently in the planning of new urban centres and large public buildings. These schemes often lack a convenient pedestrian space system (supported by public transit routes) as the basic structure of the composition. Instead, vehicle roads take the role. Whenever there was a conflict between vehicles and pedestrians, the latter often took the hit. For example, in Shanghai's new central business district, Lujiazui, stand several major public places/tourist attractions like the Oriental Pearl Tower, the Jinmao Tower, and the Lujiazui Park. But in order to move from one place to another, people have to walk a long distance on hard pavement under scorching sun, including crossing several wide automobile corridors of multiple lanes.

Due to the city planners' negligence in the early years of the Reform, not enough parking garages were required of new developments, resulting in a chronic shortage of parking space. Large amounts of sidewalks, including old ones that are already too narrow for pedestrians alone, are encroached upon by for-fee automobile and bicycle parking administered by various ad-hoc entities (Figure 10). The strip of set-back space legally required between a building and nearby sidewalk is often used by the building owner for parking, making long stretches of public sidewalk into driveways. Many residential compounds have seen their pedestrian walkways (only to be used by taxi and emergency vehicles in the original planning) and other open spaces converted into parking. In contrast to Western cities with similar densities, fewer automobile parking facilities are located underground because car owners complain about the higher fees there. Here we witness a biased redistribution of public resources against car-less residents.

It is a common practice in many Chinese cities that makes a retail or residential street also a wide, automobile artery simultaneously. Beijing in the 1990s enforced a road-widening scheme in which new street widths between buildings will range from 25 to 80 meters (Abramson : 2008). The super-wide, exposed and noisy roads discourage people from strolling along them or crossing them at ease (Figure 9). A Beijing resident lamented: "During the early 1980s, even my old mother could have a walk on the sidewalk next to her home, considering that her feet had been bounded once. She could cross the street to pick up her milk every morning. Could she do these today if she were still alive?" (Xiao : 2007). In addition, the government is unwilling to establish crosswalks and over/underpasses at intervals short enough for pedestrians. To prevent tired walkers from crossing a street in the middle of a 200-metre block, the authorities erect fences along the sidewalks and in the median of the street, further reducing residents' desire to use the street.

Cause of Gentrification

If one may attribute window-dressing and privatization to the questionable motives of the government and the private developers, it is more complex to name the culprits of gentrification. In some of the cases studied above, retailers went bankrupt due to too many



Figure 10 : The sidewalk that suddenly vanished, Shanghai.

similar establishments within a short distance. Therefore, in addition to its negative impact to public space, the wrongheaded approach may also hurt the developers. Probably, the problem started with planners' and investors' miscalculating most residents' actual consumption levels, partially due to the lack of data and experience in a young market economy. However, in the unique Chinese political and cultural contexts, the initial mistake was drastically compounded by the lack of check and balance from the government and the public, and by an oversupply of exuberance in the entire society about the speed of growth.

Conclusion

Amid the wholesale demolitions and brash new urban spaces being constructed everyday, this paper calls for:

1. a return to the first-generation Modernism that emphasizes on basic human functions, the needs of the majority of residents and an evidence-based design approach, rather than on fashionable visual forms;
2. Respect for existing local urban forms which have successfully supported a rich civic life; and
3. an incremental introduction of new solutions to emerging challenges. Of course, planning/design alone has a very small role in the production of public space. The true solution lies in the emerging urban middle class who will claim their ownership of the public domain.

Note

This paper is based on two previous published studies, see "Shuide Chengshi? Tushuo Xin Chengshi Kongjian Sanbing (Whose City? A Pictorial Essay on the Three Problems of the New Urban Space)", *Time+Architecture*, Vol. 1, 2007, pp. 4-13; and "Brave New City: Three Problems in Chinese Urban Public Space since the 1980s", *Journal of Urban Design*, Vol. 16, No. 2, 2011, pp. 179-207.

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UK Olympic Games

Top Down Planning Lost and Found

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Introduction

This paper explores themes of “top down” and “bottom up” planning through a case study of the masterplanning and delivery of the Olympic Park for the 2012 London Olympic Games. If modernism is associated with the large scale planning, top-down, of urban development, then recent decades in the UK have seen the practice of planning shrink from a confident modernist paradigm in favour of a commitment to the kinds of values embodied in Jane Jacobs’ celebration of the organic qualities of cities. Good cities, for Jacobs, are ones in which the urban fabric arises from the complex social and economic order, rather from the application of ‘rational’ decision making by planners through measures like zoning (Jacobs, 1961).

Few contemporary examples of top-down planning exist in the UK. Given this, the development of the Olympic Park in East London, although by no means an exemplar of modernist values, “bucks the trend” in favour of “bottom-up” organic development: a 400 hectare quarter of the city has been planned, developed and constructed via an approach that displayed many features of “top down” planning, despite the prevailing mind-set in the community of UK planners, including many directly involved in the development of the Olympic Park, who strive with zeal to secure public involvement in the planning process. The case study, then, tells us interesting things about interplay of bottom up and top down planning in the British context. The Olympic Park had to be planned, funded, developed against an immutable deadline, and this was achieved in a policy and cultural context in which failure to deliver against targets, protracted delays, shifts in direction, and general failure of purpose are legion. The case, an exception to the UK rule, tells us much about opportunities and constraints in UK planning and development; it also provides

insights into the relationships between people, planning and government.

Top down planning in a bottom up world

After 1945, the UK government had adopted ambitious (in UK terms) house-building and city renewal programmes, led by municipalities. Progressively since the 1960s, the British state gave up the lead role it had adopted in promoting and delivering house building and other civic development (Thatcher, 1974). Powers were rescinded and given away, institutions dismantled, and the public sector’s capacity to undertake direct development at scale was lost (Abrahams, 2012). The responsibility for promoting development was given over, or more accurately handed back, to the private sector, but now with development rights highly regulated through the planning system. Masterplans were created in response to development proposals for single sites, rather than for the grand planning of city quarters. Planning by contrast, was controlled by local government, setting the policy context against which development decisions would be determined, but without the resources or capacity to promote development. To this day, the planning framework sets development targets and defines the infrastructure required to support development, but relies on negotiations with developers to make things happen (HM Government, 2012). Moreover, planning has extended its concern with wider social, economic and environmental matters, creating an ever more elaborate and cumbersome policy framework characterised by weighty regulation, experienced by some as a barrier to development (Ball et al, 2009).

Arguably, by the last decade of the 20th Century, the state looked to others to take

responsibility for setting the ambition, vision and inspiration for city development. If running down the capacity to promote development reflected a lack of ambition on the part of government, then this was matched by a mentality that would look to the private sector for dynamic inspiration: vision-setting too was contracted out. Public / private partnerships and developers were sought out to provide the leadership that the public sector apparently lacked.

The Olympic Park in East London, then, stands out as an exception, a case of the UK state proactively taking control to promote development, albeit in this instance for the primary purpose of mounting a three-week festival of sport. The Olympic experiment was exceptional as a piece of statecraft in many ways, but not least (Nimmo et al, 2011):

- Rapid Delivery of a major development with a fixed, immutable deadline;
- Central control of the development, at the level of strategy and detail, from the government at the highest level;
- A planning strategy that both responded to the present requirement (the Games) but also anticipated adaptation and change at the outset (for the Legacy).

The Lower Lea in its sub regional context



The Olympic Park is a 400-hectare site sitting within a wider area of east London, known as the Lower Lea Valley. The Lea Valley had once formed the historic edge of London, a place for dumping and noxious industry, away from the city's financial, commercial and retail districts. Then in the nineteenth century the development of London's docks with a series

of deep ports to the south of the valley had created a ready supply of wood, leather, metals and other imported raw materials; this drove the formation of a district of small craft and other dock related industries servicing both the requirements of the docks and the markets of the London population. In the third quarter of the twentieth century, the rapid decline of the docks, the loss of competitiveness of UK manufacturing, and rising land values in London all removed the rationale for manufacturing industry in the area. Scarred by its past, and severed by road and rail infrastructure, the area slumped, so that by the start of the 21st Century the Lea Valley was home to a patchwork of small businesses, hidden spaces and backlands supporting an array of economically marginal activities (Clifford, 2012).

In the first years of the 21st Century, there was strong London-wide demand for housing and commercial development sites, and, as noted, there was a public policy aspiration that the Lea Valley would provide parkland and amenities for east London (Greater London Authority, 2004). However, a number of critical weaknesses stood in the way of the re-development of the valley:

- Land ownership was fragmented, with a number of landlords prepared to sit on assets and take a long view of commercial returns;
- The land parcels were physically fragmented by noisy and polluting roads, railways, power lines and a meandering riverine network of tributaries, making it difficult to assemble attractive large scale sites with good quality modern infrastructure;
- The local authority governance of the area was fragmented and complex, with four local councils, a newly formed regional authority (the Greater London Authority with a London Mayor) along with a nationally funded Regional Development Agency (The London Development Agency);
- The wider area contained neighbourhoods with some of the UK's most deprived conditions. This created conflicting policy imperatives: on the one hand to unlock profitable development capable of delivering housing and offices; on the other hand the pressure to invest in social housing, education, amenities, and other measures to mitigate poverty.
- The Canary Wharf Business District, two kilometres to the south of the Olympic Park, had boomed over 20 years. Global trends and financial deregulation, backed by sustained public investment at an

unparalleled scale, meant that London was to create an entirely new quarter for financial and business services to the east of the historic City of London. Yet despite this burgeoning affluence, the neighbourhoods in the shadows of the towers remained obstinately poor. The sense that new development would reproduce stark social divisions created a cloud over expectations that high value development in the Lower Lea might ameliorate poverty. Experience at London Docklands suggested strongly that “trickle down” policies did not work. (Owens, 2012)

The Lea Valley is now identified in the London Plan (the London Mayor’s strategic plan for the London region) as an area of opportunity: a place capable of contributing to London’s forecast growth in housing and jobs, and also a place where infrastructure, including leisure, education, and other amenities could be provided to meet the needs of the existing deprived communities at the edge of the area. The aspiration in the London Plan to focus its city growth strategy to the east builds upon a longer standing national policy for UK population growth. The Thames Gateway, land north and south of the river Thames estuary, had been identified as one of four nationally important growth areas capable of population and employment growth (RPG9a, 1996).

Regeneration in the Lower Lea before the Olympics

The London decision to promote the bid to host the Olympic Games in the UK, based on the development of an Olympic Park in the Lower Lea, was taken in 2002/03. This section reviews the historical context for regeneration in the area that was to become the site for the Olympic Park.

The government had in the previous decades created the property-led London Docklands Development Corporation (LDDC) -using powers of compulsory purchase to assemble land and backed by public investment- to create a market for property development. As noted above, this initiative had, over nearly 20 years given rise to an explosion in high-end commercial development in east London. The experience of the LDDC created a sense of possibility among local authorities that large-scale radical change in the fortunes of an area could be achieved if it were to be backed by central government resources. However, local

Councils were attuned first and foremost to the needs of their residents, and they were acutely aware of the limited impact of the Development Corporation on local deprivation (Pacione, 2005).

Through the 1990s, the government had progressively promoted a new style of regeneration based on the creation of local public / private partnerships that would bid into competitions for central government funding. Partnerships of local government, the private sector, and local community groups came together to bid for funds and then manage fixed-term public investment programmes in return for regeneration outcomes (Pacione, 2005). This partnership style of working was the characteristic approach to regeneration in the areas surrounding the Lower Lea Valley in the decade prior to the Olympic Bid. A number of regeneration programmes, backed by local quangos and their local authority partners, were established to promote housing development and refurbishment, site redevelopment, economic development alongside social and cultural programmes. The concentration of deprivation meant that the area attracted substantial funds relative to other parts of the UK, but nowhere near the scale of funding required to secure the wholesale redevelopment of the entire valley. Moreover, the initiatives were localised: the boundaries dissected the area and fragmented the programmes across geographical and local governance jurisdictions.

The upside of this patchwork was that it unlocked local initiative and allowed creative responses from individuals and groups. Alongside the housing programmes of local government, residents came together to help establish community projects and to plan the area, local artists in the area set up studios and galleries, and small enterprises were encouraged to flourish. Local initiative became celebrated by those who valued the informal, semi-abandoned and to some extent deregulated place left behind by industrial decline.

On the downside, the local programmes tended to reinforce rather than address the major challenges of the area’s physical and political fragmentation, its pollution, and its poor infrastructure, in particular its lack of connection into the surrounding urban fabric. Some initiatives had sought to work within the existing government funding framework to “scale up” the local response and to create a strategy for the valley as a whole, but none succeeded in mounting a strategy to respond

to the scale of the opportunity and the enormity of the barriers to change.

The London Mayor and the Olympic Bid

At the turn of the century, the Greater London Authority was formed, headed by an executive Mayor of London, with principal responsibility for strategic planning in the capital. A “family” of authorities with responsibilities for transport, fire and emergency services, policing and economic development formed were made strategically accountable to the London Mayor. Within this, the London Development Agency (LDA), a regional development agency created and funded by national government, was made accountable for its strategy and business plan to the London Mayor. It effectively became the Mayor’s agency for business and jobs, giving him a substantial fund (£300m per year), to invest in initiatives tied to the city strategy that would be written into his strategic spatial plan: The London Plan. The creation of the GLA, backed by the LDA and Transport for London, was an essential step in creating the tools necessary to mount a city-scale project such as the Olympics.

A coalition of sporting interests, local activists and urbanists, including architect Richard Rogers and engineer Mark Bostock of ARUP, built a case that the Lower Lea should become the site for the Olympic Park. The Mayor of London grasped the opportunity, with an eye to two prizes: first a means to bring focus and scale to an important component of his city strategy to promote growth in the east of London, and, second, a means to secure major national government investment locked into a time-bound and irrefutable commitment (Keso, 2008).

Thus, the UK Submission to the International Olympic Committee contained two major commitments: that London would deliver a world-class Olympic Games and that the Games would in turn deliver a lasting Legacy. The commitment to legacy spoke to a national and regional imagination (such as health, sport, and economic reconstruction), but locally a significant impact would be to accelerate physical regeneration of the Lower Lea and the socio-economic regeneration of the deprived communities in the Boroughs around the Park: *By staging the Games in this part of the city, the most enduring legacy of the Olympics will be the regeneration of an entire community for the direct benefit of everyone who lives there.*

The London Olympics Candidature File (2004, p. 19)

In the context of the Lower Lea, this dual commitment, one to a major event with international significance, and the second to a development programme of city scale and local importance, created extraordinary challenges for governance, leadership, and for local engagement (Vigor et al, 2004). Who should lead? How could delivery be assured? Should the programme be done to ‘or with’ local communities? How could delivery be assured without disenfranchising local people?

Heavy Lifting Gear

The UK government had to guarantee its ability to deliver the Park along with the national infrastructure to win the Bid to the IOC. The UK treasury effectively signed a “blank cheque” by guaranteeing in the bid submission that the UK government would deliver the necessary infrastructure. Moreover, the clock began ticking on a timescale to assemble and develop the site, for a country with a poor reputation for its inability to plan for and deliver development proposals.

Officers of the government’s Department for Culture Media and Sport and the Greater London Authority took steps to establish control. Collaborative relationships between the patchworks of pre-existing local partners were increasingly subsumed into a new institutional framework, led from the centre. Work on the feasibility and costs of development proposals, on land assembly, and on masterplanning were supervised by London and national government, working together in a consultative relationship with local stakeholders. In the short term, the London Development Agency took the lead, but dedicated arrangements were quickly formed:

- The Olympic Development Authority, formed to create the “stage” for the Games – the Park and all of the facilities required to host the Games
- London Organising Committee of the Olympic and Paralympic Games, responsible for the “show” – for delivering all aspects of the Games as a sporting event.
- Latterly, in 2009 and five years after the bid submission, the Olympic Park Legacy Company was created to secure the development of the Olympic Park for Legacy uses. In 2012, the Legacy Company was subsumed into the London Legacy

Development Corporation. (Brown, et al, 2012)

Masterplans were commissioned for the site. In the Bid preparation stage in 2003, the London Development Agency commissioned masterplans for three options: The Lower Lea with the Olympic Park, another for the long term Olympic Legacy scenario, and a third a “regeneration” or non-Olympic scenario. Two of these (Olympic and Olympic Legacy) were used to support the land assembly process between 2004 and 2006. Marike van Harskamp (2006) contends that the Olympics changed the qualities of public consultation about the future of the Lower Lea in that period. Despite a major campaign and public dialogue, the proposals were focused around complex, difficult to understand sets of strategic options. The masterplanning work supported in the first instance, a planning application to provide certainty for the Bid Document; and further provided technical evidence to inform the further development of planning policies at the local and London levels.

Latterly, the Olympic Development Authority produced revised masterplans, taking into account revisions to proposals based on securing cost savings and operating efficiencies. The ODA masterplans also addressed the relationship between the Olympic Park and Stratford City, a huge retail, commercial and housing development for a site adjacent to the Olympic Park. The ODA combined the plans and negotiated agreements that resulted in the housing on the Stratford City site forming the Athlete's village for the Games and a realignment of the entrance to the Olympic Park through the retail core of the Stratford City site (Nimmo et al, 2011). The plans were further developed to address three scenarios: Olympic Games scenario, a “transformation” scenario, for a period immediately after the Games when facilities would be de-commissioned and the park re-opened; and a third and evolving legacy scenario, including the phased release of sites for housing, commercial, leisure and mixed use development. These plans formed the basis for planning applications submitted by the ODA in 2007 for site preparation, Olympic Facilities and for “transformation”, namely the works to prepare the site for legacy. A design strategy was also published in 2007 that codified principles for the future development of the site. This included principles for remediation, temporary structures, conversion of the Olympic Village

into housing for Legacy, establishing transport connections, infrastructure, and establishing which buildings would remain on site post-Games. The master plans allowed for a phased approach to delivery, establishing 15 delivery zones that could be progressed incrementally but with a common approach to staged delivery in each instance. (Nimmo et al, 2011).

From bottom up to top down governance (and part way back again)

The London Mayor's tactic of mounting a bid as a means to secure national government commitment to investment in London's infrastructure certainly paid off. The Olympic Games has accelerated the Lower Lea's development, hastened investment in land remediation, development of rail links, and brought forward parkland and leisure amenities for a deprived part of London.

These gains were achieved through a top down planning process involving centralized control of land assembly, masterplanning led by national and regional government with the involvement but not control of local authorities, and the successful development of the Olympic Park to time and on budget.

This approach, on the face of it, ran counter to the growing commitment to collaborative planning, and community engagement in regeneration. Planning for the Olympic Park appeared to sweep aside “bottom-up” planning and regeneration processes, in an approach that mimicked the style of the Development Corporations of the 1980s. The London Olympics certainly disrupted and recast the pre-existing institutional fabric for planning and regeneration in the area. However, the approach did not mark a wholesale departure from the commitment to engaging stakeholders in the process. The commitment to legacy and the creation of the Legacy Development Corporation was accompanied by what would popularly be seen as an enlightened liberal approach that sought opportunities to mobilise involvement and to engage with communities at every stage.

One of the key ways the commitment to popular engagement was secured was by broadening its scope. While the development of the Olympic Park itself appeared to recede from the public gaze, quite literally disappearing behind a blue fence erected to

establish site security and control of the land, the Legacy project was extended from regeneration to sports participation, health, volunteering, employment, arts and culture. This widened scope enabling an incremental programme to unfold locally, London-wide and nationally. The programme culminated in the cultural Olympiad programme that preceded the Games themselves, and the procession of the Olympic Torch around the UK. The latter programme was a remarkable populist success. The route was designed so that every part of the UK could be within one hour of the procession, and over 8000 people from all walks of life carried the torch for short stretches. Despite a crescendo of media anxiety about wasted spending, security concerns and other negative stories, the UK Olympics appears to have secured a considerable measure of popular support. Locally, another move ensured that the local authorities around the Olympic site were bound in to the process. They formed an independent organization, called the Host Boroughs, and wrote their own charter for how they would seek to secure benefits for their citizens from the Games (Host Boroughs 2009). The Charter, the Strategic Regeneration Framework (SRF), postulated that success would be recognized when their populations demonstrably secured the same standards in terms of wealth, health and neighbourhood conditions as the London average. The Mayor of London endorsed the SRF with its commitment to "convergence". The local authorities had established a strategy and a platform through which they could engage with the process with an independent interest, but concurrently in a relationship to the consultative body set up by the London Mayor, the East London Legacy Board.

More or less democratic?

MacRury and Poynter (2009), reflecting on best practice lessons for "cohesive and coordinated interventions at all stakeholder and governmental levels" if mega sports events are to deliver effective regeneration, define three approaches to institutional relationships (MacRury and Poynter : 2009):

1. State centred: where central government provides the policy framework and the role of non-state institutions is mainly confined to the (part) financing and delivery of the project;
2. Public/private partnership: where the economic or commercial interests of the latter

are privileged in the process of the project's development;

3. Networks of Stakeholders: where the interests of all stakeholders (the state, private sector and local communities and civic groups) are represented in the governance framework and the vision and policy goals of the project. This is a useful typology for analysing the progress of the London Olympic project. Over time, the project proceeded as shown in (Table 1).

Within such a framework, the most local form of governance, the networks of local stakeholders, might be perceived to be the most democratic, in that local people are most affected by development and local networks are most attuned and responsive to local opinion. Public-private partnerships, by definition, are attuned to commercial realities as well as public needs. State-centred arrangements may appear most aloof from the people, especially if government is popularly mistrusted.

However, the downsides of the apparent "distance" from the people might be qualified in a number of ways:

- The creation of a powerful, centrally controlled mechanism in this instance made it possible to deliver public goods not achievable at the local level;
- The public interest in this project can be understood to operate at a national, regional, and local level. Local networks cannot democratically represent national or regional interests;
- The imperatives to deliver the Games created a means to draw together what had been a disparate set of stakeholders behind a unified and clearly understood programme.

In other ways, the processes might be seen to have created a greater distance between agencies of government and the public:

- Formal democracy, and the possibility for contestation, exists through the planning process. In this instance, planning decisions were taken away from the democratically elected local authorities and vested in the Olympic Development Authority and latterly in the London Legacy Development Corporation (London Assembly, 2010). These bodies are accountable upwards to national and regional government, but are less accountable locally;
- The creation of new quangos may be seen to complicate an already complex tapestry of quangos, and further privatise ownership and

Phase	Pre Bid	Bid Development	Games Development and Delivery	Legacy Development and Delivery
Approximate Dates	Up to 2002	2002 to 2004	2005 to 2012	2007 onwards
Characteristic form of governance	3. Networks of Stakeholders <i>Plus</i> 2. Public/private partnerships	1. State centred	1. State centred <i>Plus</i> 2. Public/private partnerships	2. Public / private partnerships 3. Networks of Stakeholders

Table 1 : Progress of the London 2012 Olympics

control in the area. This process of privatisation may be exacerbated if land parcels are sold off to private developers in the future (Minton, 2012).

In practice, and notwithstanding issues of democratic accountability and control, all the agencies involved in the bid development have invested significantly in winning public opinion in favour of the Games, the Olympic Park and the Legacy impact of the development, through the use of opportunities to create good news stories, to leverage projects and programmes to create jobs and opportunities for local people, and to involve people in arts, culture, volunteering and sports programmes. We might conclude that, although the process has been managed from the top down, it has been infused by a commitment to work bottom up wherever possible. The cadre of Olympic planners has been trained in a culture more sympathetic to Jane Jacobs rather than Le Corbusier. Their success has been not to focus narrowly on the development process itself, but rather to engage the public in a much wider and pragmatic way.

development within urban areas (Urban Task Force, 2005); and to conserve the historic fabric of urban areas. For China, rapid urbanisation is overlaying the spatial geography of the established cities, through continuing urban development, rapid suburbanization, and through the rapid growth of completely new cities, these being built to accommodate the significant movement of population from their rural hinterlands. Thus, the concepts used to understand development do not read across in any simple way; moreover the domestic political and social concerns that set the context for the Olympics are quite different. However, the pace of development in China means that cities are set to move to a post-industrial, service, or knowledge economy, much more quickly, and therefore while still economically dynamic, there is a growing interest in policy areas at the core of UK development discourse: sustainability, regeneration, historic preservation, cultural strategies and the like, albeit in the wider context of expansion and development.

Moreover, and although the drivers for a concern in social engagement arise in a different context (rural migration and the unequal rights of migrant workers, the absence of formal democracy), there is in China significant concern with the management of social consensus and the mitigation of opposition.

Notwithstanding the differences, there are some parallels between the Beijing experience in 2008, and the UK experience in 2012. In both cases, there were shared concerns with using the developments to create new city infrastructure and homes, to remove and replace urban decay, to create green spaces, to secure green technology gains, to promote popular support for the Games and to mount extensive volunteering programmes to give active expression to that support (Ong, 2004).

How does the UK approach compare with the Beijing experience in 2008?

For the UK, urbanisation and industrialisation is largely a historical phenomenon. While there is a continuing need to accommodate population and city growth, pressures to develop new housing and to expand the UK population are met with significant resistance, expressed in various aspirations: to limit population growth (Beddington, 2009), and to protect the countryside (CPRE, 2008) and contain urban

Moreover, the imperatives of clearing the site meant that in some senses, the strategies for clearance and development for the UK Olympics echoed those adopted in Beijing in nature if not in scale. The scale of population displacement in Beijing is disputed, with a claim that over 1.25 million people were displaced in Beijing, in preparation for the 2008 Games, compared with an estimated 6,000+ households have been demolished since 2002, according to official figures (Jiang Yu, 2007). In the UK, the Olympic Park was developed in a sparsely populated industrial area. Nearly 500 residents were displaced; over 200 businesses employing nearly 5000 people were relocated to make way for the Olympics (Games Monitor, 2012). The case study above demonstrates the greater experience of the UK in the use of collaborative strategies for managing consensus, notwithstanding the UK's preparedness to pursue compulsory purchase and to act in defiance of some local opposition where necessary.

Legacy and the future

The commitment to Legacy at the outset of the process for planning the Olympic Park ensured that the planning for the project struck an "attitude" towards the future. Some features of that perspective were:

- A commitment at the outset to adaptable buildings and the site as a whole, with a number of temporary structures that would be scaled down (such as the main stadium, and the extent of the site itself) or removed (including the Basketball, Hockey and Fencing stadia, and hospitality facilities). The Olympic Park was built such that it could be scaled down from the outset (Abrahams, 2012);
- The creation of a long term vision was geared towards its post Games use: delivering a park, enabling infrastructure for development, and towards changing the socio-economic profile of the local communities, the latter, first, by securing immigration of higher paid residents; second, by creating opportunities for the existing community to gain better education, skills, work, and housing; and, third, by reducing the churn of upwardly mobile residents by encouraging them to remain in the area rather than move on as quickly as possible. In this sense, the Olympics became a means to create a narrative for the future of east London: one constructed around themes of

health and a high quality environment, neighbourhoods with excellent social and leisure infrastructure, and new employment opportunities in retail, commercial and service sectors (Stratford Metropolitan Masterplan, 2012).

- The London Olympics has demonstrated how top down planning need not create once and for all developments: top down planning can build in adaptability to change from the outset (Abrahams, 2012).

Conclusions

The London Olympics have, in one sense, already achieved a number of its objectives. The Games were a successful spectacle that showcased the UK's ability to promote and deliver an international event; they provided a backdrop through which a benign image of the Capital City and the nation could be viewed by the world. They have acted as a means for mobilizing public opinion, and for promoting some of the more ideologically driven dimensions of the UK government agenda, around themes such as health and sustainability. The construction phase of the Games have acted as a Keynesian antidote to the economic recession, and have sustained the impetus towards London's eastward development.

The Games have also acted as an important vehicle for constructing new relationships between the institutions of government and the wider public, as well as for centre-regional-local relations. The Games made a direct appeal to public opinion, nationally and locally, through a call to involvement: in volunteering, in taking up sport, in consuming culture, and in joining in the celebration. Thus, although the project was largely conceived and driven from the "top-down", it has been run in a way that welcomed engagement from the "bottom-up". Critically, this involvement was one of practical involvement rather than one of democratic control of decision-making.

In such circumstances, of a process driven top down, but is nonetheless highly sensitive and attuned to local opinion, to the extent of proactively seeking to construct that opinion, some features might be noted:

- The significant role played by "experts" who engage with, at best aid or at worst manipulate, public opinion and involvement
- As a consequence of 1 and 2 above, the existence of the "public" as both a real and

- an imagined (constructed) entity in the minds of the agencies working in the area, who are predisposed to engage and inspire people
- The scope for collaboration with the “public” in the process to either complement, obscure, or at worst replace the relationship between the public and their elected democratic representatives
- The relative absence of the public as an active political force, controlling developments through their relationship with democratically elected representatives, and rather, the presence of the public as consumer, active participant or passive crowd
- The risk, in creating dedicated delivery vehicles at the local level, to add to a proliferation of confusing layers of government and agencies, making processes and accountability more obscure to the public, or conversely, the opportunity to use a major event to rationalise and reduce the number of quangos in the area.

In a society with a heightened perception of risk (Beck, 1992), there is a danger that the public appears on the stage as an invitee to an anxious, highly regulated, risk adverse, security conscious party. The popular support for the Games has been won by appealing to people's better judgment and humour in lighthearted ways: in the spirit of entertainment and enjoyment. In this, the public's relationship to the development process itself has tended to become a side issue. One might suggest that an active, engaged public is also able, through the political process, to influence, if not direct, change and growth. In this sense, the Olympics have shown some possibilities. Top down control need not be the death knell for the public; rather it simply offers a means to confidently plan, assemble land, and deliver development. Such focused purpose can be used to deliver to public aspirations as much as it can deliver their exclusion.

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Modern Architectural Influences of Western Construction Companies in China

*The Crédit Foncier d'Extrême-Orient,
1907-1959*

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Introduction

The prodigious recent developments of the building sector in China and the design of most audacious architectural and urban projects by both Chinese and foreign architects casts a shadow on modern construction activity from the past. The origin and early developments of modern construction in China, indeed, do not date from the 1980s, but go back to about a century ago. The central question in this paper would be if and how Western construction companies contributed to and influenced the modernization process of architecture in China during the first half of the twentieth century. The polarization that had existed between secular Chinese building traditions and Western national historic and classic styles exported in an imperialistic perspective, shifted from around 1920 to the generic issue of modernity in architecture and society, and the specific issue of modern architectural identity in nationalist China. Modern architecture, using concrete structures and new technologies, experiencing new forms and diffusing new building types, deeply transformed the building sector from the design to the execution in the West as in the East. In China, however, a specific "modern Chinese architecture has not developed from within, but has been stimulated or generated at its earliest moments by Western forces" (Zhu : 2009) Currently, the study of foreign architectural influence on China's modernisation is dominated by American and British cases and to a lesser extent by French, German, Russian

and Japanese ones, but influence from other Western countries remains almost obscure. British architectural firms include Palmer and Turner (founded in Hong Kong 1868), Leigh & Orange (founded in Hong Kong, 1874), Davies, Brook & Gran (founded in Shanghai, 1895), Spence Robinson Ltd. (founded in Shanghai, 1904), and Hemmings & Berkley (founded in Hankou, c.1908), are amongst the oldest design firms established in China. In contrast, there are few companies that dealt with a wide range of construction businesses, real estate properties and production of building materials in China. The Fuller Construction Company (American), (Cody : 1996) Andersen, Meyer & Company (Danish), and the Crédit Foncier d'Extrême-Orient (Belgian- French) are examples of such companies.

In Shanghai and other major coastal cities, buying and selling land, and administrating real estate property were considered a "very important phase of commercial life and activity".(Saverby :1931) Companies such as the Shanghai Land Investment Co. Ltd., the China Realty Co., and Cumine and Co. Ltd. have been prolific in developing Shanghai. The fact that the Chinese could not hold property in the International Settlement under their own names resulted in a number of Western real estate companies, architects and lawyers being devoted exclusively to the business.

Origin, Development and Functioning of a Construction Company in China

Of the above companies, the Crédit Foncier d'Extrême-Orient (henceforth C.F.E.O.) was perhaps the most substantially active in China, having constructed numerous works spanning the time of half a century. The C.F.E.O. was an anonymous society of Belgian right, one of the many Belgian capitalist-colonial businesses through the world that developed during the heydays of Belgium's economy from around 1890 to 1914 (Figure 1). Belgian companies began investing in China from 1865, but Belgian investments greatly increased after 1900 in several industrial, financial and commercial sectors such as banking, railway, steel industry, and real estate. Contrary to architects who worked in Congo, the only Belgian colony until 1960, Belgian architects active in China and Hong Kong remain largely unknown. Since a detailed history of the C.F.E.O.—translated to “Far East Land Credit” 義品放款銀行 (Yi-pin Credit Bank), later known as 義品地產公司 (Yi-pin Estate Company)—has previously not been published, this paper will provide such a purpose and is based on historical notes from the company's archives. On 3 August 1907, the “Société Franco-Belge de Tientsin” was founded with the aim of exploiting 14 hectares of real estate properties bought from French missionaries in Tianjin. Belgian and French groups constituted the initial capital and the Belgian “Banque d'Outremer” was responsible for the management. The company was headquartered in Brussels and opened soon an office in Paris. After having invested in Shanghai, the company changed its name into “Crédit Foncier d'Extrême-Orient” in 1910. Apart from mortgage-guaranteed loans and financing modern technology infrastructure (water supply, telephone, tramways, electricity, etc.), the mission statement of the C.F.E.O. as defined by the statutes included construction works, production of building materials, and all possible activities in the real estate market, and works for third parties. (CFFEO 1921-1957) The young company expanded remarkably, opening agencies in Hankou and Hong Kong in 1911, Beijing in 1915, and Jinan in 1918, as well as brickyards in Tianjin, Hong Kong and Shanghai. The C.F.E.O. also built several offices for the Chinese Post, notably in Jinan and Kaifeng.

In 1927, due to political instability and increasing institutional controls upon design in

the Mainland, the company restricted its business to the concession areas, especially in Tianjin and Shanghai. The concessions were extraterritorial enclaves in the treaty ports ruled by foreign nations. Simultaneously, the C.F.E.O. redeveloped its activities in neighbouring British colonies, increasing the role of its Hong Kong agency, opening a new agency in Singapore in 1928, and starting business in Malaysia (Muar and Malacca). The world economic depression of the 1930s affected the C.F.E.O. that, however, benefited from the growing real estate market in Hong Kong where Chinese refugees converged from the Mainland. The Japanese invasion of China reached Beijing, Tianjin and Shanghai in 1937, Hong Kong and Singapore in 1942, and isolated the local agencies of the C.F.E.O. The Chinese Civil War of 1947-1949 and the victory of the Communist party first obliged the company to adapt to new legislations and later, in 1955, to put an end to its activities in Mainland China. The C.F.E.O. revived in Hong Kong and Singapore, making profits until the mid- 1950s, but finally left the Far-East in 1959.



Figure 1 : Action of the C.F.E.O. in 1944
(Brussels, private collection)

Construction and Development in the Chinese Urban Landscape

The core business of companies such as the C.F.E.O. consisted in mortgage loan and all operations in generating profit from real estate investments, including: buy and sell grounds and buildings, build and acquire buildings in order to rent them, manage and maintain buildings belonging to the company or to third persons. The company never reached a sufficient critical mass to become specialized in certain building types or activities, but simply took all the opportunities. There was a permanent architectural office in every agency of the C.F.E.O. The tasks of the architectural agencies, of which the size depended on the volume of the business, were varied and consisted in designing new buildings, following up works, evaluating grounds and buildings before acquisition, transforming existing buildings, dealing with foreman, choosing building materials, improve technical installations, etc. When new building projects were decided, the team of the architect and his Chinese draftsmen were hard working, but in low conjuncture the architect had to work for third persons who paid his service to the company. This explains why the architects of the C.F.E.O. not only designed buildings belonging to the company but also individual houses for private clients, offices and apartment blocks for other Western and Chinese investors, educational buildings and religious houses for missionaries, and some buildings for the Chinese State.

In Shanghai, the C.F.E.O. benefited from the high conjuncture of the 1920s and 1930s. The residence cluster of Yi-pin Cun (Yi-pin Village or Yi-pin Estate) was a significant project from 1921 situated in the third expansion of the French Concession between Rue Massenet (current Szenan Road) and Southern Chungking Road (Figure 2). Twenty-three individual residences were developed of a similar style in the manner of three-storied European country houses with a concrete structure, slanted brick roofs and a garden of approximately 300 m² (Figure 3). Evidently, these residences were designed to accommodate moderate to large families and categorized within the luxury-property sector. The C.F.E.O. brought the construction of individual luxury-style residences to other cities, although evolving into different architectural manners throughout the years. Several works of the company in Hankou (present day Wuhan) were documented in



Figure 2 : Shanghai, map of the Yipin Estate and surrounding area, 1921 Wei (2008: 61)



Figure 3 : Shanghai Yipin Estate: typical residence, 1921 Wei (2008: 200)

“Contemporary Architecture in China”, a valuable article published in 1927 by architect Gabriel Van Wylick in a major Belgian architectural journal, revealing his perception of Chinese architecture and the building sector. In Hankou, Van Wylick designed a bungalow (Figure 4) of a detached Western-style house, belonging to an architectural type that spread from England and the United States in the 1910s to the rest of the world in the 1920s, and became a favourite house in colonial countries. (King : 1984) He also designed a “semi-foreign” house at Hankou, which is a brick and concrete building with an Art Deco

demonstrative main façade expressing the status of the owner and flat roofs used as terraces (Figure 5). Built on a narrow parcel of land, the house combines a front part, three levels high, with a reception space and a staircase, and a rear part for private family life. In the prolongation of the main hall and entrance, a long vestibule connects both parts and ends with a second staircase at the back of the house (Figure 6). Van Wylick defines the term “semi-foreign” as an architectural type for wealthy Chinese blending Western comfort and the requirements of Chinese life.²¹ He also points out that the roofs effectively form a series of terraces, which as a space is much appreciated by the Chinese, choosing to pass many summer nights there with family and friends. As a matter of fact, the usage of external or open spaces in this residence, seen in the terraces, verandahs and vestibule, was a

term “semi-foreign” and prefers new categories such as “hybrid”, “compradoric style”, and “modern Western neoclassical”, proving how ambivalent stylistic terminology can be.²³ In the developing cities of the 1910s-1920s, financial companies and Chinese real estate developers also built vast housing blocks called “Chinese quarters” for the rising urban population. Such a quarter belonged to one owner and was a gated compound with small-sized family row houses. Financial companies made such investments without undue risk through mortgage loans. Therefore, loaning money to investors was part of the C.F.E.O.’s business, as well as building quarters for investors or investing itself in large-scale projects. Van Wylick designed a Chinese quarter in Hankou consisting of about fifty brick houses spread out in seventeen rectangular blocks (Figure 7). Every entrance takes the



Figure 4 : Hankou, bungalow for an European (*L'Émulation*, 1927)

development from traditional Chinese courtyard-type houses. In fact, during this period other buildings types were introduced, such as terrace houses, apartments, open-corridor housing and high-rise apartments based on foreign countries.²² It is worth noting that present scholarship does not refer to the

form of a small walled court, while the kitchen is located at the rear of the house and opens to a service street. Van Wylick notes that “the art of the architect consists in exploiting the topography and following the local traditions, because a house with a main entrance on a secondary street would be difficult to be



Figure 5 : Hankou, "semi-foreign" house
(*L'Émulation*, 1927)

shikumen lilong houses as such were clustered and small in scale, where a main alley and several side-alleys connected the houses. Land and real estate developers had sought to build as many houses as possible on a limited parcel of land, effectively also reducing costs of construction and technical installations.

The Architects and their Architectural Adaptation

Western construction companies such as the C.F.E.O. looked for architects who were "flexible enough to adapt to the Chinese building methods and have a good health because the work is hard".²⁷ Sometimes the C.F.E.O. developed specific projects with local architectural firms because it was less expensive and more efficient than sending their own architects.²⁸ Most foreign companies also worked with Chinese employees and turned to native contact suppliers or 'compradors'.²⁹ Every architectural office of the C.F.E.O. employed Chinese draftsmen, who were well appreciated: "with time and patience, some become very skilful because they are meticulous and patient. Usually they are excellent in tracing and I have known some who were capable of finalizing all plans of execution when given a simple sketch of the

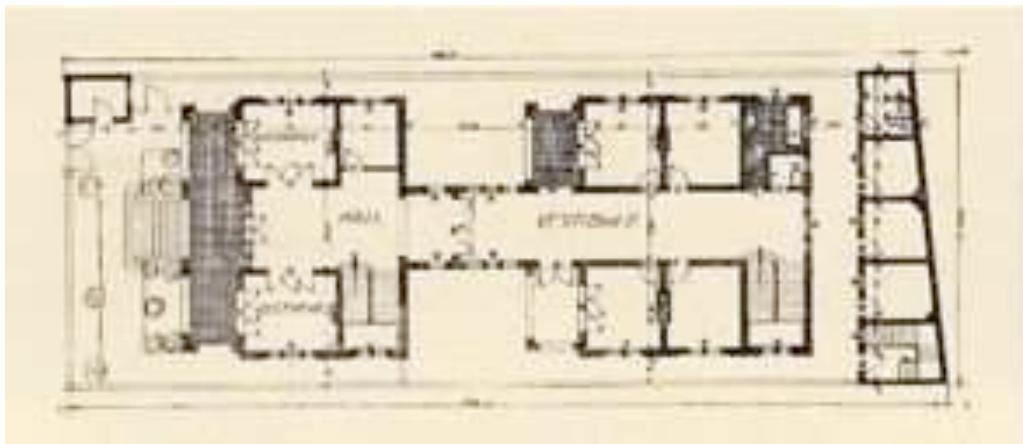


Figure 6
Hankou, "semi-foreign" house
(*L'Émulation*, 1927)

let" (Wylick : 1927). The development of this quarter was in line with the shikumen lilong housing or courtyard lilong housing that prevailed respectively in Shanghai and Northern China (Zhao : 2004) These housing blocks were "outgrowths of traditional houses with new features added to cater to people's new demands" (Lu et al : 2001). Old-style

project design" (Wylick : 1927). From 1911 to 1959, the C.F.E.O. had an agency in Hong Kong that was headed from 1931 to 1946 by Gabriel Van Wylick. Among the most significant projects of the company in the British Colony were many residences erected along Prince Edward Road, Kowloon, an area that developed from 1931 as a "future



Figure 7 : Hankou, Chinese quarter of Lin Tse Tsin (*L'Émulation*, 1927)

semi-detached house emphasized by corner windows opening to verandahs. On top of this, a block of ferro-concrete flats in Kowloon was completed in 1932 (Figure 8). According to archival reports, the architects of the C.F.E.O. had “exercised their ingenuity to the full in using every feet of space to the best advantage. [...] An ingenious arrangement of ventilation from the roof [such that it] fits in cupola manner leaving a small space between the top of the wall and a rim projecting downwards from the roof, to keep out wind and rain. The staircase is also built with the idea of providing airy space and ventilation” (SCMP : 1932). Several private residences were also designed by the C.F.E.O., for individuals around Hong Kong, on the Peak, in Kowloon and at Deep Water Bay. The latter two residences have a circular stairwell that forms a predominant feature of the design scheme,



Figure 8 : Hong Kong, residential block at Prince Edward Road, Kowloon (Brussels, archives Edouard Van Wylick)

suburban garden city”. Two such residential developments designed by the C.F.E.O. were noted at the time to “represent an entirely new style in architecture in the Colony” (CFEO : 1931-1948). One was a block of three-storey flats, of which the front section of the first two floors formed spacious verandah facing the main roadway. The other residence was a

combining the reception hall with the living and dining rooms, defining porch verandahs and vast spaces for social functions on the ground floor and leading up to bedrooms on the first floor (Figure 9). These residences were said to achieve an exceptional feeling of “brightness and airiness [and] far surpasses anything that is usually planned for residential building of this type” (Graye : 1941). The above examples show that the foreign architects grasped the opportunities offered to them, and designed according to the patron, the local context, and responding to stylistic and practical

requirements of the time (Coomans : 2012). As for the pool of patrons and clients, they came from all parts of the society but religious bodies often commissioned large or prominent projects and would normally remain with one company throughout the years. French Catholic missionaries, for instance, were important clients of the C.F.E.O. in Tianjin and in Hong Kong. The company was actively engaged with works for the Jesuits and the Lazarists in Tianjin and for the Foreign Missions of Paris in Kowloon. In 1932 Gabriel Van Wylick carried out the plans of the new Catholic parish church of St. Teresa at Kowloon Tong.

China, a World Market for Building Materials

The construction sector needed building materials in quantity and quality. The development of buildings and infrastructure

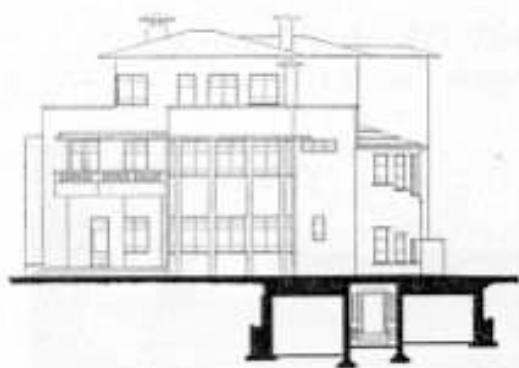


Figure 9 : Hong Kong, residence of Mr Lasala at College Road, by Gabriel Van Wylick (The Hongkong and Far East Builder, 1941)

generated both a considerable local production of some materials and obliged to import other materials from worldwide. All the imported materials were shipped directly into the treaty ports, which were the main market places. We could say that the issue of building material consumption in China is not a phenomenon of the last decades, but that China was already on the map of a world market before 1920. In Shanghai, although a considerable amount of building materials was imported, a certain amount was locally produced. With brickyards in Tianjin, Shanghai and Hong Kong, the C.F.E.O. contributed to the local manufacturing of materials (Graye : 1951). The company also built ceramic factories in Shanghai and Tianjin. Virtually all the building contracting seems to

have been carried out by the Chinese, a prominent contracting firm being Voh Kee and Co. in Shanghai. The Tai Shan Brick and Tile Co. also manufactured and supplied building bricks, facing bricks and tiles to the Shanghai market and exported considerable amounts to other cities in the Far East. The Kailuan Mining Company, renowned for mining and selling of a bituminous coal extensively used in industry in the Far East, also manufactured facing bricks and tiles that were imported into Shanghai from northern China.

The early use of concrete in south China dates back to about 1905, and was favoured by two factors. On the one hand 'reinforced cement' resisted typhoons, which frequently devastated coastal cities such as Hong Kong. On the other hand, cement resisted the infestations of termites, which were a plague in cities such as Guangzhou where wood constructions proliferated. In 1908, cement was produced in Hong Kong and Haiphong, but was also imported from Belgium, Germany and Austria, while steel bars were imported from the United States (Detroit) (Dumonceau : 1908).

In fact, concrete would quickly be extensively used in construction all over China. Owing to the soft nature of the soil of Shanghai, large buildings were therefore 'floated' on a raft of piles. Danish engineer A. Corrit was a specialist in concrete piles and has done the foundation for most of the large buildings in Shanghai in the early twentieth century. In the 1930s in Shanghai, the firm Malcolm and Co. manufactured a new type of material called 'Aerocrete', which was a very light and strong material for filling in walls and greatly reducing the weight of a building. The Cathay Mansions in Shanghai had been built by the Cathay Land Company in 1928, of which the facing bricks were manufactured by the Tai Shan Brick and Tile Company. In 1931 the building was reportedly the largest individual building in Asia.

Due to the lack of wood in China, timber had to be imported from North America, the Philippines and Japan. In 1930 a total amount of 204,660,618 feet of lumber was imported into Shanghai from the Pacific Coast of North America, of which the China Import and Export Lumber Co. and the Canadian Trading Co. Ltd. were the main companies involved. (Sawerby : 1931). Meanwhile, the firm of Kienhuize and Co., most probably importing wood from Indonesia, was the main importer of tropical hardwood in Shanghai such as mahogany, teak and oak used for interior woodwork in buildings.

For more elaborate materials and technology such as plumbing and sanitary installations, heating systems, and electric installations, it seems that architects, when delays were allowed, preferred ordering materials from their home countries. Air conditioning did not seem to have been used in the south of China before the late 1930s. Its development in the decades following the Second World War would have great consequences on architectural design and economy of materials. In 1927, an architect noted: "Despite the internationalization of construction, buildings remain typically characteristic of the countries from where the architect is originated" (Wylick : 1927).

Conclusion

Shanghai, Tianjin and the other treaty ports with their bustling concession territories or international settlements within China, as well as the British colony of Hong Kong, were unique interfaces between the East and the West during the first half of the twentieth century. Their international character made them the real 'gates to modernity' of China. Studying the activities of Western construction companies in these cities reveals the remarkable dynamics of the building industry in China at a time modern architecture and urbanism became, for the first time in history, a worldwide challenge.

Taking the C.F.E.O. as a key to enter the complex world of real estate business and architecture in urban context is relevant not only because of its exceptionally well preserved archives, but also because of the uncommon combination of the functions of both real estate and architectural design in one company. Specific activities such as the purchasing and selling of land and the administration of property also indicated the prominent roles that these Western companies held. They also reflect and enhance the intertwined urban dynamics between the Chinese and the foreigners in these cities, during a time that slightly predated and surpassed the Republican period.

This paper had also evoked the issue of construction materials and technical equipment. It is a significant factor to note via observation of records and data of material imports such that it reached a climax in the 1920s and 1930s. The establishment of Western factories in manufacturing materials in China, such as the ceramic and brick factories

of the C.F.E.O. thus reflect the demand of such foreign equipment and technologies. In terms of architectural influences, these construction companies and their architects brought to China new building typologies and adapted them to the local conditions, notably the climate. This was particularly observed in the new forms of housing that the C.F.E.O. produced, which had combined Western construction and comfort with Chinese traditions and life-style, thus reflecting the living standards and expectations of the rising new Chinese middle class. These new constructions and their relationship with the urban landscape serves as an indicator of how the companies and architects adapted to the evolving demands of the emerging modern Chinese cities, and ultimately showing their influences and impact upon the first generation of urban development of modern China.

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Building A Socialistic Architecture

The Transformation of the Architectural Profession in China during the First Five Year Plan

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keywords: *Architecture; Profession; Industrialization; Bureaucratization*

Overview

The formation of the modern architectural profession in China was the product of political and social change in the 20th century – the falling of China's imperial system and the rising of Western models in the first half, the implementation of Soviet model and nationalization of the architectural profession in the middle of this century, and the revival American model and the semi-privatization of the profession.

The introduction of modern Western capitalist forces of production had undermined and transformed much of China's traditional economic order, and the onslaught of the Western model disintegrated China's traditional architectural practices. However, the architectural profession in China was not refashioned in the image of the Western professional world. Although Chinese architects shared similar, if not the same, professional criteria and social distinction with those practitioners in the West, the changeable ideological structures, repeated foreign interventions, and constant revolutions significantly changed the nature of the architectural practice in China. In the 1950s, China's architectural education underwent a significant transformation under political and ideological orders. Within a few years, the American Beaux-Arts model was wiped off and was replaced by the model borrowed from the Soviet Union.

This paper focuses on the transformation of China's architectural profession in the 1950s. Unlike other architectural historical studies on this period, this paper examines the relationship between the political consequence of the First Five Year Plan (1953-1957) and the bureaucratization of the architectural profession.

Background

With the Chinese Communist Party's victory in 1949, all professions in China, including architects, were quickly and effectively integrated into the state organizational system, which was actually fully controlled by the Chinese Communist Party. Consequently, architecture was seen and applied as a ruling instrument with the yoke of ideological representation and institutional control from the state and the Party. Therefore, when studying the development of Chinese architecture in the modern era, it is necessary to examine what the social and political contexts were at the beginning of the communist regime, in which Chinese architects shifted their relationship with the state as well as with the ruling ideologies and values. It is also critical to discuss how Chinese architects responded to those changes, which has resulted in a profound change of the profession and formed the primary characteristics of today's Chinese architectural practice.

By revealing the social, ideological and institutional factors as well as architectural practitioners' experiences, which formed the relationship between the profession of architecture and the Party, and determined the direction of the profession's development, this paper will examine the development of the Chinese architectural profession during the first decade of the communist regime from 1949 to 1959, focusing on the interplay between the new regime of the Chinese Communist Party and the profession of Chinese architecture. The Party's attitudes towards architecture and the developmental characteristics of the architectural profession discussed in this paper are the integral subjects of the cultural and social developments of the architectural profession in response to one of the most important turning point in modern history of

China – including the role of Western-educated architects, foreign influence from both the West and the Soviet Union, the struggles and confusion of incorporating traditional forms in modern architecture, continuous ideological and political campaigns, hard economic conditions, and the Party's efforts of industrialization during the 1950s. The shift of the architectural practice in China can be seen as a prominent episode in the modern architectural history because of the degree of complexity, ambiguity and controversy, to which few cases in the world have presented.

Consolidating The Profession for the new Society: Changes of the Architectural Profession between 1949 and 1953

The communist victory in 1949 did not bring an immediate change to the architectural profession. During the first few years of the new regime, recovering economy and restoring public order became the primary considerations for the Party leaders. At the beginning of the new regime, rules, systems, and regulations in architectural profession from the former regime were mainly retained and private professional practitioners were allowed to continue their businesses as they had before. The Party also needed the skills and expertise from architects to reconstruct urban environments which had decayed for decades and to assist the economic industrialization and modernization. But the Party was also concerned about the western influences on those architects, most of whom were trained in North America and West Europe. These influences could cause ideological deviation among not only architects, but also the Party cadres in charge of the architectural and construction activities. Hence, the Party adopted a series of gradual efforts to achieve its goals of reforming the profession for the socialist needs while allowing other key aspects of the profession to be retained so that architects could still function well for the economic and social development.

The nationalization of all key economic sectors were not only a political need for a socialist country, but also a necessary means for the Party to reduce the conflicts between different economic sectors to a minimum and to establish an effective system to carry out the Party's plans and policies. The Party started

the nationalization in architectural profession in a non-mandatory way. By establishing state-run construction enterprises, the Party offered prominent architects better income and benefits and exploited their patriotism to encourage them to join the state enterprises. In practice, the nationalization of architectural firms at the early 1950s took place usually by merging private enterprises into larger state-run construction companies.

When the political and economic situations turned better, the Party could make harsher policies to achieve full control over the profession. Since 1951, the Party gradually marginalized private enterprises and decreased room for their practice in professional market by establishing criteria of prerequisite for architectural practice and controlling the issue of practice permission. As a result, in order to survive, most mid-size and small-size private architectural firms had to merge in state-run enterprises and became nationalized. Between 1949 and 1953, the state-run construction enterprises (including design institutes) had increased four fold while the percentage of private enterprises in the construction sector had drastically dropped from 35% in 1949 to 1.7% at the end of 1952. The introduction of the Soviet model of design institute in 1952 generated the second reorganization of architectural profession in China. Being split off from the state-run construction companies, the architectural practitioners were assembled together according to their geographical locations and specialized expertise to form regional-based and discipline-based design institutes. This augmented the architectural profession's full reliance upon the Party's and the state's agencies because each entity in a construction practice was firmly controlled by the Party and its state agencies. As the Party and the state became both the project clients and the owner of contractors, the architectural professionals became the state employees too, and could not provide services for individuals any more. The design activities were seen as a contribution to the national modernization and the public good rather than for the architects' own interests.

With the adoption of the design institute system, the Party finally established its centralized administrative organ, the Ministry of Construction, in August 1952. Thus, the Party formed an effective and efficient four-layer and double controlling system to administrate architectural and construction affairs. Through the governmental organs at city and province

levels, the Ministry of Education at Beijing could take control of any architectural and construction activities that occurred in any place within China. The nationalization of architectural practice and education had produced two immediate consequences. First, all architects and architectural scholars became the state employees, which had completely changed their working nature. It meant that they did not have the freedom to choose their works and occupations any more. Before 1949, they were able to move between sectors- sometimes by choice, sometimes by necessity. Such occupational flexibility gave this stratum a critical degree of autonomy from the state. After 1949, political constraints and nationalization campaigns narrowed the channel of career choices. Second, the nationalization generated two strata of architects and scholars – the establishment ones and those who retained a preference for independence. Establishment architects could enjoy protections and privileges only through their cooperation with the powerful state. On the other hand, those who wanted to retain autonomy and independence would find it was extremely hard and dangerous to work in a way outside of the state's system and without the bureaucratic alliances.

Serving the Industrialization: Sovietizing the Architectural Profession in 1953-1957

When the economic production achieved the peak of pre-1949 level in 1952, China's modern industrial bases were still tiny and primitive. Meisner found that when Stalin launched the Soviet Union's First Five-Year Plan in 1927, per capita industrial output in Russia was more than four times greater than China's in 1952, when China announced its First Five-Year Plan (Mesiner : 1999).

Beginning its drive for modern industrialization in a far more backward economy than that of Russia, the Chinese communists had to utilize the political and human resources on hand and to use both of them simultaneously to achieve the preconditions for economic growth and the society's socialist transformation.

In 1953, the top priority of the nation was switched to industrialization and the First Five-Year Plan, a massive-scale economic plan aimed at establishing a solid economic foundation for socialism. The Party also announced the beginning of socialist

transformation in 1953 but the emphasis was less on the transformation of social relations than on modern economic development. Effective and efficient nationalization had considerably increased the number of state-run enterprises in the entire economic sectors. When the industrialization and economic growth became the nation's top priority and the socialist transformation was ongoing, the architectural profession consequently had to fulfill the new tasks of serving the industrialization and economic growth as well as accomplishing its socialist transition. Hence, the operational system of architecture profession had to be consolidated and enhanced for the new change. The adoption of the Soviet model of industrialization and the centralized economic planning demanded substantial bureaucratization and routinization of state and society. The Party needed to establish more complicated and increasingly specialized administrative structures. More skilled cadres were needed in leadership positions of administration and functionaries. This led to a more profound bureaucratization in the expansion of centralized political control in design institutes and higher education institutes.

When design institutes were continuously formed throughout the entire country, the bureaucratization had already taken place in major cities. The first step was to establish a hierarchical rank of technical titles for all personnel in a design institute. Ironically, the architectural practitioners also called for a prompt installation of the hierarchical rank system because the formation of design institutes had substantially changed the architectural practitioners' social circles. Before 1949, Chinese architects and architectural scholars usually established their social networks with their educational backgrounds – the schools that they attended, the teachers that they learned from, or the disciplines that they majored in. People tended to be closer to those who graduated from the same school or shared experiences of being one's students. The inner circle of personal relationships based upon educational background often determined architects' and architectural scholars' career choices. However, in order to establish a design institute, the governmental organs usually assembled architectural practitioners and construction engineers from different enterprises and entities. The only reason to put them together was because of their specialties,

skills and expertise in particular fields rather than their educational backgrounds or professional ties. As a result, interpersonal conflicts were inevitable when people with totally different professional experiences, educational backgrounds, working styles and practical preference worked together under one roof. This conflict even expanded to the governmental organs when some elite architects were offered government positions.

Establishing the Chief Architect/Engineer System

The Party's official definition of the hierarchical technical title system was not established until June 1955. Before that period, the old job ranking system used in the former Guomindang regime was retained. According to the old system, the hierarchical rank was divided into senior, middle and junior levels based upon the educational background and professional experience. In general, the senior level rank, called "senior designers" or "chief designers" in design institutes, were given to most of the architectural practitioners, who were primarily trained overseas and started their professional practice before the Second Sino-Japanese War in 1937. The middle level rank, called "designer", were given to the majority of domestically-trained architects who had graduated between the 1920s and early 1940s and had participated in design practice before the communist's victory in 1949. The middle level rank was also assigned to those who had worked in architecture or construction engineer for over 15 years with at least secondary technical training. The junior level, "design technicians" or "design-assistants", were given to the fresh graduates and the practitioners who did not have secondary technical training or had only worked on small-scale construction projects.

The nationwide rapid industrial development called for a highly efficient operational system in design institutes, which demanded a specialized and centralized management based upon professional expertise. It was crucial to clearly define lines of responsibility and authority to skilled architects who were responsible for carrying out directives from the Party and to implementing the directives. As a result, each design institute adopted the "Chief -Office System" borrowed from the Soviet Union. A chief architect office or a chief engineer office was established in each design institute. Several senior-most designers and

engineers within the design institute were designated to work in the office, taking charge of organizing and supervising all architectural design activities. The chief office directly reported to the head of design institutes. All large-scale or important building projects had to be done with the direct involvement of the chief offices while the middle-level projects were conducted by individual design units with the chief offices' supervision. A design institute was usually composed of several design units divided by design specializations. For example, the Eastern China Architectural Design Institute had seven design units including the Master Planning Unit, the Cultural & Educational Projects Unit, the Health Care Project Unit, the Industrial Project Unit, the Structure & Construction Engineering Unit, and the Mechanical Engineering Unit. Within each design unit, there was a unit director, usually a senior or middle level designer, to be responsible for all design management and organization of the unit. Each design unit was often divided into several design groups, each of which was led by an experienced architect, usually at the middle level rank, working on one to three projects simultaneously. Therefore, unlike the Western model of architectural practice, where the principal and project manager composed the two-level management system, an architectural design institute in China normally included four levels of management: head of the design institute, chief architect/engineer, unit director, and design group leader.

In addition, like all other state-run enterprises, a design institute had to organize its own facility services, maintenance and welfare services, which often included staff dining service, daycare service for staffs' children, transportation services, library, supplying offices and other services. This resulted in a much larger size of employees in China's design institutes than in Western architectural firms. The regional and provincial level design institutes normally had more than 1,000 employees, like the Beijing Institute of Architectural Design and the Eastern China Architectural Design Institute. In major cities, the city level design institutes often had 200-1,000 employees while the average size of design institutes in a middle or small city was 50-2000.

The Chief Architect/Engineer System was generated by the bureaucratization of architectural profession and also enhanced the centralized control of this profession, for the Chief Architect/Engineer System established a

chain of control from the supervising governmental apparatus at the top to the individual architectural designers at the lowest level. This system became the main channel of the Party's direct involvement in the architectural profession. The chief architects or chief engineers were responsible for carrying out the Party's directives in architectural design while assuring the design quality by supervising other architects' works. They played a dual role in the design institute by working as both designs and administrators. On one hand, they participated in design practice. On the other hand, they supervised other designers' performance and made direct report to the heads of design institutes. The Party did not directly challenge the chief architects/engineers' authority. Although the Party branches and committees were also formed in different managerial levels within a design institute, the Party's role was primarily confined to that of moral and ideological leadership.

However, the Party gave the head of design institutes and the Party's personnel offices the authority to implement the Party's influence. Normally, the Party assigned a Party cadre with sufficient managerial skills and educational background of at least secondary school or above to become the head of a design institute, rather than giving this position to a senior architectural practitioner. The head was responsible for accepting and delivering the Party's directives from higher level Party authorities or administrative organs. All chief architects and engineers reported to the head, while all design unit directors reported to the chief architects/engineers. Within each design unit, the leader of each design group reported to the director while supervising each individual designer within the design group. Thus, the Party confined its direct involvement to the level of chief architects/engineers and allowed more indirect influences to be exerted by design practitioners. The position of the head of the design institute was fulfilled by a capable Party cadre who ensured the Party's full control. This reflected the Party's policy that all professions should be "under the ideological leadership of the Party."

The Party's influence on professional practice within a design institute was demonstrated in the Party's personnel system (*Ren Shi Zhi Du*). The Personnel Office was established in every design institute and it was responsible for building up a full personal dossier for each employee. The dossier included the performance assessment made by the

employee's supervisor, appraisals by peers, all ideological study reports by the employee, documents which showed the employee's personal history and political orientation, employment records, professional credentials, and any criminal record. The access to those dossiers was highly controlled and even the employee himself/herself normally could not review his/her dossiers. When people were transferred to different employers, their personal dossiers were also sent to the Personnel Office of the new employer. Based on the information from the personal dossiers, the Party cadres made vital decisions, such as career promotion or transference, employment benefits, salary level, and membership in professional organizations. In this manner, the Party's control had penetrated deep into each practitioner's daily life.

For individual designers, the bureaucratization of the architectural profession meant subjection to more specified codes, regulations and managements, and more defined strata of status based on their ranks. The definition of strata for architectural practitioners was clearly demonstrated by the differentials of their salaries and academic or technical titles.

Creating A Hierarchical Ranking System and the Associated Salary System

Another significant step of bureaucratizing the architectural profession was the adoption of a hierarchical salary system. The State Council issued "the Order of Adopting Monetary Salary for All State Employees" on August 31, 1955. The Party cadres were assigned to one of the thirty grades defined by this order. The highest rank, at 560 yuan per month, was given to the Party's top leaders, such as the Party Chairman, President and Premier. The lowest rank, only 19.8 yuan per month, was given to the junior-most non-clerical workers. It was the first time that a governmental regulation clearly defined a technical rank system as well as its corresponding salary system. In July 1956, the central government issued a revised format "The Order of Reforming the Salary System." Table 1 demonstrates the brief definition of salary levels and its corresponding official or technical ranks according to those two governmental documents.

According to the state's definition, all architectural design practitioners were divided into five ranks: senior engineer, engineer, technician, assistant technician and intern. Corresponding to each rank, there were

several grades of salary levels. For example, in Table 1, a senior engineer's salary could set between Grade Seven and Grade Thirteen in the salary grade while an engineer's salary varied from Grade Fourteen to Grade Twenty-two. The two documents also defined eleven different geographical areas across China based upon different living expenditures. For example, Beijing was defined at Area Six while Shanghai was at Area Eight. The amount of salary was increased at 3% between each interval. State employees working in places belonging to the Area Two earned 3% more than those working in Area One places.

The State Council set two major criteria for assigning a person to a specific technical or academic title: the political attitude and the professional expertise. According to these two criteria, three factors were primarily considered –the political qualifications, professional competent, and professional or academic accomplishments. In addition, the educational degrees and working experience were regarded as two affiliated factors.

In fact, the new technical ranking titles could be seen as a revised and detailed definition of the previous three levels of technical titles for architects – the senior, middle and junior level. Most senior level architects and engineers in the old system became the “senior engineers,” the senior level rank in the new system. The middle level practitioners were divided into two titles –“engineer” and “technician” while the junior level included “assistant-technician” and “intern.” In general, the senior engineers were assigned to be the chief architects or chief engineer. The strata of the architects still remained. The only significant change of personnel in the mid-1950s was the increasing numbers of young architects who graduated after 1949 joining in the professional group. It was noted that the “chief architect/engineer” was an official title while the “senior engineer” was a technical title. And it was the technical title that determined a practitioner's salary level, rather than the official title. When a practitioner was transferred to a new employer, his official title might be changed but the technical title would be retained. For example, when a senior engineer moved to a different design institute, he might no longer be the chief architect while still retaining the senior engineer title and receiving the corresponding salary level. From Table 1, a senior engineer working in Area Eleven could earn as high as 364 yuan per month while an intern working in Area One only obtained 20 yuan per month.

Salary Grade	Salary per month (in Yuan)		Technical Title	Academic Title
	Area One	Area Eleven		
6	320	416	N/A	Full Professor (Level One)
7	280	364	Senior-engineer	Full Professor (Level Two)
8	250	325	Senior-engineer	Full Professor (Level Three)
9	220	286	Senior-engineer	Full Professor (Level Four)
10	190	247	Senior-engineer	Full Professor (Level Five)
11	170	221	Senior-engineer	Full Professor (Level Six)
12	150	195	Senior-engineer	Associate Professor (Level One)
13	135	175	Senior-engineer	Associate Professor (Level two)
14	120	156	Engineer	Associate Professor (Level Three)
15	108	140	Engineer	Associate Professor (Level Four)
16	96	125	Engineer	Associate Professor (Level Five)
17	86	112	Engineer	Associate Professor (Level Six)
18	76	99	Engineer	Lecturer
19	68	89	Engineer	Lecturer
20	61	80	Engineer	Lecturer
21	54	70	Engineer	Lecturer
22	48	63	Engineer	Assistant Lecturer
23	43	56	Technician	Assistant Lecturer
24	37	49	Technician	Assistant Lecturer
25	32	43	Technician	Assistant Lecturer
26	28	37	Assistant-Technician	Assistant Lecturer
27	26	34	Assistant-Technician	N/A
28	24	31	Assistant-Technician	N/A
29	22	29	Intern	N/A
30	20	26	Intern	N/A

Table 1: A part of the salary grades and their corresponding ranking title defined by the “Order of Reforming the Salary System” issued by the State Council in 1956. Source: The State Council of the Central People's Government, the Order of Reforming the Salary System, 1956.

Normally, all elite skilled personnel, such as senior engineers and full professor, were given special benefits. Their salary grades were virtually equal to, if not better than, the senior level Party cadres. For example, a senior engineer's salary grade was set between Grade Seven, which was used for mayors of major cities or army commanders, and Grade Thirteen, the highest salary grade for county magistrates or regimental commanders. The 1956 order clearly stressed that "among this salary reform... senior scientists and professional practitioners should have a considerable increment." The salary grades for higher level practitioners were far beyond the average incomes of the majority of Chinese people. This reflected the Party's sustained efforts to reassure key groups of the society whose skills and expertise were crucial for the nation's economic modernization. In addition, the distribution of high salaries to elite engineers and architects also reflected the Communist Party's attempts in expanding the "United Front" to absorb more allies who supported the Party's policies and goals, and participated in carrying out these policies to achieve those goals.

In addition to the different salary grades, there were several other key benefits determined by the levels of academic and technical titles, such as assigned housing, food supply, and health care. The Party also specified that all personnel with salary grades at Grade Thirteen and above could be eligible for the Senior Cadre Treatment with special benefits in housing, health care, business travel, allowance, food supply and other aspects of wellbeing.

As a result, most architectural practitioners and educators were actually more concerned about their salary grades than their academic and technical titles because the salary grade primarily determined the quality of well-being and the amount of income. The technical or academic title only defined a person's duty and responsibility while the salary grade defined his/her political and social status. As the salary grade was bundled with a certain academic or technical title, it helped the Party reduce the resistance when transferring professionals from one employer to another according to the economic needs. Those professionals could gain the same, if not more, salary and enjoy the same social privileges between different employers. However, the Party did not present a well-defined criterion for salary and title promotion to create an incentive for performance. This caused an actual stagnancy

in professional promotion during the following decade.

The Changing Nature of Architectural Practice

By 1953, the Party had achieved a substantial political control over all major sectors through a series of political campaigns and nationalizations. This offered a solid foundation for the Party to start a new phase of socialist development and transformation with the emphasis on industrialization.

On January 1 1953, the Party announced the starting of the First-Five Year Plan for industrialization, which was accompanied by the announcement that the economic restoration was over and the socialist transformation commenced. On October 1 1953, the fourth anniversary of the People's Republic, the Party proclaimed "the General Line for The Transition to Socialism," which emphasized achieving industrialization and the transformation of social relations by abolition of private properties. This led to the nationalization of most of the remaining private sectors of the urban economy during 1953 -1956 and the rapid agricultural collectivization in rural areas in 1955.

The emphasis on planning economic development produced a critical link between the operation of architectural and construction practice, and the social transformation. This link demanded a strong push for regularization in architectural and construction practice. With the regularization, the Party could take full and direct control of all resources and all procedures of architectural and construction practices, which also reinforced the transformation of the profession to ensure that the planning economy and socialist transformation could be carried out effectively. A planning economy demanded a centralized authority of the state and the Party to conduct leading roles in all economic affairs. The First Five-Year Plan aimed to construct a solid industrial foundation for socialist transformation, which was a drive based on the wholesale adoption of Stalinist methods, techniques and ideological assumptions. This led to regularization of administrative apparatus and the specialization of the division of labor and administrative responsibility. The State Planning Commission, similar in organization and function to Stalin's Gosplan, was founded in November 1952 to direct the entire industrialization process. Other new

economic ministries were also created between the end of 1952 and mid-1954. The construction of a planned economy in a Soviet model necessitated the Soviet forms of architectural and construction practice. For the Chinese communists, the Soviet model was the only historical example of completing the socialist transformation by industrializing an economically backward country into a powerful modern nation within a short period. Thus, the Chinese communists believed that the Soviet means of development was extremely valuable for China and would lead China's socialist advancement to the desired outcomes. In January 1954, the State Council promulgated the "Temporary Procedures of Construction Projects", which specified that all entities offering architectural services must accept the state's administration and supervision. This decree regulated that "before conducting construction works, all construction enterprises must have all architectural design documents which should be completed according to the proper architectural process and procedures. Otherwise, the construction is forbidden to begin." Borrowed from the Soviet model, the "proper architectural procedure" was defined as a combination of three phases – preliminary design, design development, and construction document design. According to the types of construction projects, all design documents must submit to the governmental organs at different levels for reviewing and approval.

According to the construction costs, all design documents were submitted level by level to different governmental organs for review and approval. According to the "Temporary Procedures of Construction Projects," all design documents of the construction projects beyond the fixed quota (Level A and Level B projects) must be reviewed and approved by the central governmental organs, such as the Central Financial and Economic Committee, the State Planning Commission, and other ministries. The provincial and city government could review and approve the design documents of projects below the fixed quota (Level C and Level D projects) except for those projects whose clients were the central government. In 1955 the State Council ordered that all preliminary design documents for projects with costs beyond 5-million-yuan should be reviewed by the National Construction Commission (guojia jianshe weiyuan hui) and approved by the State Council. Projects of industry, agriculture, post and telecommunication, and transportation with

costs between 0.8 million and 5 million yuan as well as civilian projects with cost between 0.6 million and 5 million yuan would be reviewed and approved by the provincial governments. All preliminary designs of projects with the cost below 0.6 million yuan could be reviewed and approved by the city-level governments. In 1954, the State Planning Commission stressed that all design institutes were state agencies and consequently, all design fees should be waived when designing projects for other state organs, enterprises and agencies. All financial resources for the design institutes came from the state budget, including the salary of personnel. Although the design institutes could still charge design fees when working on design services for non-state sectors, the low percentage of private and non-state sectors made little contribution to financial flexibility for design institutes. Without any considerable resources outside of the state scope, each design institute had to rely upon the governmental resources to function. Without design fees, individual architects had to depend on the salary provided by the state to support personal and family wellbeing. Without the governmental approval, any design practice was prohibited and illegal. As a result, each design institute and each individual architect had to carry out the design tasks assigned to them and complete the tasks well as a way of indicating their support of the socialist development and also demonstrating their values as professional experts. Under the tight Party control, the professional practice of architecture in China was fully transformed into a totally different pattern which contrasted sharply with the Western model. The Party aimed to not only ideologically transform architectural professionals to prevent their opposition against the regime, but also to build up a functional "machine" which was loyal and efficient to carry out the tasks of architectural services assigned by the Party and to contribute to the industrialization. Since the First Five-Year Plan primarily emphasized the development of industry, especially the heavy industry, the Party demanded that the architectural profession pay more attention to industrial projects. In September 1955, the State Planning Commission required that industrial projects be the top priority of all design institutes' work. The increasing tasks of offering design services for industrial projects also posed a challenge for Chinese architects. Few architects had sufficient experience and knowledge in industrial architectural design as

most of the Chinese architects primarily were trained for and practiced in civilian projects. Before 1949, China's industrial capability was considerably weak and there was no immediate need for industrial projects. Although there were a few factories and warehouses in major cities, the scale and size were small and the function was simple. However, the new design task for the First Five-Year Plan was totally different – for example, about 80% of design tasks for the Tianjin Architectural Design Institute in 1955 were related to industrial projects and most of them had thousands of workers and multiple production functions.

This led to a profound Soviet influence in China's architectural practice. Having established a complete set of industrial systems, the Soviet Union brought special technical expertise to the areas where China lagged behind. The Soviet advisors went to major cities and conducted short-term training programs in industrial site planning, factory programming, mechanical arrangement, cross-discipline cooperation, and technical documentation. Most architectural practitioners were required to participate in those training programs and worked under the Soviet advisors' assistance on industrial projects. For example, during 1953-1955, 21 Soviet advisors were working in the Architectural Design Institute of the Construction Ministry to help designing the First Automobile Works, the first automobile manufacturer of China.

One significant contribution of this Soviet influence was the establishment of a complete set of industrialized building systems. The mass development of industrialization generated an urgent need for housing. The Soviet experience of industrialization provided relief. During 1954-1956, translations of Soviet industrialization building systems were widely published. Dozens of Soviet advisors also worked with Chinese architects to compose the standardized design patterns for mass production and systematic construction. Based on the Soviet experience, major design institutes in different provinces were responsible for providing a few patterns of standardized housing units and spatial modules made up of standard building components. Those housing units and building components were manufactured in factories and transported to the construction site to form buildings. A pattern of housing units could be used in multiple sites and repeatedly constructed as long as the site conditions satisfied the design. The industrialized building

system indicated obvious benefits in fast construction, low cost, and labor savings. This was critical for China in the 1950s when construction resources and skilled designers were acutely scarce.

Conclusion

At the fourth year of the People's Republic in 1953, the Chinese Communist Party had successfully consolidated its ruling and restored the war-torn economy and public order. The Party had also established more effective political control over the economy and society and possessed more resources to advance its economic and political goals on the basis of those substantial foundations. During this year, the Party released its economic goal –the implementation of the First Five-Year Plan, a nationwide economic development for industrialization and economic modernization. In the political field, the Party announced the start of the socialist transformation to achieve the full-scale nationalization and to establish the Party's full control over the entire country. Both the economic and political goals were connected by the state-planned economic system. On one side, the advancement of nationalization and political control offered the opportunity to the Party to control more economic resources and gain more capability to formulate economic plans. On the other side, the growth of industrialization and economic modernization generated a stronger reliance of all economic sectors upon the Party and the state, which promoted the Party's capability of social and political control. The implantation of the planned economy demanded the bureaucratization and routinization of state and society. In the architectural profession, a more complex and increased specialized operational structure was highly needed. The establishment of the Chief Architect/Engineer System created a centralized operational mechanism of architectural design. Through the Chief Architect/Engineer Office at each design institute, the Party implemented its policies and directives in the design institute's practice while gaining the assured design quality by the supervision of the chief architects/engineers. In addition, the Chief Architect/Engineer System helped the Party gain more support from the elite architects as most of them were assigned these chief positions. The bureaucratization and routinization of the architectural profession was reinforced with the implementation of the hierarchical ranking

system for technical titles and their corresponding salary levels. The adoption of both the hierarchical ranking system and its corresponding salary system deepened the stratification of architectural practitioners. A practitioner's income level was associated with his/her technical rank, which was ultimately determined by the Party's administrative organs. In this manner, the architectural profession became fundamentally dependent on the Party. Through the personnel departments within each level of the governmental authorities and design institutes, the Party controlled and monopolized the occupational advancement. In order to gain more income, the architectural practitioners had to be promoted by the Party in terms of technical ranks. To achieve a rank promotion, the practitioners had to meet the Party's criteria of political orientation, educational background, practice experience, and professional expertise. Through the bureaucratization and routinization of the architectural profession, it was apparent that individual wealth, prestige, power, and expertise could no longer bring in professional privilege and secure income. Rather, they had to become the salaried employees of the Party and the state, obedient to the Party's directives and lines, because only the Party could determine the occupational promotion and salary advancement, the material incentives for the skilled, productive and loyal architectural practitioners.

In the meantime, the First Five-Year Plan began in January 1953 with a great emphasis on the development of heavy industry. The rapid development of urban industrialization required the architectural profession to make corresponding response and the entire process of architectural practice was increasingly determined by the economic goals defined by the plan. Since the industrialization and economic modernization became the nation's top priority, the architectural practice had to address the issues that were conducive to industrialization –the issues of efficient consumption of resources and the rational process of practice.

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Crossing Continents and Cultures

Architectural Re(Production) and Evolving Forms of Asian Modernity

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Keywords: *everyday life; image-making; essentialism; fragmentation; social recognition*

Introduction

This paper explores the dynamic transformation of the Southeast Asian architectural landscape as wrought by the continuous process of image-making and abstraction. Much of this image-making is implemented through the construction of large scale iconic structures that are intended to, and in fact often do, define the new landscape. However, large-scale urban intervention is by no means the only process contributing towards image-making and abstraction in Asian cities; the realities of everyday life also play their role.

The first part of this paper will provide a historical overview of image-making in Southeast Asia throughout history. This overview will cover image-making both as the result of large-scale intervention and as that associated with the experiences of the everyday life. I will argue that an examination of such image-making throughout history reveals an underlying dominant attitude. Further, I will argue that this dominant attitude, in concert with certain other common urban trends, has encouraged noticeable fragmentation within cities such as Jakarta or Manila.

Key to this image-making throughout history is the practice of ‘essentialising’ a culture in order to preserve it. Given that the everyday life is governed by the rule of scarcity—according to Debord the ‘everyday life is literally “colonized”’—how does the essentialist tendency reflect the self-preserving attitude of people? (Lefebvre, 2002) One theory may be that the effects of scarcity (in its various forms) give people no choice but to reduce and

essentialise one’s culture and lifestyle or else lose it completely. Counterintuitive as it may seem, the reductionist or essentialist method is critical in the preservation of cultures—a process that could be likened to the making of dried fruits where it is necessary to drive off a large part of the water in the fruits leaving only the essence of the fruits, thus allowing them to be preserved. In considering this question one might reflect upon the disparate fragments of culture, custom and tradition that were transported into new locations in Southeast Asia as a result of the coastal migration in the twelfth century. These migrants were faced with a form of cultural and social scarcity, as they faced practical limitations on what could be taken with them, both physically and emotionally. They were therefore faced with the incredibly difficult decisions regarding what to retain and relive in their new location, with their choices then critically impacting what was retained of their home culture and lifestyle. In short, one may say that they were required by circumstance to redefine their cultural identities and attitudes. Yet, this process of preservation was clearly at the same time a process of evolution, for values and traditions were continually required to be adaptive and changeable to survive.

Theoretical Approach: Social Recognition and Architectural Reproduction

As an existentialist, and phenomenologist, Heidegger's thinking on architecture is quickly challenged, not least from the perspectives of critical theory. He perceives the 'essence' of buildings and dwellings in authentic attunement to being, despite being fully aware of the essentialist tendency. Crucially, Heidegger also believes that space only comes into being when we the users are able to identify it, in other words, the element of recognition is imperative for any space to have any meaning. Even though the notion of social recognition has been at the heart of Southeast Asian architecture and urbanism for much longer than we realise, it has only become noticeably evident in the new urban trends of our cities. Arguably, the projection of ethical values in the context of Southeast Asian architecture and urban planning is just a fig leaf covering pragmatism; such projections are really first and foremost mechanisms through which the Asian subjects adapt and make sense of their own spaces. It is vital to recognise the varying scales at which these projections may be carried out and thus what they may uniquely represent. The most obvious projections occur in relation to the large-scale monuments often commissioned by and for a very distinct class of individuals in a given society. While more often overlooked due to its much smaller scale, a different type of projection is often formed as a result of the reaction the urban inhabitants have to these monumental projections. Indeed, the latter reflects the realities of everyday life, and is usually found in the intimacy of one's households and streets.

The importance of social recognition may be best observed through the lifestyle of the rising new middle-class or the nouveau riche. Chong (2002) points out the emergence of a new middle-class in Singapore that tries to distinguish itself from other Asians through various mechanisms, such as the hiring of domestic maids from the Philippines and Indonesia in order to benefit from the higher social status that this confers. Likewise, I submit that this attitude of following the existing but evolving systems of social recognition is visible in the architectural styles and urban landscapes of many rapidly developing Asian cities.

According to Bourdieu (1984), the value of any form of capital depends partly on social recognition. Beyond the stylistic choices that

have been made by different groups in defining their dwellings, however, this paper also examines the way societies have tended to essentialise their cultures around the awareness of social recognition in the given environment they are required to live in and to adapt to. I will attempt to utilise a combination of a more phenomenological approach that focuses on the individual's specific roles with a more structuralist approach that acknowledges the roles and significance of social laws.

Historical Background

Let us first explore the various examples of image-making in the history of Jakarta. At risk of oversimplification, I have categorised them into three waves as follows:

1. As the historical research underpinning this paper will reveal, the first wave of image-making and the appropriation of foreign cultures in major Asian cities took place centuries before the "colonial" period. Coastal migrants entering Southeast Asia from the Far East redefined their cultures through the use of a culturally essentialist strategy, which would subsequently become ingrained in the following generations; as Bourdieu (1984) explains, cultural identities and attitudes are often inherited from the accepted definitions offered by elders.

Widodo (2004) studied the coastal migration from Southern China into parts of Southeast Asia, which dated back to the 12th century, hundreds of years prior to the colonial period. A culturally essentialist strategy was employed through the transfer of spatial order from the mainland onto the boat in which the traders travelled. A reduced version of this spatial order would then be transferred back onto the mainland upon their arrival at the new location. This early appropriation of architectural elements and the so-called importation of architectural style was arguably a method used by these early settlers to self-preserve their original identity in a new home. It could therefore be considered a strategy to adapt to the ever changing conditions in their everyday life. Further, according to Evers (2007), cities in Indonesia and the Malay Peninsula were unlike those in China and Thailand in that they did not have a strong urban tradition. This is evidenced by the absence of traditional urban features such as city walls in many Southeast Asian cities. Indeed, most major cities today such as Jakarta and Singapore started out as

functional ports and harbours, very strategically located, which grew quite spontaneously into the present day metropolis.

2. While similarly employing the reductionist and essentialist attitude, a second kind of image-making and the appropriation of architectural elements occurred during the New Order regime (1967-1998) in Indonesia. President Soeharto in his effort to 'Indonesianise' the archipelago went as far as encouraging the replications of the Demak mosque (figure 1) which he claimed to be the only remaining architectural example of heritage from the pre-colonial era, heritage which thus needed to be revived. Consequently, a trend to construct mosques modeled after the Demak mosque became widespread because in many parts of Indonesia the new national identity was viewed as something novel and modern and therefore highly desirable. Even in some regional areas where this viewpoint was not prevalent, this trend still became dominant because of the somewhat skewed perception of the decision makers about the nation-state building; as Vickers (2005) observed, except in circumstances when state policies clashed with religious beliefs, those in authority were usually highly respected and in a sense worshipped due to the power that had been 'bestowed' upon them.

3. A third wave of this process of image-making can be seen in the present dominance and penetration of global culture, itself hugely influenced by western ideas, which has received a similar reaction from the population as that of the New Order regime's 'Indonesianised' culture. The images of progress and globalisation have encouraged the commodification of cultures and architectural styles in the city. Certainly, the city has been used as a playground for political actors, while the construction of these culturally important projects have also been used to stimulate the economy. However, the appropriation of space in the urban areas has meant that these forces have not gone completely unchallenged. The physical and urban manifestations of the resultant negotiations over land are a reflection of the ever-present social tension resulting from widening disparities of wealth and cultural influence.

So much for the historical background. This paper will now focus in more detail on the second and third waves of such image-making by observing the post-independence period and the reformasi period of post-1998 Riot. In both these cases, the social and political tension of the time can be seen manifested in the urban fabric of the city, and can be seen expressed in the cultural presumptions underpinning certain important construction projects.



Figure 1 : Mosque in Barabai South Borneo
(Courtesy of Koninklijk Instituut voor de Tropen,
Photo taken by J.A. Meesen in 1867)

Nation-state Building

The second wave of image-making is arguably the most obvious as it is characterised by monumental developments, which in the case of Indonesia were part of the national development agenda that took off shortly after independence in 1945. In the 1950s, having been trained in the International Style tradition himself, Indonesia's first president Soekarno went about expanding boulevards in the heart of Jakarta. He then placed his most important monument, the National Monument (MONAS) in the centre of the Freedom Square. Soekarno wanted the monument to be "Indonesia's Eiffel Tower", but to also represent the local concept of Lingga-yoni. However, the final monument was more obviously a modern interpretation of the ancient Egyptian obelisk. As a symbol for Indonesia and Jakarta's urban core, Monas is therefore visibly a modern structure but is actually an amalgamation of ideas from so many different precedents, all unrelated to each other.

In the following New Order regime, president Soeharto continued the legacy of Soekarno by constructing monumental structures. But the New Order projections differed largely in their attempts to incorporate traditional elements into the national projects. A famous example commissioned by the first lady Siti Hartinah in 1970 is the Miniature Project, which was a collection of 27 pavilions, each representing a provincial culture. An open-air adaptation of a foreign western idea of a museum, the Miniature Project similarly embodies an amalgamation of ideas that may have little to do with each other. Like the National Monument (MONAS) that was constructed during Sukarno's Era in 1961, "a common element in many of the New Order's public monuments lies in a style of replication, designed to reveal essence and continuity rather than record existence and change". (Anderson :2006) The Miniature Project, which was intended to showcase the diversity of Indonesian tradition to the world, was controversial as it was easily viewed as a collection of monuments that were distant and nothing more than icons of the past. In defending the project, the First Lady Siti Hartinah argued that the project was necessary because little was left from the periods prior to colonisation and that 'new things were needed to raise national consciousness and pride.' (Anderson, 2006) In redefining and classifying Indonesian identity, however, this project employs a reductionist and essentialist attitude that was problematic as it inevitably excluded certain cultures belonging to minority groups in other regions of Indonesia. Nevertheless, this reductionist method was somehow deemed necessary in order to recall and 'preserve' the pre- colonial heritage. In fact it would contribute to the popularisation of more recent urban trends in Indonesia. This method of 'reducing' the identity of Indonesia becomes a model for the rest of the nation to reclaim or recreate its own identity.

Palisading Jakarta

The third wave of image-making can be perceived as twofold; the first involves the penetration of global culture, which results in the dominant urban trend that glorifies commodification of cultures and styles, and the second being the reaction to this prevailing practice. We might begin by looking at a dominant urban trend in the 1990s, where

several major auto-oriented shopping malls were planned and given the green light for construction in Jakarta. Taman Anggrek was among the many shopping malls that developed during this time and was one of the most ambitious mixed-use developments of the 1990s. Essentially a vertical gated community—or a miniature city within a city—the complex combines all the necessities of urban living, including recreation, residential, and commercial activities. The 'city' is somehow recreated within the interior of the shopping malls in which there are theatres, an ice rink, and corridors, completely decorated to look like streets with booths and kiosks, making one feel as if one were in the city. In addition to the amenities and facilities offered, these shopping malls also provide a safe haven for shoppers who mostly come from the new middle class of Jakarta. The lifestyle of the new middle class has been largely shaped by the presence of these shopping malls, which have suddenly become a tool to differentiate one group from another. Consistently, shopping malls such as Taman Anggrek reflect the anxieties that persist among a certain group of people about being outdoors where they are unavoidably placed alongside others from a different socio-economic and religious background. Not only have these private developments re-created a city in the interior spaces of these shopping malls, they have also opened the opportunities to freely imagine and further include imitations or allusions of urban spaces that cannot be found anywhere in the actual urban spaces of Jakarta. Some of these spaces have been modelled after spaces that can be found in more developed cities abroad. Examples included the Central Park and World Trade Centre both located in the heart of Jakarta, as seen in figure 2 and figure 3. The name "Central Park" was taken from the well-known Central Park of New York City but the building itself took its cues from commercial buildings commonly seen in Singapore, Hong Kong and other more developed Asian cities. The same applies to the World Trade Centre Jakarta, a building that borrows the name of another well-known structure in New York City but functions as a regular shopping mall/marketplace frequented by many middle to working class Indonesians. We will see in the next section that this eclectic utilisation of ideas is not without precedent. These new structures remind us of how the National Monument (MONAS) as a landmark in Jakarta was conceived, where it similarly displays an amalgamation of ideas from so many different



Figure 2 : Central Park Jakarta (Source: skyscrapercity.com)

precedents that have very little connection with each other.

The second part of this third wave of image-making is a result of the reaction to this dominant trend to construct monumental structures, and is thus often characterised by its smaller scales appropriation of existing structures. Another important milestone in the history of Indonesia was the period of reformasi or reformation that was initially triggered by the economic crisis of 1997 and the subsequent civil unrest that occurred in May 1998. The riots during this crisis could be viewed as explosions resulting from the long-nurtured political and social tensions aggravated by the existing urban trends that over time further widened the gap between ethnicities and/or socio-economic classes. The aftermath of this riot saw the urban population trying to make sense of spaces both in the centre of the city as well as in other pockets of the city. These appropriations of existing urban spaces have indicated to us that the social and political tension has not disappeared. In fact, in some instances one may argue that it has been even further highlighted within the urban fabric of the city. The city of Jakarta was organised into enclaves, largely segregated according to the socio-economic status of the general population. While some of these enclaves were clearly demarcated using tall metal gates and security posts, many others, such as some in Northern Jakarta were not so obviously demarcated back in the mid-1990s. As such, access to middle-class housing complexes were visibly open to the public. This meant that anyone could walk into a housing complex and use the parks and other facilities found within the housing complex with very little formal



Figure 3 : World Trade Centre Jakarta (Photo © Pawda Tjoa)

surveillance. Unlike the ‘gated communities’ today, the roads and other ‘public’ facilities in these neighbourhoods were actually open for public use.

Take as an example a neighbourhood in Northern Jakarta that changed quite dramatically after the May 1998 Riot. This neighbourhood was one amongst many others that became targets due to its presumed high concentration of ethnic Chinese or relatively wealthier residents.

Amidst rumours of attacks and riots elsewhere near the city centre, residents of Muara Karang gathered together to discuss a plan of action in case the riots reached the northern reaches of the city. Shortly after, barricades were raised and palangs were released so that access to the neighborhood would be closed to the incoming masses (Figure 5). These palisading efforts were initially noticeably temporary solutions to an urgent security problem that many assumed would pass in the near future. The riots in Jakarta did indeed subside within weeks, but these temporary elements remained in place. A year later and they still remained firmly in place just as initially erected. Fourteen years later, with the exception of some further reinforcements here and there, the original barricades and released palangs have become permanent features of the city today (figure 6). In fact, the additional security reinforcements that some residents implemented were so extreme that they were banned by the government, albeit to very minimal effect.

The presence of enclaves within Jakarta is nothing new to the city’s master plan. In fact, the 1962 schematic plan of Jakarta as seen in figure 4 projected the formation of many self-contained settlements around the peripheries

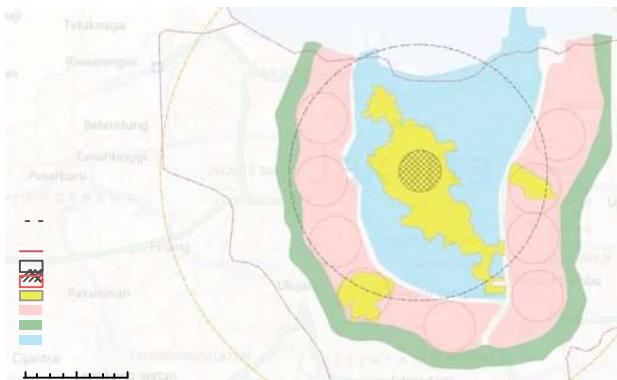


Figure 4 : Schematic Projection of Jakarta's Expansion (1962). Design: ir Herbowo, ir Radinal Mochtar, ir Kandar Tisnawinata, O. C. Simonsen. Redrawn by author.

of Jakarta. Nevertheless, Muara Karang today is visibly a collection of gated communities or to borrow from David Grahame Shane (2011), “enclave inside enclave”, a striking contrast to its pre-May 1998 state (Figure 7).

Therefore, events such as the May 1998 Riot introduced to the urban fabric the further fragmentation that dominates and characterises the growth of the city. These transformations have significantly altered the interaction and lifestyle of the residents of Muara Karang. More importantly, I submit that they have triggered a much larger phenomenon all across Jakarta, shaping the urban landscapes of Jakarta and the cities beyond.

The physical remnants of the riots and the ensuing structural reinforcements described above may be taken as benign precautionary measures, albeit ones that have been continually fortified. In fact, some have even argued that, ‘it is common practice today... moreover, it would be too much trouble... and too radical to do otherwise.’ Nevertheless, it would be truly difficult to ignore what these physical remnants really represent: the evidence of the unresolved social tension that still exists in the city.

This unresolved tension can be observed in the intensifying efforts to exclude and include referred to above, and the inevitable simultaneous appropriation of the urban space originally intended for public use, such as the roads and the parks, which are subsequently blocked from the public. Consequently, the collective spirit of the community is now increasingly obstructed and impeded.

When regional autonomy was introduced in the 1990s, the community was given greater power

to coordinate the maintenance and government of their own neighbourhood. However, this autonomy would only be effective if there was a sufficient level of reliance and trust in the local government. The lack of trust in many of these cases meant that the residents felt they had no choice but to take things into their own hands. This attitude would be reflected in the increasingly fragmented infrastructures and urban fabrics of the city. As revealed in the account of the preceding paragraphs, it was not until after the event of the 1997 economic crisis and the ensuing civil unrest in May 1998 that this tendency to self-preserve became really evident.

One example can be seen in figure 8, showing the repair of a patch of road in front of a house in Muara Karang. According to the Posko/security officers of the area, the implementation of the neighbourhood system meant that the repair of roads should have been a collective burden led by the regional government. However, the excruciatingly slow process and often-unreliable local authority motivated the residents to take even the issue of public maintenance into their own hands, such as by independently hiring a contractor to repair roads in front of their own houses. The consequence of such practice is that the roads in Muara Karang are visibly amalgamations of fragmented pieces of cemented pavements, with differing heights and shades. The increasingly dominant culture of self-preservation and individualisation is arguably most evident in such examples.



Figure 5 : Palang in use at a junction in Northern Jakarta 2010 (Photo © Pawda Tjoa)

Not only have these actions changed the physical appearance of the neighbourhood, but they have also altered the dynamic of street lives within. The streets of Muara Karang used to be lively and dynamic with mobile vendors circling around the blocks to sell their very popular local delicacies, such as chicken skewers, fried rice or soup noodles. These vendors were hugely affected when the barricades went up and the palangs came down as suddenly it was no longer possible to enter the neighbourhood and to carry out such normal rounds. Many have over time taken advantage of the "dead" intersections and turned them into permanent food stalls, complete with benches and a tent as seen in



Figure 6 : Fortified security check at a designated entrance point into a Muara Karang block (Photo © Pawda Tjoa)

figure 9 in the next page. Such actions have not gone completely unchallenged by the regional authority. Some vendors have been evicted but those that have successfully persisted have done so by attracting enough customers to frequent their warung or food stand on a daily basis. It follows then that their presence has become increasingly permanent within the neighbourhood.



Figure 8 : Repair of a patch of road in front of a house in Northern Jakarta (Photo © Pawda Tjoa)



Fig 7 : Public street access in 1990 (left) and in 2011 (right)



Conclusions

In my introduction, I explained how the essentialising of cultures played a key role in cultural image-making throughout the centuries. Then I explored the reductionist method employed by Indonesia's first leaders in defining the Indonesian culture and identity, first by the Soekarno regime and subsequently by Soeharto's New Order where there was an arguably more intense pursuit demonstrated through the national projects. In the last section, using a specific historical reference and study area, I described the physical and social fragmentation that came as a reaction to the essentialist tendencies found in the dominant trend of architectural reproduction and image-making that have first guided the growth of the city.

Scholars of Asian modernity such as Chua and Tu, have studied the socio-political articulation of Asian values and Confucian ethics, which are tied to economic and political strategies in a particular context (Chong : 2002). Of Singapore, for instance, Chong (*ibid*) explains, "[b]y replacing the Marxist/communist conceptual baggage of the term "ideology" with "national ethics" (Chua : 1995) Asian shared values secure an important foothold in the national discursive space in which alternative ideologies would find themselves in conflict with essentialist but ambiguous ideas of Asian-ness. This essentialist/ambiguous dichotomy has endowed the Asian values discourse with endurance and flexibility'. These studies have undoubtedly employed an essentialist strategy to arrive at such terms as, "Asian values" and "Confucian ethics", which clearly referred to a set of "values" and "ethics" that reminds us of Asian origins or characteristics and Confucianism. Indeed, Asian values and Confucian ethics have been used as "cultural ballast against the tide of global culture and its concomitant influences to retain some sense of identity and heritage" (Chong : 2002). This method was critical in the initial construction of Southeast Asian nation-states such as in Singapore and Indonesia. In Indonesia, national sentiments and values were projected through the construction of monumental structures such as the MONAS that at first glance represented national unity. However as this paper reveals, such projects themselves adopted the same reductionist and essentialist attitude employed by outside observers of Asian culture. I have suggested that such an essentialist approach to culture was particularly necessary in the face of threat and scarcity, and it encourages increased urban



Figure 9 : Mobile vendors turned warung at a blocked junction in Northern Jakarta (Photo © Pawda Tjoa)

fragmentation. I have also demonstrated how the same essentialist method has been employed—arguably in an equally eclectic manner—at a smaller scale, thus evolving beyond the larger agenda of national development set by the state. These include the obsession to secure dwellings following a riot and the subsequent appropriation of urban spaces by food vendors in the face of eviction that further fragment the urban spaces of Jakarta.

Most importantly, this paper has looked into the evolution of Asian Modernity, as Chong (2002) once put it, "from the prioritisation of communal rights over individual rights, economic welfare over human welfare and adherence to authoritarianism over liberal democracy" into a more individualised attitude in the everyday life (Chong : 2002). Using a case study on Northern Jakarta where there has been increasing fragmentation of public spaces, this paper has explored the individualised and atomised attitude found in major cities today. This often results in the amalgamation of various values or precedents that are unrelated to each other, which has become a dominant trend continuing to steer the growth of our cities today.

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African and Oceanic Art, Picasso and Le Corbusier

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Key words: Primitive Art, Cubism, Purism, vernacular

Overview

This paper explores the crucial influences of primitive art in the early development of Cubism and the late architecture of Le Corbusier. When Le Corbusier initially approached Cubism, he ignored the African and Oceanic sources that had inspired Picasso's art. Primitive art then appeared in the late work of Le Corbusier who never completely waived his impressions of the early Cubists. The presence of primitive art in the formative years of Parisian modernism will be discussed with examples of Cubism, Purism, and the architecture of Le Corbusier.

The discussion and comparison between Cubism and Purism may have counterparts in traditional Chinese philosophy, namely Taoism and Confucianism. A corollary at the end of this article will discuss the relevance of this paper for the conference theme.

The artists that turned to Africa and Oceania were fascinated by the exotic, the magic and the wildness that those cultures possessed. Africa and Oceania, to them, were places of fetishism and superstition, of the animalistic and the primitive. Africa and Oceania exorcised these artists from their rigid intellectualism and over-civilized culture that had cut them off from their emotional spontaneity, naturalness and "origins". Picasso discovered in African and Oceanic sculpture new expressive potentials of the human figure, abstract ways to capture states of mind, and complete freedom to reorder the human image.

Re-evaluating the formal armature and spatial connections of objects, in 1907 Picasso and Braque discovered a system for depicting three-dimensional relationships independent of perspective. Later on, they dispensed with closed forms, and fragmented objects were combined in ambiguous and unexpected ways. These experiments produced the style known as Cubism, which revolutionized Western art for most of the 20th century.

Charles Jeanneret (Le Corbusier) and Amadee Ozenfant, through their writings and work (1916-1925), hoped to succeed Cubism in the visual arts. They thought of Cubism as too decorative and chaotic. They believed the time had come for a more rigorous style that retained the essential aspects of Cubism but had a basis in the (Eurocentric) laws of structure and composition. They called their new expression Purism. Distilling Cubism from its primitive art sources stripped the style of its rich formal tensions, emotional power, and ambiguity. The architecture that Purism influenced was therefore cold, and mechanistic. But Le Corbusier did not completely abandon the ideas of early Cubism; the influence of primitive art appeared in his work after 1930 as he reassessed his views on vernacular architecture, cultural symbols, and idiosyncratic humanity.

Introduction

In 1906, various Parisian artists individually claimed to have "discovered" important artistic attributes in African sculptural artifacts. Who made this discovery and how it came about, is less important than its influence on the development of Modern Art.

In 1937, Andre Malraux recorded a conversation with Picasso about Picasso's 1906 discovery of African sculpture at the Trocadero Museum. Picasso said: "The masks weren't like other kinds of sculpture. Not at all. They were magical things...the sculptures were intercessors... against everything; against unknown threatening spirits. I kept looking at the fetishes. I understood: I too am against everything. I too think that everything is unknown, is the enemy!... Les Desmoiselles d'Avignon must have come to me that day, but not at all because of the forms: but because it was my first canvas of exorcism" (Cladel, 1937).

The Primitive in Art and Architecture

There are important differences in the way that "primitive" was understood in art and in architecture at the turn of last century.

Primitive art as we know it today, usually refers to sculptures from Africa and the South Seas, pre-Columbian art of Central and South America, and works of the American Indian and the Eskimos. The term does not include the art of early civilizations such as those of Mesopotamia, China or the Aegean, although it is stylistically similar to the modern concept of primitive art. The unifying principle of primitive artworks is animism: they were not created as "works of art" in the Western sense; they were used in magico-religio-social functions and not produced for sale (Sergy, 1969). These works are associated with fetishism, magic and mythology.

The term "primitive" began its current use in the 18th century and connoted the art of tribal or native societies most of which were associated with the European colonial expansion.

Within the artistic realm, the term exists among a whole constellation of words: savage, barbarian, exotic, aboriginal, uncivilized, naive, instinctive, archaic, native, tribal, erotic, outsider, to give but a few. The term may be condescending, tending to denigrate who or what is described by it, and implies an assumption of superiority in whoever uses it. The term may also be liberating because it assumes an authentic and spontaneous worldview, the myth of the noble savage. Primitive in art was unknown to the art theorists of the classical tradition, and was completely unlike anything that they might have conceived. This is why the influence of primitive art in early modernism was considered highly subversive and has been a controversial issue ever since.

The primitive in architecture is a less contentious concept. It is considered a source of architectural history and therefore an integral part of the profession. Primitive buildings are key points of reference, the myth of a primitive hut as the beginning of architecture has been a common historical datum since Vitruvius. Discoveries in new lands have only confirmed this theory (Odgers, Samuel and Sharr, 2006).

Connotations of primitivism in architecture are less negative than those in art; terms such as

vernacular, non-pedigree, and indigenous are usually associated with the wisdom of tried and true building practices closely related to specific cultures, regions and climates.

In this respect, architecture is quite unlike other art practices, particularly painting and sculpture, where the primitive has always been used to destabilize the tradition of Western art. Gauguin's discovery of the primitive in Tahiti, Picasso's interest in African masks, the German Expressionist painters' interest in African sculpture, and the surrealists' interest in tribal imagery were all subversions of traditional values in art with no intention of affirming eternal values (Odgers, Samuel and Sharr, 2006). Instead, they intended to threaten bourgeois taste, by revealing a more direct form of expression uncontaminated by cultural over-sophistication, or to assert the presence of the irrational and the unconscious underlying art practice.

The term "primitive" is often misused and misunderstood. It is too often used synonymously with crudity, although the root of the word "primitive" means original, primary or not derived. In general, the idea of the primitive has always been to oppose prevailing norms of taste by appealing to something original, far away, and yet, at the same time near and at hand. In architecture, the principal purpose of the primitive has been, as Joseph Rykwert says, to renew architecture. "The primitive hut... has provided ... a point of reference for all speculation on the essentials of building. These speculations intensify when the need is felt for a renewal of architecture" (Rykwert, 1972).

Vernacular and primitive architecture has also been studied as a repository of unconscious and sustainable wisdom; it represents a moment in which humans directly related to their local environments and derived their buildings in response to local climate, materials and traditions.

Picasso and Primitive Art

Intensified contact with the colonies and the new science of anthropology opened an appetite for the exotic in 18th century Europe. Everything that was unknown at home was found fascinating; exotic nakedness for example amused Europeans constrained in corsets (Stepan, 2006). The excess of civilization at the beginning of the 20th century had Europe ready for the primitive influence. The prescription therapy was in the forms and products of pre-industrial culture and mentality. To Picasso, "primitive" meant archaic cultures including Mediterranean antiquity. It also included a new found interest in animistic art from Africa and the South Seas.

Picasso mixed his influences as he went along. References to an archaic classicism appear and reappear in his oeuvre throughout his artistic life. The assimilation of Iberian and Etruscan sculpture in his pastoral paintings of 1906, for example, paved the way for the subsequent heightening of sculptural presence under the impression of African figures and masks. The coexistence of multiple and often opposing paradigms in Picasso's work is testimony to the enormous radius and elasticity of his corpus. Yet European "antiquity" is no more a monolithic concept than "Africa" is. In both cultural realms, Picasso remained apart from the mainstream, exploring marginal zones and tapping into powerful sources of archaic collective imagery. *Les Desmoiselles d'Avignon* (1907) include these hybrid influences.

Reading the five nude figures from left to right, the first three archaic-looking women are inspired by Iberian sculpture. They pose from multiple viewpoints with hypnotic eyes and defiant gestures. The last two figures have menacingly deformed faces showing both human, and African mask features.

The appearance of hybrid creatures in Picasso's pictorial cosmos remind us that metamorphoses of this kind are a specialty of archaic and indigenous cultures, particularly in Africa. Unlike antiquity, the traditions remained alive on the latter continent until well into the 20th century. In African art Picasso found a physiognomic richness of expression in his wish to render visually, beings from other strange worlds. That is what accounts for the enigmatic ambivalence and ambiguity that is the key feature of African sculpture. Equally in contact with the worlds of man, animals, and imagined spirits, metamorphosis was and is a great specialty in Africa.

African sculptural figures emphasize their constituent elements; for instance the mouth,

eyes or breasts, rather than the harmony of the work as a whole. They were proportioned according to the passions that inspired them. Referring to African sculpture Maillol said that it often has the gift of combining "twenty forms into one" (Cladel, 1937). Similarly, a solid may indicate a void, and vice versa, or a concave form may represent something that in nature is convex. Formal signs become substitutes of direct observation of nature. African sculpture provided Picasso a new combinatory logic of elements in the human figure. As Cubism progressed after 1906, Picasso together with Georges Braque began experimenting with simultaneous superimpositions of two or more abstracted and semi-transparent forms. What Paul Cezanne's "passage" had done before by linking foreground and background, Analytical Cubism achieved by superimposing transparent forms and objects creating intersections of rich spatial ambiguity.

By 1912 Picasso and Braque had dispensed with closed forms altogether and collage in the form of Papier Collé had become almost completely abstract in a perfectly flat space. Synthetic Cubism, as this later stage is called, favored still-life collages using common household industrial objects as references. Cups, bottles, moldings, newspapers, musical instruments etc, abstracted in a pictorial space, appealed to architects because the paintings looked like plans and elevations of buildings seen from multiple perspectives.

The wealth of motifs and explorations in Picasso's work and the intense humanity that informed them can only testify to his passionate desire to portray the richness of life at an emotional, sensual and intellectual level.

Le Corbusier and Purism

Although Le Corbusier was only six years younger than Picasso and both men lived in Paris sharing acquaintances for some time, they did not develop a friendship or meaningful relationship. When Le Corbusier first came to Paris to work for Auguste Perret in 1908, Picasso and Georges Braque had already invented Cubism and were among the up and coming avant-garde painters in Europe.

The young Charles Eduard Jeanneret, (alias Le Corbusier), started to paint regularly around 1918 –working side by side with Amadee Ozenfant - his pictures showed bottles, glasses, plates, and guitars, the objects favored by the cubists. But in contrast to the cubist works of Picasso and Braque, the plastic identity of these objects was emphasized to represent a new morality, the spirit nouveau, of a machine age based on industrial types and standards. It seemed that after the debacle of the First World War, a new era of classical restraint and a new elementarism was arising in all areas of culture. This phenomenon, according to the two founders of Purism, called for a new conception of art (Von Moss : 1980).

By 1918, it was already clear that Cubism had completed the dislocation of the traditional concept of plastic space originally started by Manet. To many, it was equally evident that the succession to Cubism lay wide open; Picasso himself had moved on to search other artistic explorations.

As a result, in the atmosphere of uncertainty of the immediate post-war period, the manifesto "Apres le Cubisme (1918)", written by Jeanneret and Ozenfant, was to find an unexpected echo. In it, Jeanneret and Ozenfant stressed the ethical value of the principles laid down by the initiators of Cubism. By reducing form to its geometrical, hence intelligible elements, and by re-evaluating the notion of composition, Cubism had reinvigorated painting; but the method of analysis it used had led to the splintering of form to which despite its best efforts, failed to find remedy. Even more serious to their eyes was the laxity displayed by Cubism in the application of classical constructive principles. From this they concluded that the new times demanded a spirit of exactitude of which Cubism had shown itself incapable (Besset, 1968). Jeanneret and Ozenfant were seeking to bring about a culture and a society based on technology, purity of design, and planning in all

spheres of life. As artists, their Purist paintings favored still-lifes and reduced objects to strict orthogonal composition in plan, elevation, and section combining them within a transparent collage medium. They composed this formal strictness using classical regulating lines to achieve a balanced and controlled effect. It did not seem intentional that the cubist system of space construction could be applied to fields other than that of painting. And yet, despite the purely pictorial orientation of their preoccupations, the cubists produced important suggestions of architectural space. In the first place, the simultaneous representation of the object from several angles implied at least a virtual mobility on the part of the spectator. Transposed to the plane of the practicable space of architecture, this new mobility made it possible to break with the classical system of static, purely visual, arrangements, composed in terms of axes and symmetries, and to endeavor to reintegrate within architecture the sum total of the complex experience of movement.

By superimposing non-concordant, discontinuous images, Cubism stripped the object of its opacity and its density, rendering it at once transparent and permeable to the medium that surrounds it, and with which it then engages in interplay of unstable, shifting relations. It has long been realized that this bursting of the hitherto impenetrable outer covering of things, this reduction of the object to a transparent order, this co-penetration of interior and exterior, corresponded very closely to that simultaneity in the experience of space which modern construction had already been proposing for several decades. Finally, by reducing the complexity of the forms of sense experience to a limited number of geometric elements, Cubism facilitated the assimilation of that formal language, shorn of all accidental detail, which was specific to modern construction (Besset, 1968). Le Corbusier was one of the first architects to make a direct connection between the Cubism-Purism pictorial techniques and architecture.

The emerging relationship between artistic activity, industrial production, and a new architectural space formulated the essential themes of that "new spirit" which would soon manifest itself in architecture in the guise of what is generally termed the International Style.

Le Corbusier still-lifes in the Purist mode from 1918 to 1925 are characterized by classical precision and mundane elegance. As a Purist he strove to capture the exact cross-section and plan of the bottles, glasses and musical instruments.

According to the art critic Edward Fry, the Purist paintings of Ozenfant and Jeanneret are Cubism stripped of all its spatial and formal tensions, wit and ambiguity. It produced a sort of heretical Calvinist Cubism (Fry, 1978).

The "Purist" architecture of Le Corbusier, although spatially complex, is equally reductive and a-tectonic. With few materials and textures and with white as an overall color, the general spatial experience is aseptic, industrial and cold. As a reaction of this awareness, Le Corbusier began changing his painting techniques in 1926, as a prelude to deeper changes in his architectural style and philosophy.

Picasso in the 1920s and 30s

By 1920, Picasso was the most famous vanguard artist in Paris, his work avidly pursued by European and American collectors. His life-long search for liberation made him rebel from his own creations including Cubism. As early as 1915, Picasso entertained figurative painting again. Naturalistic and abstract themes and combinations of them resurfaced on and off throughout the rest of his artistic career.

In the 1920s Picasso painted in a new objectivity vein, women with classical profiles, heavy limbs and robes like fluting on columns. It was, once again, a resurfacing of his antiquity themes.

A third comeback happened in the 1930s when the Minotaur became a key motif. His need for recollection induced him to treat the figure of the Minotaur and later the faun as an alter ego. For Picasso the Minotaur, half man, half bull was close to the toro of the Spanish bullfight, endowed with mysterious volcanic forces. His Minotaur or faun personified the sardonic "monster" with steaming nostrils flaring with excitement, circling the naked slipping girl and throwing itself wildly on her inviting, defenseless body (Stepan, 2006).

Picasso was particularly taken with depictions of hybrid creatures – beings born of humans and bulls, horses or goats, allowing him a variety of different identifications. Among the hybrids were also goat-legged, horned centaurs or a winged demon with the head of a bull-bird. By showing these creatures in their

animal nature, they look all the more human. A zoomorphic, archaic antiquity conjures up a pre-rational civilization when there could be cross begettings between the realms of mankind, animals, and gods (Stepan : 2006). There is a correspondence between Picasso's hybrid creatures in an antique vein and the polymorphism of African and Oceanic art. Minotaur and Pan have long died out in Europe but continue to live in present day African dances.

Some of the figures depicted by Picasso during this period show a sensuous curvilinearity. The figures sometimes reduced to a mere outline are overlapped creating new and unexpected figures as the web of their outlines intersect. This new mode of expression will affect Le Corbusier's art, architecture and urbanism once again after 1930.

Le Corbusier 1930-1957

Le Corbusier's early references to the primitive are always related to eternal and universal Eurocentric values. With Purism he devoted himself to show that geometry was the language of man and that geometric proportions were the eternal, timeless basis of architecture. Le Corbusier's use of this genre of primitive belongs in the tradition of classical theorists of architecture. Just like Laugier, he uses it to criticize the present abuses asserting an original model from which architecture has deviated (Odgers, Samuel and Sharr, 2006). However, these eternal values changed over time. In *Une Maison un Palais* (1928), Le Corbusier's account of the origins of architecture starts off with speculative archaeological reconstructions of the primitive dwellings in Mesopotamia, then switches to Brittany, and finally to the Landes in southwest France. Le Corbusier's description of the fishermen's shacks in the Landes is a perfect example of how the near-at-hand becomes construed as the primitive.

Le Corbusier writes with admiration about the intuitive spontaneity of the fishermen giving them a lyrical and human quality: "The fisherman, why shouldn't he be a poet too – the savage after all is a fine one" (Le Corbusier, 1928).

It is possible to argue that the full story of the development of Cubism began settling on Le Corbusier around 1926. Some of the same values that Picasso had found in a humanist primitivism started to appear in Le Corbusier's work. The sensual lines of female nudes

emerged in his paintings after 1930, his artworks became freer, curvaceous, and with little reference to strict geometry. Animals started cropping up in his paintings, bulls, hybrid beings, and even Minotaurs. There was a delayed following of Picasso in Le Corbusier's work. Purism arose seven years after the first Cubist experiments. The continuous contour lines and the reference to bulls and Minotaurs appeared in Le Corbusier's paintings long after Picasso had unleashed them. This curvaceous lines will inform some of Corbusier's most famous urban ensembles such as the plan for Algiers of 1930 and Rio de Janeiro in 1936 . Jeanneret (Le Corbusier) and Ozenfant must have been not only very knowledgeable of Picasso's art but also great admirers. Le Corbusier was the first owner of "Bottle of Rum". He bought it through Ozenfant from one of the large sales held in Paris in the early 1920s. This occurred at the high point of Le Corbusier and Ozenfant's Purism. Ozenfant bought not only for himself and Le Corbusier, but also 12 Picassos for the major collector of Cubist and Purist paintings, Raoul La Roche. Le Corbusier designed two adjoining houses for La Roche and Le Corbusier's relative Albert Jeanneret. The two houses are home of the Le Corbusier foundation in Paris today.

Le Corbusier's break with the dogmatic aesthetic of Purism, coincides with the conceptual point in his career when he began to abandon his faith in the inevitability of a machine-age civilization. From now on, disillusioned by industrial reality, his style began to move in two opposite directions at once. On the one hand he returned, at least in his domestic work, to the language of the vernacular, on the other, he embraced the monumentality of Classical, not to say Beaux-Arts grandeur (Frampton, 1992).

The erotic, haptic and mythical that was denied during the Purism period, came to inform some of Le Corbusier's later works.

Several of his houses began showing vernacular construction traits of this new genre. The Maisons Jaoul were an affront to those sensibilities which had been nurtured on the myth that modern architecture should manifest itself as smooth, machine-wrought planar surfaces set within an articulated structural frame. Built by Algerian laborers equipped with ladders, hammers and nails, with the exception of glass, no synthetic materials were used (Stirling, 1991).

Mythic and symbolic elements informed several of Le Corbusier's most important works

specially the church of Notre-Dame-du-Haut (1955), and the governmental complex of Chandigarh in India.

The primitive had one of its clearest expressions in Le Corbusier's oeuvre, in a documentary that he created for the Philips Pavilion that was also designed by his firm. The film that he called Poeme Electronique contained some of the themes favored by Picasso in his paintings: bull and matador to show animal and human oppositions, classical statues representing both the mythic and the rational of the European past, and tribal sculpture to establish commonalities among cultures and link our past and our future.

Conclusion

The influence of primitive art, in all its different modalities, allowed artists at the turn of last century to break with the artistic traditions of their time. By avoiding academic composition and technique, artists were unrestricted to explore a wide variety of human themes and emotions. In a strange way, it was a tool to criticize, or an attempt to make sense of the modern industrial experience.

Picasso was undoubtedly one of the most perceptive and skilled artists of his time. His artistic work was pivotal for many of last century's artistic movements. Equally aware was Le Corbusier's architecture that expressed modern ideals. What connected these two individuals was their artistic pursuits. Le Corbusier saw in Cubism a new formal language that could influence the spatial organization of architecture. He used his painting as some kind of laboratory, where he could explore formal relationships free of the practicalities of construction. Le Corbusier's paintings had a strong connection with his ideas, writings and architectural production. Le Corbusier first approached Picasso's work from a rational point of view. By trying to discipline and moralize Cubism, he made it accessible to a new rational organization of architectural space. Later on, Le Corbusier grew disillusioned of his own "Purist" style and the architecture associated with it. Upon re-evaluating Picasso's art, Le Corbusier found in Picasso's primitive influences, an emotive richness that his personal work was lacking. Le Corbusier first changed his pictorial style by introducing figuration, feminine sensuality and symbolism. He later changed his architecture by incorporating vernacular forms and materials, by exploring sensuous shapes and

symbolic content, and by a heightened awareness of topography, texture, and color.

Corollary

The comparison between Cubism and Purism can be expanded to include counterparts in the context of Chinese culture. Cubism originated as escape from over-intellectualism in turn of the century Europe, and favored spontaneity and intuitive innovation. Purism on the other hand, strived for bringing modern painting within the rational ethics and formal etiquette of classical composition. A similar comparison can be made with ancestral Chinese philosophy where Taoism is an anti-literary tradition that favors intuition and naturalness, while Confucianism favors social etiquette and regulated morals. In the context of traditional Chinese architecture, the classic Chinese garden can be said to express Taoist ideals while traditional courtyard housing such as “hutongs” likely represent Confucian cannons regulating family life and domestic space. The massive development of International Style architecture in modern Chinese cities today, calls for a re-evaluation of old Chinese ideals in which nature’s wisdom and intuition should be strongly considered as a counterpoint to oversimplified and generically regulated modern designs.

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Contentious Modernism in Mexico, Luis Barragan and Mathias Goeritz, transcultural influences, collaborations, and competition

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Key Words: transcultural influences, collaborations, competition

Overview

During his lifetime, artist Mathias Goeritz remained mostly on the sidelines, as architect Luis Barragan gained fame. It was not until after Goeritz's death in 1990 that major exhibitions and publications have made his work and ideas more accessible.

This paper explores the working relationship between Barragan and Goeritz and how these collaborations changed their late individual productions. Architect-artist reversals occurred out of these encounters, and competition between them for the entitlement of works and ideas unfolded with the publication of their collaborative projects.

Barragan and Goeritz personify the collaboration, rivalry and enrichment that transcultural exchanges may bring. The story is relevant for the conference Masterplanning The Future because as the age of globalization unfolds, an increasing number of transcultural influences are brought together with unforeseen results but with the potential for achieving meaningful syntheses. This is particularly true of China and India, two ancient cultures increasingly exposed to foreign influence, especially from the West. A corollary to this paper will further link transcultural exchanges to the context of the conference theme.

Introduction

Mathias Goeritz arrived at Guadalajara, Mexico in 1949, to teach art in a newly founded school of architecture. By then Luis Barragan had completed his two famous personal houses in Tacubaya, Mexico City. Each individual had substantial acumen to share: Goeritz his pre-

World War II German artistic education, and his exposure to the Bauhaus pedagogy and to the European avant-garde; Barragan, his newly found synthesis of native Indian, colonial and modern architectures within a highly abstract and minimalist language. Both men had a philosophy of sharing ideas with other artists and architects and engaging in interdisciplinary work. Through Guadalajaran acquaintances, they met in 1949 and Barragan would later become instrumental in Goeritz's establishment in Mexico City.

For their first collaboration, Barragan was the planner of a subdivision called "Jardines del Pedregal". Goeritz participated with a large sculpture (*El Animal*), at the main gate of the new suburb. This collaboration allowed Goeritz to become acquainted with Barragan's architecture.

In 1953, Goeritz had the chance to design a new experimental museum called "*El Eco*". His role this time was both that of an architect and of a sculptor. He viewed this project as an ideal fusion of all the arts including dance, music, and poetry. What makes this project interesting is that Goeritz freely borrowed from Barragan's spatial and material conceptions. He used a similar monastic austerity, tall and thick masonry walls, a huge window with cruciform mullions, coarse stucco finish, and wood flooring like that of Barragan's own home. But he also introduced new elements that would later influence Barragan's work. Goeritz advanced a new dynamic angularity in three walls of *El Eco*, and a highly articulated abstract sculpture of a serpent. *El Eco*'s angular walls produced a sense of forced perspective that induced a sensation of movement. Goeritz also designed two tower-

like freestanding slabs that seem to float aimlessly on the floor plan. He named these slabs "Torre Amarilla" (Yellow Tower), and "Torre Negra" (Black Tower). The slabs were a major contribution to Mexican architecture because they isolated two monumental walls turning them into sculptural objects. These two discoveries were not unnoticed by Barragan who would incorporate them in later projects. Comparing Goeritz's and Barragan's personal and collaborative projects, a series of similarities and differences become apparent thus shedding a new light into the nature of their ideas, their contentious rivalries, and their shifting professional boundaries.

Barragan's long formative years

1923-1947

Before building his second house/studio in Tacubaya, Mexico City (1947), Luis Barragan had gone through 24 years of architectural experimentation. He searched patiently before finding a synthesis of his native roots with the International Style.

After 1947, Barragan built only a handful of projects, some in collaboration with Mathias Goeritz. The projects of Barragan's latter period have received the most attention and have made him world famous. His late work is so unique that we tend to forget his long formative years. Barragan himself created a mysterious veil over his previous productions, but it is impossible to explain his mature projects without the many influences that informed them. A brief biographical portrait is necessary to situate Barragan before his first collaborations with Mathias Goeritz in 1951.

Barragan was born in Guadalajara in 1902 and lived there until he moved to Mexico City when he was 34 years of age.

The son of rich landowners, he spent his youth in ranches of the lake Chapala area and in the provincial environment of Guadalajara. From 1919 to 1923 he studied Civil Engineering and started working for his engineer brother in 1922.

Between 1924 and 1926 Barragan traveled to France and Spain for a year and a half. In France he visited the International Exhibition of Modern Decorative and Industrial Arts. He was exposed to the modern pavilions of Le Corbusier, Melnikov, Mallet Stevens and Hoffmann. He also became acquainted with the published work of Ferdinand Bac. He was particularly fond of Bac's Mediterranean architecture and literature-inspired gardens.

In Spain he visited several southern cities. At the Alhambra, Barragan came in contact with the Hispanic-Arab roots of his Mexican traditions, and, more importantly, with an idealized beauty based on a marriage between architecture and luxurious gardens. Barragan was fascinated by the site's ingenious irrigation system, by the patios with their gurgling streams and by the high walls that forced an introverted focus. Granada inspired him in such a way that it became his primary frame of reference in architecture.

Upon his return to Mexico, Barragan began to practice architecture in Guadalajara. Important land reforms at the time forced rich landowners to invest in real estate. Rental houses became an important business in Mexico because it coincided with a great migration from the countryside to major cities. Barragan built at least nine houses in Guadalajara with a marked Spanish-Arab influence.

Before sailing again to Europe in 1931, Barragan stopped in New York for several weeks. There he met fellow "Tapatian" artist Jose Clemente Orozco and Viennese architect Frederick Kiesler. The two individuals became great influences in Barragan's intellectual development. Orozco was committed to creating "authentic" Mexican art that incorporated respect for the value of tradition expressed in new forms (Pauly, 2002). The artist used an expressionist style of human figures, while exploring the abstract potential of pure geometric forms for his architectural settings. Orozco's thinking would greatly influence Barragan's position with regards to Modernism and his interpretation of a Mexican style. Kiesler, on the other hand, was part of the European avant-garde, and introduced Barragan to modern functionalism. Kiesler discussed the artistic debates going on in Europe and talked of Adolph Loos' spatial principles, claiming he had been a partner in the Viennese architect's practice of the 1920's (Pauly, 2002).

Once in Paris, Barragan met Le Corbusier who facilitated the visit to some of his finished buildings including Villa Savoye and the Stein de Monzie house at Garches. He also met Ferdinand Bac and visited Bac's most important garden, Les Colombiers, in Southern France. Barragan brought back to Guadalajara a monograph on Loos work and a copy of "Vers une architecture" which will give him a deeper perspective on modern spatial concepts.

In 1935 Barragan moved to Mexico City, where he acted as a developer and architect, buying

land and building investment properties. He built at least 10 buildings, which were markedly modern with abstracted facades and large windows. The influence of Le Corbusier is evident in the disposition of cubic volumes, roof terraces, strip windows, modern materials and standardized components.

In 1940 Barragan acquired large tracts of land with the intention of designing private gardens. Unlike his first gardens in Guadalajara, which consisted of paved patios, these larger properties were intended to contain wild and naturalistic settings.

Beginning with his first house in Tacubaya, Mexico City (1940-43, today known as the Ortega House), Barragan dramatically ended his "white" period influenced by Le Corbusier and the International Style.

He reconsidered his vernacular roots but this time in an abstracted mode. Tall walls, punched windows, natural materials, and basic masses are set to interact with a large garden made of terraces and wild outcrops of trees and plants. Mexican Baroque statues and traditional clay pots found room in this garden. In 1947 Barragan finished his second home at Tacubaya. Instead of making an aggregation of rooms like his first house, the new house/studio had a more complex spatial arrangement in section. Loos "raumplan" was definitely at work here. The circulation sequence weaves inside the house linking a variety of rooms and spaces illuminated by dramatic natural light. With this house, Barragan arrived at a true synthesis of his many transcultural influences both vernacular and international.

Goeritz in Mexico City

Mathias Goeritz was born in Danzig, between Poland and Germany in 1915. In 1916 his Jewish parents moved to Berlin where he lived until 1941. There he studied art and art history and received a Ph.D in the History of Art.

Never satisfied with his education he sought to gain knowledge by interacting with the avant-garde. He visited the Bauhaus several times and was impressed by Itten, Moholy-Nagy, Schlemmer and Paul Klee. In the 30's he met the surrealist and dadaist circle in Basel and also met Picasso, Georg Grosz, and Kandinsky in Paris. Influenced by his German education, both academic and self-taught, Goeritz was particularly attracted to German Expressionism and Dada. He always sided with the Bauhaus' position that regarded

modern art as a fusion of the many constituent art disciplines including architecture, painting, sculpture and theatre.

With the advent of the war in Germany he escaped to Spain and then to Spanish Morocco. Back in Spain he taught German while painting watercolors and drawings. At Santillana del Mar, near the Altamira Caves, he founded the Altamira School of Art with the intention of recouping "the innocence of savage art" like Joan Miro (Rodriguez Frampolini, 1997). Goeritz envisioned a place where artists could freely create authentic art "as modern as that of prehistoric men" (Cuahonte, 2002).

In 1949 he accepted an invitation to join the Mexican architect Ignacio Diaz Morales, who had established a School of Architecture in Guadalajara. Before reaching Guadalajara, Goeritz spent a few days in Mexico City, had a meeting with Barragan and together visited El Pedregal.

During his first two years in Guadalajara, Goeritz taught art history and visual education at the State University. He used similar teaching methods as those that Johannes Itten and Moholy Nagy employed at the Bauhaus. Some assigned exercises consisted of expressing emotion and dynamism with abstracted geometrical figures and everyday objects. But Guadalajara proved to be excessively catholic and conservative for modern art. Goeritz found an outlet for his creativity by resorting to modernize ecclesiastic art where he found an eager audience in the Benedictine order. He also fabricated primitive-looking crucifixes that were received with great success.

Like other Guadalajaran artists before him, Goeritz moved to Mexico City attracted by its more cosmopolitan atmosphere. It is important to note that several of these artists including Orozco, Dr. Atl, Jesus Reyes Fereira, and Goeritz, came from Guadalajara and would have important influence on Barragan. Luis Barragan was part of a group of Guadalajaran "expatriates" that helped each other in Mexico City. In 1951 Barragan would hire Goeritz to make a larger version of a sculpture that he had seen in Guadalajara. The sculpture was intended for the entrance of his "Jardines del Pedregal" development.

Goeritz recalls that artist Jesus (Chucho) Reyes advised them on the location of the statue and the color palette of the ensemble. In this project, Chucho Reyes introduced Barragan and Goeritz to the strident colors of popular Mexico.

Goeritz became one more artist and intellectual in Barragan's circle. Barragan and his clients bought art pieces made by Goeritz, and Goeritz in turn, became familiar with Barragan's architecture. Barragan found in Goeritz an echo of his own aesthetic ideas, an extraordinary sculptor, and a valuable partner and sounding board with whom he collaborated on several projects. As an artist Goeritz was a complex individual and explored several fields. Some of his work were precursors of minimalism and conceptualism. Some of his golden monochromes hang in Barragan houses. During this time Mathias Goeritz developed a thesis about what he called emotional architecture (Anda Alanis, 2005). Goeritz adopted an opposing stance to that advocated by the functionalists, whose concepts dominated Mexican building output at the time. These ideas may have been shared with Barragan who later adopted them as his own (Smith, 1968).

El Eco

In 1953, another "Tapatio" (Guadalajaran), Daniel Mont, presented Goeritz with a unique opportunity to design a building near downtown Mexico City. Mont was a great admirer of Goeritz's work and left the building program for the artist to decide.

Being primarily a sculptor and painter, Goeritz had never taken any particular note on the logical form of building. However, he had always been aware of the profound impression caused by the great works that contain within themselves all the arts. So he decided that El Eco would be an example of what he chose to call Emotional Architecture, and that its function would be that of an Experimental Museum. In the Manifesto for an Emotional Architecture that he published in 1954, he wrote: "Our times are full of spiritual unrest. The Experimental Museum (El Eco), sought nothing more but to express this, and to cause the greatest possible emotional impact...The building was an effort to reawaken, within modern architecture, the psychic emotions that are latent in man. I tried to create, and add spiritual content to the achievements of functionalism...I avoided 90 degree angles, I sought to express the imperceptible irregularities that are found in any human face, any living being. There were no friendly curves. It was all done on the spot, without exact

plans. Mason, painter, sculptor, and architect were one person" (Blamford Smith, 1967). The experimental museum El Eco, was built on a 5,700 square foot lot. It was conceived as a total work of art in the manner of Dadaist Hugo Ball's Cabaret Voltaire in Zurich. It consists of three basic elements: a walled patio towards the street, a two-story volume, and a double-height space at the back of the scheme. A combination of slanted and orthogonal lines allowed Goeritz to qualify the spaces as either dynamic or serene. The entry corridor and towers, for example are dynamic while the outdoor patio is more subdued and static. In El Eco, Goeritz adopted a sculptor's approach towards space, handling it as it were a palpable material that could be shaped and altered in line with its occupants. The scheme was designed without architectural plans, for the artist devised the whole ensemble as a vast livable sculpture. The work was built as and when the design concepts were conceived; similarly, the proportions and positioning of the walls, together with the materials and structural forms were defined (and altered) throughout the design/construction process. High walls isolate the building from the exterior world and enclose a patio. The corridors, which start off wide, grow gradually narrower to tighten sight-lines and give the impression of depth, dramatizing views of a mural wall in the background. On the patio, which contained the sculpture "La Serpiente" by Goeritz, a narrow and very high wall painted bright yellow rises up like a standing block. It was the only coloured surface in the scheme, its outline oriented towards the sky (Pauly, 2002). The "Yellow Tower" is 40 feet high, it contained an abstract piece of writing fabricated in metal and directly incised into the concrete; it was called "The Plastic Poem" (Bamford Smith, 1967). Writing about the building, Goeritz mentions that: "the patio was designed as the final point in the series of emotions that a visitor would experience. It was planned to produce the impression of an enclosed and mysterious world, protected and dominated by a tall tower, almost triangular in plan, located in one of the corners, separated from the enclosing walls as an sculptural element. Its yellow color gave the impression of a sun ray that penetrated the white, gray and black atmosphere of the patio" (Goeritz, 1954). Goeritz himself credited the following individuals and their participation in the project: Daniel Mont, General Manager and Coordinator; Mathias Goeritz, Artistic Director;

Mathias Goeritz, Architecture; Raul Rivera and De la Pena, Technical consultants; Luis Barragan, artistic consultant; he then listed engineers and participating artists including the experimental ballet of Walter Nicks (Anda Alanis, 2005).

The presence of Barragan's name as an artistic consultant, and the similarities found between Barragan's work and the experimental museum, may support the idea that Goeritz imitated Barragan's architecture.

Critic and historian Richard Ingersoll gave a negative assessment about the originality of "El Eco" as follows: "While Barragan is not always acknowledged as the principal artistic source of El Eco, it is clear that his advice, inspiration, and architectural knowledge were present at every stage of its production, even if he was absent from Mexico during most of the period of its inception in 1952 (he went to a convention on landscape architecture in Stockholm in June and remained in Europe until at least the end of November 1952; the gallery opened in September 1953... Goeritz frequent presence at Barragan's house and at the gardens of El Pedregal gave him his most direct experience of how to make architecture" (Ingersoll, 2001).

While critics acknowledge Barragan's influence on the project they also see important contributions by Goeritz in El Eco. Goeritz came to play a decisive catalytic role in the maturation of Barragan's artistic personality. The concept of an emotive architecture was something that Barragan may have been searching for, but was not able to articulate so clearly (Ingersoll, 2001). El Eco ambiguous program and collection of spaces was more clearly designed to arouse emotions than most of the functionalist architecture designed in Mexico at the time. In El Eco, Goeritz introduced expressive and dynamic slanted lines that were absent in Barragan's work. The two designers would explore these lines again in other collaborative projects. Perhaps Goeritz's greatest innovation was the treatment of two freestanding walls as pure sculpture. Barragan had used freestanding elements before, but they were designed either as a group to outline spaces or as functional structures like in the case of dovecote or water towers. The only function of the yellow and black towers in El Eco was to arouse plastic emotions. Finally Goeritz managed to create a setting for all the arts.

On a final note, the hand-drawn plan of "El Eco" by Goeritz, and a conflated elevation-perspective drawing of the same, are

unexpectedly refreshing depictions of the building because they denote an interest in mass, void, and spatial experience, rather than any other architectural or constructive concern. After the death of El Eco's patron Daniel Mont in 1954, the building was sold. Since then, it has served as a nightclub, university theater, cultural center, restaurant, religious center and cabaret, among other uses (Goeritz, 1960). The building reopened in 2005 with a similar program as it was originally intended.

Late Collaborations

Barragan and Goeritz had two other major collaborative projects: the chapel at the convent of the Capuchinas Sacramentarias and the Towers of Satellite City.

Separating each designer's ideas became more problematic in these projects. Animosity between the two about the authorship of the Satellite Towers erupted after they were published, ending a great friendship that had lasted many years.

From their previous work it is possible to speculate that, at the convent chapel (1952-55), Goeritz may have contributed with the placement of the tall window, (a tower of light), which included his personal stained glass design, but more importantly with the acute angled corner that articulates light and space in the chapel. This keel shaped corner is unique to Barragan's oeuvre and, therefore, it is easily attributable to the Goeritz participation.

Goeritz is also responsible for the altar design whose gold leaf surfaces reflect the amber light of the stained glass window. Barragan's contribution was in the choice of materials and in the overall proportions, something that he had researched by visiting popular religious architecture for a long time. At the Satellite Towers (1957), the issue of authorship was more contentious and controversial. Barragan was asked to develop a large landscape feature to announce a new residential district in the outskirts of Mexico City. He in turn requested Mathias Goeritz to collaborate with him. When the work was built, each artist claimed authorship of the project, and in different publications, relegated the other as a mere collaborator.

There seems to be more support for Goeritz as the conceptual author of the towers. A year before being asked to participate in the design (1956) in the catalog for an exhibit of his work at the Carstair Gallery in New York, Goeritz

wrote: "I would like to have my blocks standing, enormous like buildings, in a desert landscape, so that people could see them from far away" (Kassner, 1998). He presented a series of sculptures called "Emotional Architecture" which consisted in tower-like groups of elements not unlike the Satellite Towers.

The plans of the Satellite Towers are isosceles triangles, a geometry that is more in line with Goeritz than Barragan and recalls the "Yellow Tower" of El Eco.

According to Goeritz, Barragan's initial proposal was for a monumental fountain. Goeritz proposed seven towers, much taller than the ones that were built. Barragan reduced the number to five and also reduced the overall height. Goeritz arranged the location of the towers to induce an illusion of movement from passing motorists and therefore incorporating the dynamic role of the observers.

Barragan's late work

Barragan continued his involvement with architecture for the next 30 years. Although productions were limited, the lessons learned in the collaboration with Goeritz, brought some spectacular results. At the "Bebedero" fountain (1959) in the development called "Las Arboledas", Barragan designed a majestic free-standing wall as a counterpoint for a long water trough. When asked about its purpose, he replied that it was built for visual delight, simply to catch the shadow of a nearby eucalyptus tree (Baker, 1980).

At the Gilardi House (1976), a much smaller sculptural wall was designed to great effect. The red wall erupts from the bottom of an indoor pool and its non-structural function was to articulate light and space. A similar wall was designed for the Casa Valdes in Monterrey Mexico in 1982. In this case the wall does not touch the ceiling to acknowledge its sculptural intention.

Finally in 1983, Luis Barragan and Raul Ferrera are credited with the design of the monumental "Faro del Comercio" (Lighthouse of Business), in what is called the Macroplaza also in Monterrey, Mexico. The dimensions here are spectacular, a true modern monument for one of the largest urban plazas in the world.

Conclusions

Barragan and Goeritz upbringings, education and professional careers afford contrasting

positions in the development of modern architecture. Barragan comes from a lineage of architects that is profoundly influenced by their native environment and culture; his architecture resorts to old and new ideas to achieve a modern synthesis. Aalto and Asplund can be categorized as part of this group. Goeritz's position on the other hand, is in principle abstract and aims to universal values. Mies van der Rohe, for example, would belong to this line of thinking.

Goeritz's emotional and dynamic approach could be applied to almost any context. Goeritz built work in Mexico is particularly interesting because it absorbs Barragan's style while advancing new ideas of the European avant-garde of his time.

The collaborations between Mathias Goeritz and Luis Barragan proved that the arts are interrelated and that the change of roles between artist and architect is not only possible but also at times refreshingly beneficial for the generation of new ideas. If it is true that Goeritz learned from the long architectural research of Barragan, he demonstrated in El Eco that the fusion of the arts, like it occurred for example in Gothic cathedrals, was possible in our day and time. On the other hand, Barragan carefully crafted a synthetic style by orchestrating native and international influences. He consistently invited the collaboration of artists because he found great value in their advice. He may not have been generous with crediting their contributions, but as the historical facts emerge, these contributions have proved to be pivotal in the intellectual development of Barragan and his now world-renowned architectural style.

Corollary

The comparison between Barragan and Goeritz brings to light the collaborative, albeit contentious relationship of two innovative designers. Their transcultural exchanges can find a critical resonance within the current modern expansion of China. Barragan represents an elaboration of vernacular styles inspired by soil and history. His courtyards and enclosed gardens may recall the extensive use of walled private realms in traditional Chinese architecture. Even his gradual approach to privacy can easily find counterparts in Chinese houses and palaces. Goeritz on the other hand, criticizes international functionalism; his

emotional architecture is a reaction to the excess of rationalism in Western cultures while he also acknowledges the industrial dynamism of developed Western societies. The collaboration of the two designers brought about a regionally bound style that was both local and international. In the context of modern China, both positions would be critical to the bland and placeless International Style towers that dot the landscape of modern Chinese cities. I truly hope that this paper will contribute to reflect on the need for richer connections between vernacular sources and emotional and dynamic modernity.

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The Chengzhongcun

Collectivity through Individuality

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To Get Rich is Glorious

Much of modern China stems from the economic reforms brought in by Deng XiaoPing in the late 1970's and since that time an unimaginable and unprecedented expansion has occurred in its urban areas. The vast majority of the urban forms we see being developed can be described as the 'Great Street' and 'Vertical Block' (Hassenflug 2010) which some have argued are due to its pace of development; creating generic and often soulless urban environments lacking in a sense of place or urban community.

Indeed this drive towards progress isn't just expanding existing urban areas but creating entirely new cities, and in some cases mega-cities. The prime example of Deng XiaoPing's fundamental belief that 'to get rich is glorious' is the city of Shenzhen, located across the border from Hong Kong in Guangdong Province. This location was hand-picked by Deng XiaoPing in 1978, when it was still only a small fishing community, to become a key development and a built representation of the new Chinese dream.

Since 1978 Shenzhen has now expanded into one of the world's true mega-cities with an unofficial population of around 14 million. This means that what is effectively a modern prosperous metropolis has been created from scratch in a mere 30 years. A customary glance at areas within Shenzhen such as the CBD (Central Business District) of Futian District would reveal the typical urban signatures of any modern city such as grand highways and towering skyscrapers.

However the process of creating Shenzhen, and expanding other urban areas within Guangdong such as Guangzhou and Zhuhai, has had a surprising and fascinating consequence. As Shenzhen expanded it swallowed up the surrounding agricultural land in order to develop an urban landscape. This

land was forcibly purchased from the local farmers in order to develop, essentially leaving the local villagers without any real means to sustain themselves. The only thing the villagers owned was their "village land" on which they lived and which was being surrounded by the apparent progress of generic urban development (Song, Zenou & Ding 2003).

Re-Building the Village

China, however Communist it may claim to be, is in fact a modern capitalist state, but there is a hangover from Mao's time which is completely contrary to the idea of a free market and that is the dual land-ownership policy which is still prevalent in China today. This means that land is divided into two distinct groups: urban land owned by the state and leased to developers for development and rural land which is owned by a village collective made up of the local inhabitants (Song, Zenou & Ding 2003).

What this means in our story of the development of these urban-locked villages is that the local villagers themselves retained control of their land. This land despite being surrounded by state-owned urban land was in fact a rural piece of land meaning it could be developed independently from the city itself. But the question remained what were the villagers meant to do with this land?

The answer is as pragmatic and capitalist as you can imagine, left with only their land as their only asset and seeing a need for affordable housing for rural migrants flocking to the new city they built low income housing (Yan 2008). The form in which they built this is interesting, because the rules governing rural land meant that they could only develop family homes, approximately 10m x 10m. During the thirty years of development these have evolved and expanded vertically becoming eight-storey

high residential towers separated by narrow village scale alleyways. The height of these little towers being capped at around eight storeys due to the simple fact they don't have elevators.

What is produced is a dense urban landscape, such as Shui Wei Village in Shenzhen (Figure 1) which is based on a set of rules developed for rural settlements and a rural scale layout. In fact when they are observed there is nothing to suggest they are a village, they look urban and are urbanised in every sense. However they still retain their villager population and their village collective, now rebranded to fit in with the capitalist way forward as a 'village holding company'. They had become a 'village-amidst-the-city' or Chengzhongcun.

Unregulated Assets

At the time of this expansion upwards and increased density in the mid-1990s, the city authorities were willing to ignore these Chengzhongcun as they provided low income housing which allowed the rural migrants vital to the creation of the city somewhere to stay (Wu & Webster 2010). However becoming a magnet for low-income migrants and being independent from the city as a whole has led to lower investment in basic infrastructure and the quality of the built environment was not of the highest quality. Coupled with the fact that these Chengzhongcun appear to have a higher rate of crime, has produced an image of almost near slum status.



Figure 1 : Shui Wei Village, Shenzhen (Photo taken by Author, 2010)

These areas are not slums but compared to the brand new fully planned developments around them which consist of gated residential high-rises and commercial shopping malls they aren't far off. Instead of considering them to be slums they should be considered as unregulated assets. They are vital to the overall housing needs of the city and they provide small-scale economic opportunities which are not catered for in the larger developments (Yan 2008). In fact it is because these areas have not been planned that they are valuable. The local villagers weren't

developers and were taking a pragmatic approach to their own survival, they went from 'growing crops to growing homes' (Song, Zenou & Ding 2003).

But in order for these Chengzhongcun to have survived for so long and to have prospered there must be some fundamental benefits of their composition other than their low-income rooms for rent. They are an asset, but more than just an economic fix that the government didn't allow for, they have other benefits unique to their spatial dynamics.

A 'Chinese' Urbanism

The Chengzhongcun are an easy target for the city authorities, with a large low-income rural migrant population, reports of widespread crime and poor infrastructure (Campanella 2008), but from an urban point of view they are fascinating because they are not a completely new form of urbanism or even a form which is based on previous principles or rules.

They are an organic and pragmatic continuation of a rural Chinese spatial layout. When viewed amongst the cityscape the Chengzhongcun present a very different set of spatial conditions for daily life to carry on in compared to the great streets and vertical

blocks of the rest of the city. Fuxin Village, (Figure 2), shows a fully "urbanised" village set in a strict grid with replicated "handshake buildings" which provide the built fabric. But when examined with a little scrutiny these Chengzhongcun can be seen as a microcosm of urban life, an antonymous urban block. Each Chengzhongcun has its own school, hospital, village holding company office, local history museum, public gathering space (some even have their own amphitheatre for outdoor performances). Apart from these public services the area is alive with bustling small businesses which populate the ground and even first floors of the "handshake buildings". The high density of these varied activities brings a sense of unity and consolidation to the overall environment. It may seem at first that the incredible density which characterises these areas would be a problem, but seems to be the factor that actually serves to make them a successfull living environment.

An issue which the surrounding city has, which the Chengzhongcun doesn't have, is the distance its inhabitants have to travel to certain amenities, such as from their homes to the supermarket or their workplace. The high density and varied land use within the



Figure 2 : Fuxin Village, Shenzhen (Photo taken by Author, 2011)



Chengzhongcun allows for its residents to be walking distance from everything they need, including employment. This scale means that the local villagers have retained their almost insular village lifestyle but have the added benefit of having a mega-city and the benefits that brings on their doorstep.

However this density must be brought into context of what it is like to live within one of these urban landscapes. The Chengzhongcun is a vibrant place which is alive 24-hours a day and there is a constant hum of activity, (Figure 3). The “handshake buildings” overlook one another and it is easy to see directly into your neighbour’s living room. These facts should not be considered a negative, but they are the consequences of living at such a high density. It can be argued that such a model of living would not be acceptable in a Western society but in the Chinese context and culture this model is perfectly acceptable and actually thrives.

The boundaries between private and public within the Chengzhongcun are so blurred that even one’s home becomes part of the public realm being overlooked. It can be said that this layered living actually reinforces a sense of inclusion and a sense of belonging almost, a

sense of belonging to a place. Unlike living in a faceless gated high-rise where you are sealed in your own apartment, living in the Chengzhongcun binds you to a place, you are constantly aware of the environment you are living in and constantly feel part of a wider social group. This is perhaps how the sense of a village community has remained despite all traces of the village disappearing. The constant flow of daily life spills out onto the alleyways and brings with it a vibrancy which can only come from people living on top of other people. The constant social interaction and the constant feeling of an urban society that is ever present within your life. The fact that everything you need from supermarkets to workplaces to entertainment is literally around the corner. These are elements that a mega-city designed in zones of activities and connected by vast transport links can’t replicate and these are the exact characteristics that give the Chengzhongcun their atmosphere and sense of place.



Figure 3 : Life in Shui Wei Village, Shenzhen
(Photo taken by author, 2011)

Traces of the Past

When viewing these Chengzhongcun they appear fully urbanised and little remains of their rural past, but there are urban and architectural fragments which show the history that is inherit in these places. Many of these Chengzhongcun retain an ancestral temple which in some like Xiasha Village is given pride of place or in Nantou Village where the original village gate, (Figure 4), and in Huanggang where original houses, (Figure 5), are hidden amongst the “handshake buildings”. These built fragments of a collective past have been important enough to retain and maintain through urbanisation.



Figure 4 : Original Village House in Huanggang Village, Shenzhen (Photo taken by author, 2011)

These elements add yet another unexpected layer to these Chengzhongcun that adds to the duplicity inherit in the nature of these areas. In order to survive they have had pragmatically to strip away their past to become sustainable but have retained small fragments of history which have been deemed important to them. Again this simply reinforces the sense of village community.

However retaining some small village temples is a minor yet obvious way of retaining your

culture. What is more fascinating is that the gridiron layout of these Chengzhongcun is not merely an enforced urban form which best utilises the available land, it itself is a form of conservation which can't be immediately observed. If we consider villages like Huang Bei Ling (Figure 6), which hasn't fully been urbanised, it is clear to see the gridiron pattern of development which the “handshake buildings” is based on is in fact taken from previous village layouts. This means that the alleyways, which are extremely narrow have been an inherited inherent Chinese feature brought forward organically. It isn't only that it is acceptable to have high density in a Chinese



Figure 5 : Original Village Gate in Nantou Village, Shenzhen (Photo taken by author, 2011)

context but that density has always been present and the social acceptability of density is much greater than say in the West at present.

Not much of the physical past may remain within these villages, apart from a few preserved ancestral temples and some built fragments but that isn't actually what is important to survive. What can be said to be the real important traces of the past is the spatial dynamic, perhaps not vertically, but in



Figure 6 : Huang Bei Ling Village,
Shenzhen (Photo taken by author, 2011)

terms of the appropriate scale and relation of building to building. This is why these Chengzhongcun aren't merely slums packed as tight as they can be, they have an urban form which has developed and which has been tried and tested and accepted by its inhabitants.

Architectural Flair

Often viewed as poor examples of the “built environment” the Chengzhongcun actually surprise with their architectural inventiveness. As an architectural solution to the particular problem and the villager faced and developed at the outset of urbanisation the simple “handshake building”, (Figure 7), provides an almost elegant solution. It is cheap, flexible and repeatable to such a degree that this one building can create an entire urban landscape. These “handshake buildings” come in a multitude of varied forms but always follow a basic rule that they are comparable in scale and fit into the gridded pattern of the urban fabric. Built from a concrete frame with brick infill and tiled exterior they are a simple and cheap building to construct. They produce an overall uniform landscape but when examined closely each one is different and unique, in fact some even show somewhat an architectural flair. Be this cheap and nasty “mock” Western decoration or even inventive plays on Chinese architectural forms.

The minor variation from building to building, whilst retaining a uniform layout and basic arrangement, makes the Chengzhongcun into an area a varied landscape. This leads to an overall sense not of chaos in the urban built environment, but uniqueness and variations which gives each village its own character. These “handshake buildings” are comparable

to the tenements of Western urbanisation of the 19th and early 20th century. There are dense, cheap, uniform and aimed at the lowest level of society. Yet the tenements came to define certain areas and even certain cities.



Figure 7 : Typical Handshake Building (Drawing by author, 2011)

Lessons from the West

There are plenty of lessons to be learnt from the West by China, as the West has already been through the process of urbanisation which China is currently going through. However China seems oblivious to the main lessons learnt by the West and by the failure of Modernism on an urban scale. China's urban expansion can be characterised as following essentially Modernised principles of master planning, carving large superblock areas separated by roads and then populating them with residential high rises above multi-storey commercial podiums (Mars & Hornsby : 2008). China seems to forget that this approach has been taken before by the West. Just taking one example city like Glasgow in Scotland, it is clear to derive a story of how these principles failed.



urban forms being produced in the Chengzhongcun compared to the tenements in Western cities such as Glasgow before the 20th century are striking. It is also striking how the common feeling towards urbanism now in cities such as Glasgow is essentially a reinstatement of the urban principles which the tenements organically produced. I believe there is a very clear lesson here which is transferable from the West to China, the idea that scale and density are important in creating a successful community. The fact that the Chengzhongcun have provided China with its own organic home grown model of how to design a particularly Chinese dense urban environment shows that there may be a future in that. That is not to say that the Chengzhongcun are without their problems but they can be seen as an experimental urban form which should be learnt from.



Figure 8 : Gorbals in Glasgow from 1936, left, and 2006, right (www.britainfromabove.com)

Glasgow urbanised in the 19th century and was characterised by the strong gridded layout of vast areas of the city covered in four storey tenements. A particular area called the Gorbals was home to a massive population of low-income workers all housed in street upon street of identical tenements which were over-crowded and considered a slum area. After the Second World War it was decided that the Gorbals would be cleared and replaced with high-rise tower blocks in the Modernist style. This meant the clearing and demolition of the slum area was replaced by open green space and high-rises. However this approach also failed and what has replaced those high-rises is essentially a sanitised, less dense version of the tenements, four-storey blocks of residential homes with commercial facilities on the ground floor, (Figure 8). The similarities between the

Removing the Tumour

However this lesson is clearly not being learned or even acknowledged as the present view of the Chengzhongcun are they are a "tumour" on the face of the modern Chinese cities of Shenzhen and Guangzhou to name a few. The current policy is one of complete demolition and relocation of the villagers. Within Shenzhen villages such as Caiwuwei and Gangxia have already suffered this fate (Yan: 2008). But Caiwuwei and Gangxia suffered this because of their proximity to the CBD and their noticeable visible presence at the heart of the city. Actually it is far too expensive for the city authorities to systematically relocate and compensate every villager in every Chengzhongcun. The current system of relocation is simply to replace the "handshake

buildings" with high-rise apartment blocks and give each villager family a home within them as well as some form of compensation. But this destroys the very thing which has held the village together, a sense of place within the urban environment which is still uniquely rural in its origins and visibly different and therefore valuable. Also the lifestyle and social interactions of day-to-day life will be gone. Also, what about the impact on the wider city due to the loss of the Chengzhongcun. They provide the low-income housing which enables the rural migrants to afford to live within the city centres and close to their jobs. The Chengzhongcun are the unregulated asset which provides what the city authorities have failed to make allowances for. However the Chengzhongcun cannot stay as they are. They are far too dense from a practical viewpoint and do suffer from poor infrastructure. They are much like Hak Nam (Kowloon Walled City) (Popham : 1993) or the Chongqing superblocks (Mars & Hornsby : 2008), they are -to an extent- out of control from a built density. But what the Chengzhongcun have which these examples don't, or didn't in the case of Hak Nam, is a strong sense of community and a sense of place which has been a continuation of a previous environment not a replacement. I believe that these Chengzhongcun will develop further and meet the next challenge of how to handle possible gentrification and integration with the surrounding city. This should not be at the expense of what makes the Chengzhongcun unique, a dense vibrant socially cohesive world which puts to shame the generic vertical blocks of the surrounding city. The Chengzhongcun will handle this as pragmatically as they have done so before, if only they would be given the chance.

Collectivity through Individuality

Only in China can the most extreme form of urbanisation be said to have a rural community at the heart of it. The Chengzhongcun are a fascinating phenomenon, they are an example of an organic Chinese urbanism in which density and scale have shown that a successful urban community can be developed that is not the standard commercial podium and vertical block that characterise the modern Chinese city. In fact an urbanism with community and social interaction, one which has grown out of a rural beginning can sit just as comfortably within the context of that most

21st century form of a mega-city like Shenzhen.

So how can you best describe a Chengzhongcun, well I would describe them as Collectivity through Individuality. In terms of all scale, from one-to-one details to the overall layout of "handshake buildings" there simultaneously exists a feeling of a strong collective community and yet a sense of personal expression. What I mean is even in built form each "handshake building", although individual and unique combined with the overall mass, presents a visual and spatial cohesion. This nature reflects itself in every social aspect as well from the idea of ancestral history to individual family shrines, from the Village Holding Company to individual family businesses within the 'village'. Perhaps this is the ultimate clash of an inherited communist collective system with the individualistic free market translated into the built form of Chengzhongcun.

One thing I can conclude with is the value of the Chengzhongcun. I believe if you truly want to understand contemporary China then you should try and understand the Chengzhongcun. The layers of history mixed with pragmatic development, the haphazard approach and determination to achieve progress, the self-regulation and social cohesion, the density and intense atmosphere of social interaction are all elements that are present at all levels of Chinese society. Here in the Chengzhongcun they are exaggerated and amplified giving an insight into the Chinese mindset. For me the Chengzhongcun are in their way a summary of China at this moment in time. To have architecture achieve this is quite special, it was organically produced from the people themselves and the value lies with the villagers and migrants who live in these places, the people who produce the vibrant lifestyle and preserve the ancestral heritage. It is that quintessential Collectivity through Individuality that is so appealing and produces these fascinating communities and urban space that is uniquely Chinese.

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Modernity and the Civic Realm: Learning from the Beirut Souks

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Introduction

For over 5,000 years Beirut's urban fabric has been shaped by successive waves of migration, colonization and modernization. The post-war redevelopment of downtown forms the most recent layer. Financed and controlled by the private company Solidere, this latest evolution is considered a laboratory for global capitalism, shaped by global market forces. Solidere's motives have been met with skepticism, viewed by many as "the colonizing of public interests by the private" (Makdisi : 1997).

Drawing on academic critique, blogs and media, this paper explores the re-designed Souk which was envisaged as a major civic space for the new city centre. Merging commercial interests with public space, modern design with traditional form, the Souk forms a valuable exemplar for examining the private sector delivery of contemporary public space. This paper asks: is it possible for civic space to emerge without government influence, and, if so, what are the defining attributes of this space in the Beirut context where sectarian values continue to override a sense of collectiveness ?

Beirut's Urban Fabric

Beirut's public realm has emerged slowly, shaped by processes of modernization and the interplay between the east and west, global and local forces. The Ottoman period introduced significant shifts in the relationship between the individual, the domestic and the urban environment. In 1878, the city's first municipal authority was established. This period inspired investment in the first large scale public projects including the introduction of public squares and gardens, private space and a public transport system (Kassir : 2010;

214). Beirut's urban fabric emerged with a far more open "trans-Mediterranean inspired urban aesthetic" in comparison to the more compact Arab cities found within the Ottoman Empire (Khalaf : 2006).

The subsequent French colonization from 1918 was intent to "de-ottomanise" the architecture and spatial characteristic of Beirut (Khalaf: 2006). Large areas of down town were demolished to transform the urban fabric into more regular and controllable beaux arts inspired boulevards, symmetrical blocks and formal squares. Showcase projects such as the Etoile development replaced the labyrinthine quarters, alleys and aswaq (souqs) of shopkeepers and traders with radiating street patterns lined with Art deco and Oriental style architecture.

Following independence in 1943, Beirut emerged as a cosmopolitan city, a "Paris of the East", developing as a regional hub for finance and recreation. Successive master plans to guide Beirut's growth however were ignored, including Michel Echohard's 1944 vision, the first to consider the growing suburbs.

Throughout the 1950-70s the suburbs developed in a haphazard and informal manner as urban migration from the rural south and an influx of Palestinian refugees flooded the city. This immigration also shifted the political and religious balance of Lebanon, challenging the dominance of the Maronite Christian community established during the French mandate period.

The downtown, also known as the Bourj, the Medina or the Balad, remained one of the few spaces of mixed religion, bringing people together for business, entertainment and social opportunities. (*ibid.*) comments "This receptivity to foreign cultures, competing educational missions, European trade and an incessant inflow of goods, itinerant groups, and borrowed ideologies account for both its resonant

pluralism and assimilating character". Even during the unrest of the late 1960s and the student demonstrations of 1970s, downtown was spared, "adding to its reputation in the public mind as a place where the city's power of synthesis could still be bought to bear" (Kassir : 2010).

This was to change with the fifteen-year Lebanese civil war (1975-1990). Downtown was bisected by the green line which separated eastern Christian Beirut from western Muslim Beirut. Its prominence as a meeting place was replaced by a series of satellite communities structured according to sectarian values. By the end of the war, Lebanon was left with a barely functioning government and a population that had diminished from around four million to 2.7 million (Calame & Charlesworth, 2009; 59). The decision to allow Solidere, a private company, to assume responsibility for the reconstruction of downtown was controversial. Solidere has its origins in OGER Liban, a private engineering firm owned by Lebanese billionaire Rafik al- Hariri who had made his wealth in Saudi Arabia. Hariri commissioned Dar al-Handassa, an international firm of engineers to prepare a master plan for downtown. A *tabla rasa* approach was taken, featuring sky scrapers, underground expressways and a world trade centre on an artificial island. In 1992, Hariri became Prime Minister of Lebanon, which controversially made himself the beneficiary of the privatization of Beirut (Kassir: 2010). Lebanese Parliament approved redevelopment plans, with some modification. These plans however attracted extensive academic debate and public outcry.

In May 1994 Solidere (the Lebanese Company for Development and Reconstruction of Beirut's Central District) was officially founded. Their work however was delayed for three years due to the uncovering of significant archeological remains. During this period Solidere revised their plans to reflect a new direction based on historical continuity, with the redevelopment reframed as "An Ancient City for the Future" (Makdisi : 1997). Changes to property law allowed the resumption of downtown properties in exchange for shares. No public funding was provided to the company, although they were given significant tax breaks. Instead Solidere financed all infrastructure and land development costs in exchange for the financial return on twenty-nine hectares of development of reclaimed land.

The new master plan, shown in Figure 1, was conceived as a mixed use residential district for up to 40,000 residents. According to planner Gavin Angus the plan rejected the "Modernist-inspired city of object buildings and internal private malls" to instead create "a city of active public streets and public space". The public realm formed an 'armature to development' and was assumed to contribute to a post-war reconciliation process by recreating "the city's meeting point and busy neutral ground that somehow embodies the Levantine pluralist ideal" (Gavin : 2004). Solidere reserved the right to build on twenty-five percent of the land to develop pivotal projects that would inspire surrounding development. The reconstruction of the Beirut Souk, shown in Figure 2, formed one such project. The origin of this project was contentious, given that early planning processes led to the demolition of the original souk, which many claim could have been saved.



Figure 1 / Figure 2 : Model of downtown /The new Souk

An international design competition held in 1994 challenged designers to reinterpret the Souks, to reconcile their memory with contemporary needs, tradition with modernity (Haddad : 2004). No outright winner was declared. Three projects were nominated as co-winners Drisin and McFarlane (USA), A.K.Kassar/Valode and Pistre (France), and Mark Saade & Associates (UK). Many viewed this result as conservative. Lebanese architect Elie Haddad (Haddad : 2004) for example claimed that the jury rewarded functional and pragmatic approaches and a "New Urbanism" tendency with its careful recreation of the "urban realm" through a network of new piazzas, pathways and civic buildings". A consortium of international designers featuring architects Rafael Moneo, Kevin Dash and Zaha Hadid and French landscape architect Olivier Vidal were allocated specific design projects within a final master plan prepared by Lebanese architect Jad Tabet. The plan included a multi-cinema complex, a department store, retail space, a major underground car park, together with preservation of historic landmarks including the Majidiyah Mosque and the IbnIraq mausoleum and the provision of various squares and public open space. The south Souk opened in October 2009, with the north Souk scheduled to open in mid 2013.

The reconstruction of the Souks has generated extensive debate. Makdisi (Makdisi : 1997) asked how "could one re-create something like a souk, which is not only the produce of a long historical process but is also characterized and even defined by spontaneity and above all heterogeneity?" He predicted a project lacking in depth, operating at the superficial level of spectacle, pastiche and surface. Haddad (Haddad : 2004) concluded that the Souk were "just one parcel among many parcels in a homogenous grid which increasingly appears to be modeled according to real estate interests, market forces, and marketing strategies".

These attitudes mirror the broader debate concerning Solidere's redevelopment approach, critical of their response to history and memory (especially the failure to acknowledge the civil war). Similarly Solidere's commitment to deliver meaningful public projects has been met with skepticism, leading Sarkis (Sarkis : 993) to ask "How do we define public space, now that the space is no longer the agency keen on promoting public life, but a group of private entrepreneurs wanting urban life to promote their business?"

Amaya-Akkermans describes downtown as "a futuristic landscape entirely absent of public spaces" which attempts "to dovetail and manipulate the public space into an artificial arena of consumption" With the completion of the first stage of the Souk, it is now possible to move beyond a critique of Solidere's plans, publications and intentions to examine the constructed experience. But beyond questions of authenticity and a comparison with the original, how can we measure the contribution of this modern Souk? Clearly it will never satisfy those desiring the spontaneity, diversity and continuity of the original. How can we judge its contribution to civic life, particularly in the Beirut context where sectarian divisions continue to override values of collectiveness? I draw on three types of critique to explore these questions. These include Peter G. Rowe's analysis of the attributes of place-making outlined in Civic Realism, emerging social research that explores generational attitudes to Solidere's redevelopment and Beirut sociologist Samir Khalaf's writings on the Bourj and understandings of collectiveness within Beirut. These perspectives are expanded through the inclusion of blogs and media originating from Beirut. Together this analysis contributes an understanding of the south Souk as a civic framework, a space of neutrality and a potential agent of civic engagement.

A Civic Framework

In his exploration of civic space, Rowe (1997; 204) highlights the challenges of producing design that resists "the whims" of the private developer, the "consumerist pabulum of market forces" and the "cooption by states in the form of grandiose projects". Solidere negotiates these poles, positioning the Souk as a new civic space, merging "a shopping center and a people's place", and offering the "integration of heritage and modernity". The Souk is described as the "urban nucleus of Beirut city centre" that will act "as a meeting point that merges the capital's different parts into one organic whole" (Solidere : 2011).

While many are critical of the New Urbanist framework that underpins the planning of the Souk, there is no question that it has produced a legible and permeable urban precinct. This framework is also claimed to maintain the "prewar openness" of the original, which was considered very different from other more self contained Souks found for example at Aleppo

and Istanbul (Moneo : 1998). The original Souks comprised a series of linear north-south axial spaces that featured Souk Ayyas (fabric and clothing), al-Sagha (jewelers), al-Lahhamin (butchers), al Jamil (well ordered retail shops), al-Haddadin (tin), al-Bazirkan (woven goods) and Souk al- Tawileh (Kassir : 2010).

The south Souk opens into a series of interconnected buildings, alleys and open spaces. As shown in Figure 3, the Souk is permeable, and can be entered from multiple entrances. Eight major and five minor sections are aligned within an open north-south framework. Over 150 retail outlets are found within the complex, including the Jewellery Souk, designed over a two floor pavilions. While the largely high-end retail shops do not match the composition of the original, it is too



Figure 3 : Plan of the south Souk

simplistic to dismiss the new Souk as a shopping mall. The commercial and spatial strategies synonymous with mall design which combine spectacle, distraction and showmanship to develop “an off centre distraction” perfect for incidental and emotional consumerism are not evident (Gibian :1981). Unlike a mall which is designed to entrap the visitor within a maze of consumer possibility, the Souk can be easily negotiated on the way

to somewhere else. Its openness and legibility comes as a relief from the frenetic streets of Beirut, as does the environmental design which allows for a natural airation system.



Figure 4: Signage at a Souk entrance

A carefully controlled architectural language combines with this legible urban framework to create what architect Moneo (1998; 273) describes as a “generic, background framework that, nevertheless, acquires a level of specificity in response to surrounding urban environment”. Within this structure, shifts in scale and diffused lighting combine to produce different experiences. For example the monumental scale of the internal pedestrian street of Souk El Jamil designed by Moneo (Figures 5 & 6) contrasts with the more human scale and darker passages of Kevin Dash’s Jewellery Souk (Figures 7 & 8). This design philosophy aligns with Rowe’s (1997; 223-4) recommendation that architectural responses engage with “cultural continuity” rather than a singular architectural vision or a nostalgic “culturally calcifying” treatment.



Figure 5, Figure 6 : Souk El Jamil designed by Rafael Moneo (Spain) and Samir Khairallah and Partners



The design quality of the new Souk is viewed positively by many international and local visitors. It is extremely popular with tourists from Saudi Arabia, Kuwait, Qatar and other gulf countries who consider it as signifying Beirut's re-emergence as the "Paris of the East". Some view it as "the new Dubai, but much prettier", while others comment that it is "both modern and intimate at the same time". The "civility" of the project surprises many western visitors who are less familiar with Beirut's pre-war cosmopolitan reputation. A 2011 travel article published in The Independent for example described the down town redevelopment as a "mind-boggling transformation for a city that didn't even have a Starbucks until a couple of years ago". The journalist concluded that Beirut was "a city in which gentle Arab hospitality and some Cote d'Azur-style bling combine to make it both exciting and yet civilized".

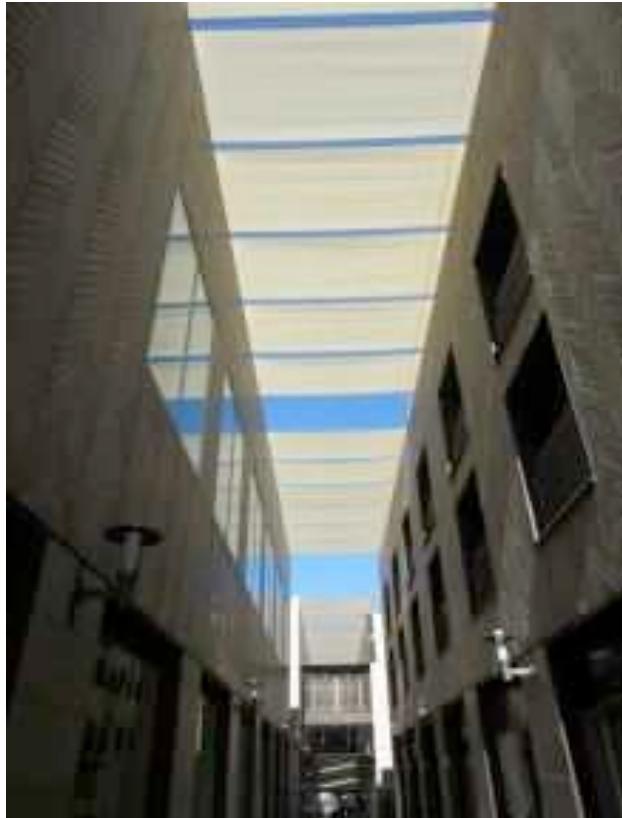


Figure 7 : Jewellery Souk designed by Kevin Dash (UK) and Rafick El Khoury and Partners



Figure 8 : Jewellery Souk designed by Kevin Dash (UK) and Rafick El Khoury and Partners

Many Beirutis view the project positively. Opening day comments included praise for the open space and architecture reminiscent of the old Souk, while one visitor claimed "it is young and hip, but at the same time, it is still Beirut". The blog Beirut Public Space reported the opening of the new Souk in the following manner.

"Actually, they have been greeted with more enthusiasm than most projects in the city. They are admittedly beautifully executed. Their contribution to public space is significant, since they do provide pedestrian open space, an essential feature in which the city is in dire need of. They also complete the urban fabric and should help connect surrounding areas to the waterfront... Solidere has been criticized for alienating the great majority of Beirutis... With the Souks, there is hope to reverse that trend and to attract more people to other areas of Solidere, and to keep it vibrant at all times of day. This could be a success".

The Souk therefore shares many of the formal qualities of good civic space identified by Rowe (Rowe : 2007), possessing a strong urban framework that can accommodate different functions and behaviours as well as maintaining "a lasting and significant presence beyond those functions, modes, and proclivities". However the design is less successful in accommodating Rowe's emphasis on cultural pluralism.

Informed by analysis of North American and European design precedents, combined with western discourse of democracy, Rowe (Rowe: 1997) argues for design that emphasizes "a pluralism of attitudes, credos, and other human characteristics inherent in society, and yet also fosters a convergence or distinctiveness of view point about what the urban realm should be like". In contrast a review of discourse concerning the public realm within Beirut reveals a desire for neutral space.

Neutral Space

Whereas western discourse concerning the contemporary city encourages cultural diversity and cultural pluralism, these concepts have different associations within Lebanon. In Beirut, states Kabanni (Kabanni : 1998), "one can argue that for a space to be truly 'public', specifically in the context of a post-civil-war urban environment, it should possess a high degree of 'neutrality'." Beyond the popular seaside Corniche, what little public space exists is largely associated with locals and their

sectarian affiliates. As Ghaddar observes "Amal flags or a Lebanese Forces triangle painted onto a concrete wall mark out a park, for example, as anything but public". The designs of shopping malls, which have emerged in Beirut post 2003, are influenced by a desire to produce neutral spaces. The popular Beirut Mall constructed in 2006 in Tayouneh was developed along a boundary of a Shi'a and Maronite neighbourhoods. The use of Modernist architecture, restrictions on political images and politically associated colours combined with careful consideration of the placement of sensitive goods such as alcohol has shaped design (Larkin, 2010; 428). With over 50 tenants, the mall also features "Adventure World" which is considered Lebanon's leading indoor theme park, offering over 65 rides [9].

Solidere's target audience for the Souk though was not the local audience of these suburban shopping malls but instead international investors and global tourists. However this strategy has also produced a culturally neutral space, shaped by globalisation. While many western critics highlight the homogenizing affects of globalization on cities, a global space in the context of Beirut offers escape from sectarian restrictions.

Craig Larkin's study of youth attitudes towards Solidere's redevelopment for example highlights a desire for neutral spaces. One student commented "we need more parks, places to meet, don't build more churches or mosques which are valuable, but they are in a sense divisive" (Larkin : 2010). While many did not agree with the redevelopment, others viewed down town as an aspiration for a more stable Lebanon, viewing the order and structure as a positive relief from the informal settlements of suburbs such as the Dahiyya. Larkin (Larkin : 2010) highlights the story of Tony, a Maronite Christian who worked for three years in a down town restaurant. Tony considered down town as "a place of liberation and awakening" which offered the "anonymity of a cosmopolitan crowd" and allowed him to make Muslim friends.

Larkin's study suggests that many young people desire a modern progressive space, attitudes shared in many blog comments regarding the new Souk. While some lamented the loss of the traditional Souk (as described to them by their grand parents), others argued that they didn't want to live like their grand parents. Hatem for example states that "the old Souk in Lebanon was in chaos and dirty (I was told that by my parents)" and claims that the

new Souk “will help put Beirut on the map, we need such a venue in the heart of Beirut (mall, souk...call it whatever you like ..I like it)”. Larkin (Larkin : 2010) concludes that down town operates as a space “where consumer practices and associations “temporally” trump other traditional cleavages and allow for new forms of social engagement”. Like many critics he also highlights its limitation in engaging with sectarian tension. He states “An ethos of consumerism may encourage unity across both political and religious divides, but it fails to adequately engage or diffuse recurring sectarian tensions”(ibid.).

While true, the question remains how could such a development bring sectarian groups together? Are there limits to what can be achieved through design? The final part of this essay looks more closely at what civic engagement might mean in a contemporary Beirut.

Defining a civic engagement

Even before the civil war, many scholars identified a lack of collective interest within Beirut. Kassir (2010; 426) for example described “a reluctance of the people themselves to accept the constraints either of law or the environment –when it was after all, their own way of life at stake”. The civil war amplified this attitude, fracturing society into separate sectarian communities and networks. Samir Khalaf (Khalaf : 2006) writes “As the public world becomes more savage, menacing and insecure, people are more inclined to seek and find refuge and identity in the reassuring comfort of family and community...here lie many of the roots of deficient civility and the erosion of the broader loyalties to public welfare and national consciousness”.

An absence of passion for public life is a frequent comment in blogs. Nasri Atallah writes for example “People don’t know how to share a space”. SF responded “Public space is a microcosm of society and government. In Beirut’s case there is a programmed vacuum of the public sphere, and public life is only enacted in private circles that keep getting smaller”. Another blog states “In a country which is used to doing without a government, state intervention is seen as rather incongruous. In fact public space is largely viewed as ‘up for grabs’, ready to be reclaimed for personal interests by the Lebanese spirit of enterprise”. Indifference affects all level of public life, evident in public space, attitudes towards national issues such as the

environment, welfare, voluntary associations and even sports “normally the most benign and effectively neutral and transcending of human encounters” (Khalaf : 2006).

Throughout the 1990s and 2000s, academics, commentators and critics stressed the importance of re-establishing downtown as a common ground. Yet few offer guidance on how this commonality might manifest, especially in the context of a society with a weak sense of governance and collectiveness. Rarely is the limitation of design in producing consensus raised. Abed (Abed : 2003) in his critique of Solidere alludes to this issue, highlighting the theoretical writing of Tafuri which “denounces the effort to produce consensus, until such time as society itself has reconstructed the material preconditions for consensus and meaning”.

Khalaf offers some insight into what a civic engagement for down town might be, concluding: “It is imperative to consider strategies through which the redemptive, healing and enabling features of a common public sphere...can be nurtured and reinforced while safeguarding the Bourj from slipping into the ‘dystopia’ of a fashionable resort or a ritualized sanctuary for competing confessional communities groping to assert their public identities” (Khalaf : 2006).

Khalaf advocates a move beyond the “hedonistic” and “passiveness” of consumption to more productive and transformative experiences that are inherently cooperative. These could include a focus on human rights, music, sport, education, advocacy, cultural and artistic outlets.

Returning to the new Souk, is there evidence of more transformative experiences co-existing amongst the commercial program? Review of the Souk web site offers some evidence. These include Planet Discovery, the only permanent children’s science museum in Lebanon which is located in the Souk. Developed in collaboration with la Villette and Palais de la Decouverte in Paris, the museum offers interactive exhibitions and programs to contribute to child development. Other events include Beirut on Ice, the first outdoor ice skating rink (open from 12 noon to midnight), and Souk El Tayeb, Lebanon’s first farmers market which specializes in organic produce and food products. According to Time Out Beirut, this market brings “together farmers from all over the country on a weekly basis” and “helps support organic agriculture and local farmers while acting as a unique social arena for Lebanese and visitors to meet and

mingle". The opening of the cinema complex will also mark the return of the cinema to down town which formed an important role in pre-war Beirut, popular across all spectrums of society. Within the urban framework of the Souk, open spaces and squares such as The Platform, Ajamai Square (shown in Figure 9) and The Venue accommodate events, performances and changing exhibition programs. Review of activities planned in May 2012 included the Lebanese Autism Society Fun day, a World Fair Trade that showcased the Fair Trade Lebanon movement and co-operatives in Lebanon including flash mobs, dance, performances and food, and Traits D'Union, a collective exhibition of contemporary Arab art scene that has links to France. These activities continue a program of informal transient activities (temporary coffee houses, exhibitions and a balloon landing park) established by Solidere during the development process to encourage people to visit down town. Khalaf (Khalaf: 2006) commented that these emerging commercial and entertainment outlets attracted "a cross section of society's status and socio-economic groups" He also observed that upper class and prosperous groups seemed uneasy that "it might become too populist, common and ordinary" (Khalaf : 2006). In his critique of the new Souk, Abed (Abed 2004) argues that the reinstatement of the traditional architecture "reflects a problematical attempt to establish a social consensus through formal conventions and formal systematization". Put simply, the design reflects rather than engages with culture. He claims that the emergence of the informal "transient activities" highlights the limitations of Solidere's fixed scheme. However I suggest

that to consider the formal system as separate from transient activities does not fairly represent Solidere's civic intentions. As Rowe (Rowe : 1997) concludes a test of civic realism is the capability of design to reflect "many changeable aspects of society and yet possesses a certain transcendental quality, by giving those in a society a sense of something permanent in common". It is the ability of the new Souk to simultaneously accommodate the transformative and consumer activities, the local with the global, the meaningful with the spectacle that allows the space to grow in civic prominence. This is also true of the entire downtown redevelopment.

The events following the assassination of Rafiq Hariri offer evidence of how Solidere's scheme has already accumulated a new layer of civic importance. In commemoration of the 30th day of the murder (21 March 2005), a coalition of government opposition organized a public gathering in Martyr's Square. Estimates suggest that almost one quarter of the entire population of Lebanon, representing a mix of all sectarian and regional groups converged in the square. Khalaf (Khalaf : 2006) views this event as evidence of the reclaiming of down town as a public sphere, a site of political empowerment and collective mobilization. It also demonstrates that a private sector redevelopment model does not preclude what Khalaf (Khalaf : 2006) describes as "the cultivation of civility". Instead new civic space such as that offered by the Souk will continue to evolve in meaning and prominence, shaped by global and local influences.



Figure 9 / Figure 10 : View to Adjami Square Christmas tree placed in Imam Ozai Square

Conclusion

It is almost twenty years since Solidere began their ambitious and contentious redevelopment of downtown Beirut. There is no question that their vision shares little physical or socio-economic connection to the majority of Beirut's unplanned sprawling suburbs. Nor does it directly address recurring sectarian tensions, instead operating as a global space that offers respite from the sectarian demarcation and unplanned informal development that shape everyday life in Beirut. However as the project nears completion, the outcome of this urban laboratory deserves closer scrutiny.

The new Souk offers an interesting exemplar for the private sector delivery of civic space. Opinions regarding the success of the Souk are diverse, shaped by different generational and cultural attitudes towards modernism, tradition, globalization and Solidere. While developed primarily to attract international investment and the global visitor, there is evidence to suggest that the south Souk operates as far more than a conventional shopping mall. Instead the Souk contributes a civic presence, demonstrated by a permeable civic framework, cultural neutrality and an ability to grow in significance through emerging strategies of civic engagement.

While this may not satisfy those that had hoped for a new common ground that engages more directly with sectarian and socio-economic divisions, the new Souk presents a robust civic framework that has potential to shift and change to accommodate more transformative experiences as the complex social space of Beirut continues to evolve.

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From Ego to Eco: Architecture's new 'ecosophy'

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*Keywords: Ecology; Theory;
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Introduction and Method

The aim of this paper is to review the changing relationship between contemporary "environmental consciousness" and architectural theory. The study is based on a broad literature review of key anthologies that deal with theory since 1968 and a more focused study one specific anthology looking at ecology and theory published in 2010.

Much of the attention of this paper is focused on the task of articulating and giving form to ideas that are in the process of coming to fruition. An "environmental consciousness" is difficult to define and is, by its nature, evolving. Analysis of this consciousness has yet to be clearly or explicitly formulated in other texts – it is recognized in parts – but rarely discussed as an entity in itself. This literature based research, through content analysis of texts draws the connections between apparently disparate ideas to elucidate patterns of thinking that have developed in relation to the discipline of architecture. All modes of consciousness suggest a particular set of social attitudes and modes of being and they are generally expressed through language. The relationship between this emerging consciousness and architectural ideas is a dialectical relationship, in which ideas inform practice and in turn practice shapes ideas. For the purpose of this paper the focus will be on ideas rather than buildings.

The ideas of ecological design and sustainable architecture are not new. However, until recently the question of the environment has been seen as an additional or external factor to be considered after the core essential questions of the discipline – such as program, form and tectonics (Frampton: 1974) - have

been addressed. The past five years has seen the arrival of articles and books that engage directly with ecology, aesthetics and ethics simultaneously (rather than as discrete agendas). This paper speculates about a critical discussion of the possible consequences of this shift in theory on broader architectural criticism and practice.

Environment and theory

The expression 'environmental consciousness' describes an awareness of, or sensitivity to, the environment (Oosterman : 2008). This developing outlook comes in a variety of different guises. In the realm of architectural theory it takes many forms such as; regionalism, primitivism, bio-philism (Wilson : 1993), biomimicry, (Pawlyn : 2001) and sustainability.

Until recently architectural theory and ideas about green design have occupied two separate realms. "Sustainable architecture" or "ecological design" were understood as very particular forms of architectural expression and, although not marginal to practice, were subjects peripheral to the mainstream discussion that constituted theory (Owen and Dovey : 2008). Environmental concerns were seen as technical issues that could be measured – like any other part of building technology. Questions of meaning, culture and aesthetics were seen as qualitative issues that were subject to reason and individual judgement, like other philosophical concerns. Given that the Brundtland Commission Report was published in 1987 one might assume that the question of sustainability would feature

significantly in the theory texts produced in since this period – but they did not. As James Wines (Wines : 2000) has argued; “It has been a peculiar characteristic of structuralist, post - structuralist and post-modernist philosophical discourse that virtually no hint of environmental awareness has appeared in the theoretical work of our leading voices in literary criticism and philosophy.”

However, in the last five years there has been evidence of a shift in thinking. We are witnessing a convergence of “environmentalism” with more specific ideas about how we live together (urban theory) and what constitutes good design. These ideas have flourished alongside a renewed interest in natural systems as a model for ‘design thinking’ and for inter- disciplinary practice. The particular focus on the term “ecology” and its use. While policy makers and politicians have relied heavy on the ‘sustainability’ to describe a range of issues from environmental protection to social equity - in the field of architectural theory “ecology”— nominally the study of the relations between living organisms and their natural environment- has been adopted to give form to a range of philosophical concerns. This trend is expressed most explicitly in “Ecological Urbanism” (Mostafavi : 2010) produced by Graduate School of Design at Harvard University. Within this massive anthology (656 pages) are essays by a number of important American and European architects and academics. Some of the ideas expressed were rehearsed in Nature, Landscape and Building for Sustainability, the Harvard Journal Reader (2008), but this book, Ecological Urbanism, marks a substantial change in the status of ecological concerns within the field. “That Nature has returned with a vengeance in architectural theory and practice goes far beyond the transmutation of the Vitruvian qualities ...” notes Preston Scott Cohen, in one of the books more critical contributions. “The relation of architecture and nature found in the abundant literature on sustainability rests on the moral imperative provided by the current environmental crisis, which sets, as in Greek tragedy, the finitude of natural resources against the dismal and infinite cycle of human production and consumption. From this agon emerges the quest for a responsible architecture,” he adds. Cohen’s assertion that the ecology provides a moral imperative for a new ethical architecture is supported, if unconsciously, by many of the other contributors. “Our historical cultural relationship to our environment is poised to

transform significantly over the next short period of time,” writes Prof. Stanford Kwinter. This situation provides, an “unprecedented challenge to the design community to serve as an organising center for the variety of disciplines and systems of knowledge whose integration is a precondition for connecting them to clear political and imaginative and most important, formal ends.” Currently Harvard academics like those above, along with their peers at Princeton, Cornell, Colombia, and a handful of thinkers from Delft, London, Zurich and Milan appear to have something of a hegemony on the generation of new ideas about architecture. The Ivy League institutions are not the sole source of new ideas – these are generated internationally and come from practice, the academy and other disciplines. However, they have the resources and crucially the publishing houses that allow them to set the agenda. Staff and visitors have been engaging with questions of the environment in their studios and practices for more than a decade. However, until the publication of “Ecological Urbanism”, the environmental question was understood as a second order concern. In the theoretical discussions about how to make buildings, questions of context, programme, form and technology (digital and traditional) took precedence. Similarly in texts dealing with cultural context and the meaning of architecture – the reduction of energy consumption and the preservation of the natural environment formed a small part of thesis on the post-modern condition. A large number of theory texts did address a change in the relationship between man and nature or argue for a re-evaluation of the benefits of modernisation. But until very recently ecology was seen as one of many restraints to be addressed rather than an opportunity to construct a driver for the discipline. Key text books such as Kenneth Frampton’s Modern Architecture A Critical History is now in its Fourth Edition (Frampton : 2007), does not ignore the question of climate change and environment but they are discussed in relation to context, topography, landscape and regionalism. Despite the fact that Frampton wrote about the destructive aspects of capital in the 1970s his concerns developed into an argument for a more rooted- place specific architecture rather than a green one. The book deals with sustainability in the final chapter but the issue is addressed as a technical question of the reduction of energy consumption in use and embodied energy. It occupies a subsection

after topography and morphology and before a much larger section on materiality.

Environment policies and regulations that have a direct impact on building construction have been developing since the Brundtland.

Successive changes to the building regulations and the launch of initiatives to measure environmental performance such as BREEAM in 1990 in the UK and LEED in 1998 in the USA have changed the way architects have specified products and developed detailed designs. Since The Whole Earth Catalogue was first published in 1968 there have been people writing books about how to design energy efficient building, however, the evolution of mainstream “theory” of ecological architecture is new. The paper looks first at architectural theory and the development of some of the particular attitudes that support “ecological thinking”. Secondly it analyses the content of these ideas and then, thirdly, discusses the potential impacts for the discipline and the profession.

The evolution of ecological thinking

It's possible to track back and draw a line through a series of sources that have dealt with the environment and design – from the 1960s John McHale (1968) and Ian McHarg (1969) to Buckminster Fuller (1969) and Reyner Banham (1971,1984). From that line it's also possible to produce a narrative that suggests that environmental consciousness or ecological thinking has always been with us - for at least half a century. Many “Green Architecture” books begin with a brief chronology of the “movement” which begins with John Ruskin and Ernst Haeckel or goes back further to 18th century Germany and the origin of the word sustainable or Nachhaltigkeit. In this popular narrative, the thoughts of the Victorian Romantics are indistinguishable from Aldo Leopold reflections on the depression, the Hippy’s spaceships pods and environmentalist of today.

These histories suggest a historical continuity is rarely justified. Some are founded on the premise that throughout human history man has been in harmony with the natural world. This happy equilibrium was interrupted by the industrial revolution and the modernisation (Brody and Owen : 2011). In reality the current ecological should be situated in our current conditions – particularly the peculiar conditions of no or exceptionally low growth in UK and

USA and much of Europe. As Slavo Zizek writes - the “ecology of fear” is an emerging feature of contemporary thought which, in Zizek's has “every chance of developing into the predominant form of ideology of global capitalism”.

In the immediate period after the Second World War architecture theory was concerned with the attempt to assert new foundations for the discipline following the savage critique and unravelling of the Modern Movement. In the 1960s and 70s this took the form of a debate between those that saw the future of architecture as grounded in scientific and those that maintained an understanding of the discipline as an aesthetic one.

Recession and the Arab Oil Crisis of 1973-4 inevitably had an impact on the popular and professional imagination – but attempts to develop a new architectural language founded on a rather dystopian view of environmental catastrophe on “spaceship earth” were limited in their impact. By the 1980s theory was dominated the two strands of Post-Modernism and Traditionalism, the protagonists of the former arguing that architecture must continually move with the times and the later suggesting a return to the past as a source of solace. After which point it's difficult to talk about theory – as a meaningful reference point (Nesbitt : 1996). In her comprehensive text on contemporary theory Nesbitt describes “a proliferation of theoretical paradigms and ideological frameworks”. It's more appropriate to understand architectural ideas since the 1990s as subject to strands of thinking – most of which find their source outside of the discipline (Vidler : 2011).

In this context the emergence of “pragmatism” has been significant. Pragmatism is an idea promoted largely in the USA.. Some would argue that it is a set of ideas that has already lost its purchase (Vidler interview 2012).

However, the idea implicit in the pragmatist thinking that after critical theory we deserve – no theory – but practice, data and intelligence remains influential in some quarters.

What is interesting is that pragmatism represents one of the first schools of thought to place environmental concerns at the core its ideas rather than an afterthought. The pragmatists preoccupation with the contingent nature of social life has a strong connection with ecological concern. So for example Michael Speaks in his essay on Design Intelligence (Krista-Sykes : 2010) describes James Corner's field operations activity in the following way: ‘These “field operations” trigger

the emergence of new forms of natural and urban life that evolve over time into self-organized artificial ecologies teaming with life". Under the aegis of pragmatism architecture is understood as part of an ongoing process of using systems to manage or balance activities, the use of resources and the production of waste. "The building" and 'the designer' have a less privileged position in this narrative. This new ecological pragmatism presents a number of questions for those involved in making buildings and producing architectural theory.

New Ecological Thinking

The character of discussions around sustainability has always been a little unsatisfactory because the subject under discussion was so large and to a large extent a technical discussion. Martin Pawley writing in the Architects Journal in 2000 wrote; "It is perhaps as well at the outset to discuss particular terms in use today – "sustainable development" and "sustainability". Both are contentious. Their scope extends beyond the built environment and is now firmly embedded in the socio-political arena. This ascendancy has been rapid while various definitions fail to satisfy critics... The first is an oxymoron, the second ill-defined and impossible to achieve." Since Pawley made this observation – it noticeable how the term "ecology" has become increasingly popular among writers of theory- if not among policy makers.

One of the key texts that is a consistent reference point for many of the writers in the Ecological Urbanism anthology is the work of Felix Guattari, in particular his book – The Three Ecologies which was first published in 1989. As such it provides a starting point for the analysis of the components of the ecological – as far as they relate to architecture.

The Three Ecologies (Guattari : 2008) is a very short text, some twenty pages long and it opens with a quote from Gregory Bateson, the polymath with a particular interest in anthropology, social scientist and cybernetics. "There is an ecology of bad ideas, just as there is an ecology of weeds" wrote Bateson. The fact that Guattari opened The Three Ecologies with this quote points to a number of conclusions. Firstly his enthusiasm for Bateson and following on from that an understanding of the term "ecology" which does not refer to relations between animals and plants – but to systems – in particular good

and self sustaining systems. Thirdly, again like Bateson, the author links the question of ecological systems directly to ideas and the self.

Rethinking the relationship between man and nature

Guattari argues that we should put aside conventional ways of understanding politics and production and review the current condition in terms of three ecological registers - the environment, social relations and human subjectivity. Implicit within this approach is that the old polarity of man versus nature is no longer a framework for understanding the world.

In an invitation to dance, Peter Buchanan's 2008 essay he writes; "This is a big choice we face to move from the ego to the eco, from acting on the world to acting with it." Guattari and Buchanan understand the post modern condition is one in which individuals relationship to the world around them (or nature) needs to be rethought. Rather than conceiving of human actions, including planning and architecture, as means of transforming the context in which we live, we need to work with natural systems to come to an accommodation. This has implications for the way in which we build and the understanding of the role of the architect. On the same point Mostafavi (Mostafavi : 2010) cites Bateson's argument that contrary to the ideas of Darwinism and natural selection - the unit of survival is "organism plus the environment". In summary Zizek summarises this thinking in less enthusiastic tones; "The lesson this ecology is constantly hammering is our finitude: we are not Cartesian subjects extracted from reality, we are finite beings embedded in a bio-sphere which vastly transgresses our horizon."

Ecology as a systems theory that suggests a different approach to knowledge

In Notes on the Third Ecology Stanford Kwinter (Kwinter : 2010) looks at the informal economic and social networks operating in the slums of Mumbai. His existential longing for the slums sense of "connectedness" leads the writer to a position in which the slum is understood as a model for economic and social organisation and as a model of the systems approach –

which is deemed to be, in some ways, superior to the mechanistic operations of the post-enlightenment society. "The Dharavi quarter is but one such site where these activities are part of an ancient ecological and urban web," writes Kwinter. The idea that ancient and organic forms of human organisation are better than the places created by the scientific and rational methods planning and visionary design is not a new idea. In the 19th century it was a marginal idea, in the Post war period, and more particularly since the end of the Cold War it has become a mainstream idea. However, through ecology the polemic against key elements of the conventions of western thought has become sharper. "In place of the Cartesian subject, whose being is solely defined by its thinking, Guattari has 'components of subjectification' who engage with real 'territories of existence' that is with the everyday domains of their lives and actions. These alternative processes of subjectification are not rooted in science but instead embrace a new 'ethico-aesthetic' paradigm as their primary source of inspiration," argues Mostafavi in the introduction to Ecological Urbanism.

Ecology as a radical reassertion of subjectivity through experience and emotion

The exploration of the self in The Three Ecologies provokes strong associations with the phenomenological trend in architectural writing that evolved from Norberg Schultz's writings. Throughout the text Guattari makes it clear that one of his main criticisms of the contemporary elite is that they are only interested in technical solutions to material problems – they have no interest in human relations of personal feelings. Guattari is particularly critical of contemporary domestic life and the relations between men and women which he describes as "poisoned by the gangrene of mass-media consumption". In conclusion he argues that the imbalance in our private lives and our inner life (the self) are linked to our relationship to the natural world. "It is the relationship between subjectivity and exteriority - be it social animal, vegetable or Cosmic – that is compromised in this way, in a sort of general implosion and regressive infantilization." This critique is very close to the architectural critiques of from the 1970s from the Modern Movement. Aldo Rossi's (Rossi : 1981) rambling discussions of

the atmosphere and experience of a place recorded in his Scientific Autobiography express many of the same sentiments and anxieties about a failure of modern thought to engage with experience and emotion.

Architectural therapy

When he published his first book De-architecture – in the 1990s – James Wines argued that architects should look at CG Jung on collective consciousness. Architecture should leave behind modern design conventions and develop those appropriate for the ephemeral information age and the mass media. Talking about the 1970s and 80s Wines says: "This hermetic situation in architecture has been much like the tendency of psychology to base its analyses on an interpretation of the mind as a sanctuary for introspection and narcissism. Today, in contrast, the rapidly growing field of eco-psychology is displacing this limited perspective through the realization that mental disorders are frequently the consequence of humanity's alienation from nature," (Wines : 2000). It is not that surprising that as an environmentalist Wines would argue that a readjustment of mans relations with the natural world will lead to psychological benefits. Guattari imagines a world in which psychiatrists operating like artist, no longer "haunted by an outmoded idea of scientificity."

The consequences of ecosophy

In The Three Ecologies Guattari talks about the possibility of ecology giving rise to an "ethico-aesthetic" outlook. Buchanan describes the development of ecological thought as the "exciting gift" from sustainability to architecture. According to Buchanan sustainability gives architecture 'purpose and dignity as it addresses very real and urgent issues so that after a couple of decades of wallowing by some of its most influential figures in fashions of form and theory, it will once again inspire influence in the shaping of our environment and culture.' What precisely meant by this is unclear. However what is clear is that the linking of ecology, ethics and aesthetics suggests that ecology may provide a mechanism for a reconsideration of the purpose of architecture. These changes are not insignificant; the emergence of ecology and "ecosophy" provides a mechanism through which the role of the architect, our

understanding of design and the purpose of the discipline is in the process of being redefined. Central to this thesis is the argument that human history must be reframed. Humanities well-being is no longer understood to be provided by material progress and personal freedom, but on the idea of accommodation to natural constraints.

Historically it has been understood that architects concern themselves with product (the building) while engineers are more concerned with process (management and infrastructure) (David MacKay). These traditional definitions are already being called into question by changes in procurement. The pragmatists in the US have already substantially redefined the role of the architect as a researcher; collecting data, establishing connections and operating the computers that deliver the parametric decision making processes. The beauty of the ecological mindset is that it fits very comfortably with the pragmatists approach.

Despite the fact that Guattari is interested in subjectivity – it is not the creative subject in the conventional sense that he is extolling – but the troubled subject, looking for ways in which to make peace with the world in order to establish an inner balance. Art is reconceptualised not as act of individual will and intellect – but as the therapeutic outcome of a largely unconscious process. The place of the architect in this world – is not as the constructor of new worlds – but as the therapists supporting clients in their attempts to feel comfortable in the environment as it naturally given.

The idea that there is a given and essential connection between ethics and aesthetics – is perhaps the most beguiling and most significantly flawed idea in the toolbox of the ecological thinkers. No-one ever properly explains the connection. The assumption seems to be that decision about how we should live are equivalent to judgments about how we should look, the feelings evoked by a space . Politics is reduced to a question of taste – and ethics becomes an excuse for an elite view of the contribution of the profession – who no longer knows how to detail a window – but it fully equipped to guide the public into better personal and social relations.

As Pyla writes Dutch magazine Volume: “Perhaps the key issue here is to be vigilantly aware that as a concept and as a practice sustainability is constantly running the danger of turning into a totalising doctrine that subsumes critical thinking. Wolfgang Sachs

made a general comment about current trends with exactly this warning: “As governments, businesses and international agencies raise the banner of glocal ecology, environmentalism changes its face. In part, ecology – understood as the philosophy of a social movement – is about to transform itself from a knowledge of opposition to a knowledge of domination...”. With this in mind Pyla goes on to ask two very important questions; “Can architects have partnership with techno-scientific fields without subsuming design to managerial-ism and anti-intellectual postures? Can ecological problems be debated in architectural circles without resorting to eco-determinants?” (Pyla : 2008)

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BIG Lessons from a Small Place

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"Devastation was, however, proposed by Glasgow itself. The Bruce Plan of 1945 by the City Engineer reflected the utopian arrogance of the time by proposing the phased replacement of every single building in the city centre, which was to be surrounded by a box of new highways. Two decades later, the urban motorways that carved up the fabric of the city were on the lines drawn by Robert Bruce, but otherwise his Plan was mercifully forgotten."

The Glasgow Story

Overview

The most vibrant, social and pleasurable cities have not been master-planned but instead have grown over time. Good planning is important but master-plans must not be prescriptive and must remain flexible to accommodate social and economic change. Maintaining links with history and cultural identity is fundamental to successful master planning and retaining a sense of place is critical to good urban design. Cultural, Social and Physical change cannot be forced. A thorough understanding of social, material, historical and topographical context is crucial for the architect and urban designer.



Figure 1 : City of Glasgow 2012

Introduction

All Cities morph as populations change in line with industry, social and employment demands. Historically, few of the great cities of the world have been actively master-planned with most growing over time in an organic response to the environment and social and economic forces. Some embrace this change and manage to sustain improvements and provide environments in which to live and work, whilst others ossify and die. Using Glasgow, my home city, as a model, I consider how transition from a city in industrial decline to a modern, prosperous place can be managed and examine the role of the master plan, urban planning and architecture in that process. I argue that for a city to thrive its politicians, people, planners and architects must all take a long term view and steadfastly resist short term thinking.

Glasgow is a small city by Chinese standards, with a population of some 600,000 people. It is predominantly a Victorian City and was built on a highly navigable river, the Clyde. For many years it was considered to be the "greatest ship building city in the world" and between 1845 and the end of the Second World War, its yards built 25,000 major sea going vessels.

Shipbuilding on the Clyde was fundamental to the identity of the city and its people and brought wealth and prestige through trade with the USA and the British Empire. Today, there are only 3 small shipyards left which are entirely reliant on government contracts and the scars from the lack of investment and appropriate planning are visible everywhere in the city and its environs.

History and Context

Glasgow is over two thousand years old. It was originally a fishing village on a crossing point on the Clyde and in the sixth century, St. Mungo, a Christian missionary and the city's patron saint, established Glaschu as a centre of Christian teaching. The city's cathedral rose in the 12th century and the university, the fourth oldest in the UK, was established in 1451. After the Act of Union with England in 1707, Glasgow flourished and became known as the "Second City of the Empire". It was ideally located on the west coast of the new United Kingdom and it built the ships needed to expand an Empire and to establish trading colonies on the east coast of America and in the Caribbean.

The city has changed greatly over time, from the haphazard growth of the medieval city, to the creation of the Georgian City and, as



Figure 2 : Glasgow Shipyards 1945

trading increased and the city prospered, the setting out of the Victorian Grid. In an effort to combat the decline of its major industry, modern Glasgow has chosen to promote various grand regeneration initiatives; including the establishment of an International Financial Services District and the commissioning of the "starchitect" for prestige capital projects. I suggest that even though the scale of Glasgow is much smaller than many Chinese cities, there are important lessons to be drawn from its decline and attempted regeneration. Political moves to re-position the city internationally in today's fast moving and highly competitive global economy by radical reform of its physical infrastructure and space can provide a test bed for others. Glasgow's experience is similar to other cities, including many here in China, that face decisions about competing in a modern market whilst trying to retain both culture and identity. It is the impact of Glasgow's political, planning and architectural decisions that forms the body of this discussion.

Master-planning Glasgow's Future

Glasgow is infamous for its past planning failures. In 1945, the city commissioned "The Bruce Plan", a prescriptive master plan which proposed to sweep away most of the Victorian, Georgian and Medieval fabric of the city and to replace it with a "Brave New World" of modernism. The plan included the wholesale demolition of all historic structures and the grid in favour of sweeping vistas, wide roads and motorways. The notion was to bypass the centre of the city and required the movement of hundreds of thousands of people to new satellite housing outwith the city on "green sites". Had the plan had been fully implemented, Glasgow would now resemble East Berlin or Bucharest and only the Cathedral would have remained. In some places where the 1945 plan was partly fulfilled, the resemblance is so strong that many Hollywood films use the city to represent the "Cold War" Eastern Europe. The proposals were however, never fully executed although much of the road and motorway routes were built, including the M8 motorway, the Kingston Bridge and Clydeside Expressway which cut through much of the Victorian centre and brought about the whole-scale destruction of established neighbourhoods, isolating business and

commercial quarters from previously linked social districts. Many fine buildings of historic and architectural value were destroyed or left marooned with their environmental context decayed. Later, Glasgow's traditional tenement housing stock was also considered substandard and much was demolished as whole communities were displaced.

The "improvements" were in homage to the motor car as the great social freedom and denied the requirement for social interaction and creating a sense of place that makes any city great. In particular, the city was spoiled when pedestrian access to the river was cut off. Central planning and "quick fix" residential projects were completed that moved families

These failed plans coupled with the wholesale destruction of historic buildings also delivered a general rise in interest in conservation, in an attempt to protect older buildings, regardless of their quality or utility and this has lead to a stock of empty and often decaying Victorian buildings in the city centre. Planning applications for new projects in the West End of the city, perhaps its most notable concentration of complete and authentic historic buildings can attract thousands of recommendations for rejection from local people. In the city centre, it is now nigh on impossible to put forward any building proposal that alters the Victorian grid or necessitates the demolition of an old building or facade.



Figure 3 : *The Bruce Plan*

and communities out of the traditional housing and into peripheral new housing estates, with neither cohesion, identity nor industry. The result was the atomisation of many communities and the destruction of large sections of historic city fabric. Many of the new estates were of poor quality and have themselves since been razed to the ground. The social legacy has been to de-populate large tracts of the inner city, leaving patchwork sections of community isolated and to instil in much of the population a deep distrust of urban planning and a distaste for modern architecture.

Today architects work with the city's historic grain. Although Glasgow is considered a centre of contemporary architecture this masks a deep resistance to any change to its historic fabric. The errors wrought by the legacy of previous master-planners coupled with the social displacement have brought strong conservative views to the fore and Glasgow continues to struggle with the impacts of decisions first envisaged in 1945. As a result there is sometimes a lack of coherence in how the city responds to changes in commercial infrastructure demands and altered social needs in housing, transport, education and leisure.

To use a medical analogy, the city fathers master planning prescription did not improve

the health of the city but served only to make the patient weaker and less able to deal with the newer travails that it faced. Today's physical planning and regeneration initiatives have little real impact on the city's development. So what is the alternative?

The "Bilbao Effect"

Frank Gehry's Guggenheim Museum project in Bilbao persuaded the civic leaders of many provincial cities that major architectural projects can bring substantial economic benefit through tourism, jobs and increased profile. It is estimated that the economic value added by the Guggenheim Museum was €168 million and that the project created nearly 5,000 new jobs. A recent survey reported that over 80% of visitors to Bilbao in the last ten years came exclusively to see the museum. Since its creation, there have been many attempts to replicate the "Bilbao Effect" but very few new museums or galleries outside major cities have succeeded in making the same impact. Cities like Glasgow compete with other regional and European centres for international business and so seek global recognition through branding, so it too needed a catalyst. In Scotland, city authorities continue to strive to recreate the Bilbao Effect by commissioning high profile capital projects using international architects, with no link to the country in some cases or little obvious understanding of context or its history. Glasgow has a new Riverside Museum by Zaha Hadid, Dundee is building a new Victoria and Albert Museum by the Japanese architect Kengo Kuma and Diller Scofidio and Renfro has designed Aberdeen's Union Terrace Gardens proposal. All three projects were subject to an international architectural competition, which although not excluding regional architects who perhaps might understand the local challenges and context better were not considered to have necessary international standing to secure the projects.

This commissioning of high profile architects suggests a general lack of confidence in local talent and confirms the need for external validation from local politicians and funders, which is in some ways understandable. All organisations need to raise substantial monies for a major projects and the risk of failure to do so can sometimes be mitigated by a high profile name. What it also disappointingly confirms is a lack of belief in historical referencing and architectural ambition as the resulting projects tend to be iconic, ubiquitous

and "bolted on", rather than a sensitive response to a particular place or local need.

Architectural Fixes

Glasgow, as I have described, rose from the river and its heritage is outgoing, building vessels and international trading. Regrettably the river, which was once the lifeblood of the city, has been allowed to degenerate with dredging to keep it navigable stopped, fewer and fewer ships are being built, and little social activity. This is another indictment of poor long-term planning and a lack of vision from civic leaders.

More recent piecemeal "design and build" solutions and opportunistic development have been disappointing and are not the answer either, for such approaches bring with them competing interests, divisive attitudes and provide little opportunity for commissioning coherent public space. There really has to be a long term and over arching plan that sets both an end game as well as ensuring high standards for on-going design and building quality.

There are projects which have attempted to revive civic and cultural interest and which could stimulate activity around them but few have achieved the high standards promised at their inception. Norman Foster is currently building another extension to the Scottish Exhibition and Conference Centre (SECC) on the waterfront. Like the "Armadillo", his previous project for the SECC, it is an "iconic" structure. It stands alone surrounded by car parking and takes no reference or joy from its riverside setting. Little is known about the process leading to the commissioning of Foster or the development of the design for the building and public debate was not encouraged. Like the Riverside Museum by Hadid, it was thought that a building by the likes of Foster would be enough to focus world attention on the city. Such a tactic may have worked but not without a first-class design.

The Hosting of International Events

In 2014, Glasgow will host the Commonwealth Games, the world's third largest multi sport event and which involves athletes from Britain's commonwealth nations. The city authorities believe that the games will provide an international showcase and bring



Figure 4 : Foster and Partners Extension to SECC

substantial economic and social benefit, whilst also regenerating moribund areas of the city. The games will cost £540 million and are part funded by Glasgow City Council and the Scottish Government. It is claimed that tourism will increase by 4% and that the economy in Glasgow will be boosted by £30m and that 1,000 new jobs will be created. Although it is indisputable that these events increase the profile of a city, it is arguable how much sustainable "economic and social legacy" they bring. These events are an act of faith.

Suzhou

As you are all aware, China is the world's second largest economy with a GDP of 7.6 % last year, which is remarkable by western standards. The country maintains its commitment to modernity and has multiple urban design and massive infra structure projects going on. Here in Suzhou, one of China's most ancient cities, a new university town is being built which will be the hub for twenty five of the world's top universities. There is much that Suzhou and other Chinese cities can learn from Glasgow's planning experience over the last fifty years. China is facing its own architectural revolution, battling between conservation and modernity; it seems unaffected by issues of identity, evolution and built heritage. The Suzhou Industrial Park (SIP) is a joint cooperation between the Chinese and Singapore governments. It has been planned on a Singapore city model, with wide boulevards for the car, a grid and wide open

spaces that are marked with stand alone architectural icons, some of which are admittedly very good. The quality of the public realm and landscaping is beautifully crafted and finished but is not recognisably Chinese. The comparison with Suzhou old town is marked. The old town is authentically Chinese; not a pastiche but a city built up over time. The city is bustling and business is going on at street level. There are working waterways and pedestrian areas, shops and cafes and UNESCO World Heritage gardens. There is an architectural language evident in the white walls, black eaves and roofs. People live and work in the same area and buildings are predominantly three and four storeys and of a human scale. Yet, although all the clues are there, nothing of the place seems to have influenced the architecture and urban design of SIP. Instead older buildings have been systematically removed and a new modern environment created. An environment which is pleasant, clean and air conditioned but charmless and alien. In fact, to the eye of the newcomer the new campus feels like it could be anywhere and at this point lacks character. The environment has been created to attract business and is succeeding. The campus is over 300 km² with a population currently of around 1m which will rise to 1.5 million in five years. You would not know that Suzhou is forty minutes by bullet train from Shanghai, the most "European" of Chinese cities and currently the biggest container port in the world with aspirations to be the world's leading cruise ship destination. However, you cannot but compare the new environment created at SIP with Suzhou city and the authenticity of the old town. SIP lacks any particular sense of place and identity, although this may come in time.



Figure 5 : Aerial view of Suzhou Industrial Park, Central Business District, 2006, Suzhou, China. Courtesy of Suzhou Industrial Park Administrative Committee.

Urban development in China is progressing at a remarkable pace. The last twenty years have seen extraordinary changes to the country's physical and social landscape and infrastructure that are astonishing. Yet, like Glasgow, it may come to regret many of the quick fix changes to its cities and towns if it continues to ignore its built tradition, architectural history and precedent. The country has many outstanding regional architects, now gaining an international reputation outside China and who have been trained in the country's most prestigious schools. Their architectural expertise is now needed to plan a positive way forward for the country's new cities. Plans which should take much more account of China's three thousand year built history, to create authentic city environments which are pleasurable and have a real sense of place whilst also addressing the country's global and economic ambition.

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A Model without a Plan:

Dubai and the Misconceptions of its Critics

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Skepticism*

Introduction: Growth skeptics on steroids

Critics of the modern city are often concerned about the apparent absence of planning. Notions of urban sprawl rest heavily on the idea that a central plan, if applied, would prevent such problems from occurring in the first place. In turn, related problems of overcrowding, congestion and environmental pollution are viewed as evidence that an early plan was sorely lacking. On the surface, such arguments seem valid – after all, no sensible municipal organization would build in urban problems on purpose. However, as the case of Dubai should confirm, having a plan is no shield against being used as an example of the problem of uncontrolled growth.

Dubai-bashing by western journalists borders on being a genre in its own right (see Francis, 2009). Prior to the 2008 financial crisis, which forced the ongoing restructuring of the Emirate's debt-ridden real estate sector, reporting from the region often consisted of juxtaposing extremes of poverty – particularly among sex workers and destitute former labourers – to the opulence on show in the malls and skyscrapers. After the crash, bankrupt western expats joined the interviewees and the coverage often adopted a celebratory tone. Whereas Dubai has been criticized as "the West on steroids", it is now commonplace to use the name of the place as a synonym for bad planning and injustice. Thus radical architecture critic Miles Glendinning seems to view Dubai as the imperial Capital of Architecture's Evil Empire (Glendinning:2010) criticizing the alienating "spectacularization" of modern architecture.

Dubai – a geographically improbable project in a brutally hostile climate constructed on the orders of an absolute monarchy by the labour

Not just emblematic of an unacceptable future, Dubai now finds itself supplying the key to understanding earlier urban nightmares. This sometimes frenzied repetition of these familiar themes coincides with what can be seen as an overall lack of serious scholarly investigation into "the Dubai model" itself (Williams and Sharro, 2011).

It is safe to say that a Dubai model is notable for its "influence in the MENA region" and demonstrated by "the extent that the so-called Dubai model became an actual term, connoting the exportability of its particular mode of development" (Elsheshtawy, 2009). A more complex issue is how to disentangle the basic process indicated by this term – "undergoing a managed transition from labour-intensive, low-technology industries to capital-intensive, advanced-technology industries" (Williams and Sharro, ibid.) – from the wider hostility to growth and modernization typically found outside of MENA, creating a "Dubai of the mind", open to disdain and vilification. In order to see what can be salvaged from the "Dubai model", it is important to disentangle these two competing perceptions. (Cynics might say that a successful compartmentalization of these problems could result from something as simple as the ability to evaluate two ideas simultaneously.)

One Dubai paradox – and not the clichéd one about contrasts of wealth and poverty – is that critics of the city and the Emirate, two entities frequently treated as synonymous, berate them for lacking a serious urban plan. Conversely, another, more radical-sounding criticism suggests that Dubai's planning comprises the integration of fear into its social fabric. Since many local housing developments take the form of gated communities, critics assert that some parallels must exist between life in the UAE and US race relations, perhaps equivalent

to some racial aspect of Glasser's Culture of Fear analysis (2000). According to some antagonistic commentators, Dubai is even capable of combining a disorderly, socially damaging pattern of urban sprawl with a carefully constructed "fear market" based on organized insecurity. Beneath this, one could argue, is an unpalatable truth: that Dubai's urban plan comprises the production of fear itself and structures residency and infrastructure accordingly.

This is an argument that seems to have more traction with commentators than actual planners. The ideas involved can be tracked genealogically, starting with Mike Davis (1992), who famously explored Los Angeles as a place where the cultural production of fear (starting with elements of the film noir genre) prefigured the militarization of suburbia. By the time Davis was treating Dubai as an "evil paradise" (2007), an almost paradigmatic approach was in place for future scholarship. Following this pattern, for instance, journal readers are promised Benjamin Smith's exploration of

"the complex geography of fears that converge upon Dubai's many and various imaginaries, insecurities, and contradictions in his article "Scared by, of, in and for Dubai". Smith mobilizes a dynamic framework for studying fear in and through landscape – offering that "acting through fear" is a key component of landscape. By asking after other ways of framing fears besides binary relationships along the lines of self-/other, Smith touches upon the difficulties of locating and writing about the ceaseless production of fears/anxieties and their articulations being, as they are, deeply personal, subconscious and shot through with ambiguity and slippery contradiction." (England and Simon: 2010)

In this account, to put it more simply, Emirati urbanism combines both the production of fear with the promise of its reduction. More prosaically, Dubai real estate developers reproduce a similar formulation when they brief their Lagos sales offices on the need to promise wealthy Nigerians a safe bolthole, out of the reach of corrupt officials and Boko Haram (Arnold 2012). There is often a neat parallel between Dubai marketing and PR that promises a safe, low-crime and tax-free environment, and critics of the state, which see it as operating a "fear economy".

Problemsatically, this analysis can veer into the more conspiratorial analysis of neoliberalism, where the state increases the levels of fear in

society in order to drive up various forms of (militarized) public and private expenditure and simultaneously remove any obstacles to a fiercely competitive form of free market capitalism.

A Land with No Plan?

Needless to say, most states can operate with some degree of practical and ideological flexibility, and the Emirate of Dubai is no exception. Rhetorically, the explanations of official positions can sway between modernization and tradition, sometimes overnight. In this respect, the capabilities of official projects to wrong-foot those who complain about their sustainability are instructive. Whereas compliant local media typically praise, say, sports megaprojects as being environmentally friendly, outside observers are alarmed at the inability of a golf course in the desert to flourish without having a disastrous environmental impact. It is unusual for commentators to consider even that the commitment to sustainable development goes beyond public relations and is instead becoming an integral part of the official ideology (with genuine implications for how the "model" is implemented; see Barnfield, 2011). So far it has been suggested that too many commentators have become trapped in the a priori assumption that pre-crash Dubai was a free-for-all of unregulated growth. (In passing, the same critics are quick to highlight the legal attacks on personal freedom that generate frequent headlines – too much regulation in private life is seen as a problem in the UAE, even when ignored at home.) Consequently, the city – Dubai municipality – is still regarded as lacking genuine urban planning, with a lack of foresight that has behavioral consequences for its inhabitants. Thus journalist Jim Krane (2009) builds a chapter assaulting 'the lawless roads' into his story – largely written before the 2008 slump – of the "world's fastest city". While it is plausible that dangerous driving could be inadvertently "planned in" to the traffic system, it is regressive to explain this by expelling individual choice from the model and view reckless or even criminal conduct as an involuntary byproduct of an entire city-state. This paper asserts that hostility to Dubai's attempts to create economic dynamism while reducing hydrocarbon dependency has been driven, at least in part, by a more general sense of despondency about the prospects for growth – sometimes couched in environmental

terms. Consequently, the notion that corporations are simply allowed to let rip in Dubai – protected by authoritarian politics and a police state – often goes unchallenged. For the journalist in source of an anecdote, there is plenty of material to feed this perception: Krane's interviewees were more likely to disclose a recent near miss on the Sheikh Zayed Road than discuss any of the more numerous journeys completed safely. Yet given that there is such an entrenched, borderline irrational perception that the “Dubai model” lacks a plan, it is worth attempting to disclose something of the character of this entity (which, given the denial surrounding it, seems to hide in plain sight).

Formally Free Zones

The first point to consider is that zoning (and rezoning) are ongoing processes within the Emirate. Prior to the 1980s, this meant using Arabic place names and names of the largest thoroughfares to indicate districts. A proportion of the same areas was home to, or set aside for, a variety of small-to-medium scale industrial businesses. Such activity was predicated on the successful construction of Port Rashid (opened 1972), allowing for import-export activity (including the movement of raw materials and parts for assembly) and enhanced by improvements in the quantity and quality of roads. In turn, a more detailed projection of the Emirate's future emerged: anticipating the idea of “peak oil” (and underplaying the role of new technologies in increasing oil production), the nation's comparatively sparse oil supplies were used to urge diversification into new areas of commerce before the oil ran out. Prominent in this discussion were real estate (non-Emiratis becoming permitted to own buildings, but not land, in designated areas), tourism and information technology (copy-pasting the burgeoning US discussion of the “Knowledge Economy”). Each enterprise is treated as a significant engine of future growth in its own right.

To accelerate economic diversification, specific zones were invented whose names – widely popularized in their literal English translations – indicated the type of activity that was desired therein. The success of each “zone” has been varied. For instance, Dubai Internet City has been able to attract and accommodate high profile IT companies such as Microsoft, Oracle and IBM, cementing the process by offering a

wide range of incentives. In contrast, at the time of writing, Dubai Maritime City remains incomplete. Other such “themed” institutions have had a more uneven history, determined in part by the percentage of their master developer's plan that was complete at the time of the 2008 economic slump. For instance, the mixed-use Dubai Sports City (DSC) promised four world-class stadiums and a championship golf course as the anchors for nearby office, retail and residential premises (see Smith 2010). Expectations of a population of 60,000 and a big role in an imminent Olympic bid were commonplace prior to the property crash. Nowadays Ernie Els' signature greens and the 25,000-seater cricket stadium are operational, but many other proposed DSC projects have lagged behind, to put it mildly. Other themed zones or “Cities” have acquired a complex history behind their declared objectives. For instance, Knowledge Village was conceived by TECOM to entice top-tier, Ivy League-style universities into opening local campuses in Dubai, surrounded by IT-based SMEs. When less prestigious institutions took advantage of the special regulations allowing for 100 percent local ownership within the zone, they were subsequently (and strongly) encouraged to vacate the site and relocate to Dubai International Academic City: TECOM-owned, more geographically isolated and built on cheaper land.

In short, when critics of Dubai point to the rapid development of the city (Dubai Municipality) prior to 2008 as evidence of the lack of a plan, they are wrong. The proliferation of themed zones with literal-sounding English names is some proof of this; digging deeper suggests that the Al Maktoum family's monopoly on land gives them the formal position of being able to dictate planning. Or, to de-personalize the role of the ruling family, we could see them as turbo-charged executive administrators, meaning they monopolize state lands and therefore would have a *de facto* monopoly on planning, irrespective of the decisions made by, say, the Real Estate Regulatory Authority (RERA). The fact that these decisions often appear to be poor, unwise or irrational does not undermine the fact that Dubai city and the wider Emirate alike are, formally speaking, subject to planning and control. This specific form of opprobrium directed at the UAE for having “unfettered” free market capitalism willfully ignores the very real planning and organization that underpins what Davis calls “Milton Friedman's beach club”.

Neoliberal Prejudice

So for Dubai city (and the internal zones that make up its themed ‘Cities’) to be seen as a neoliberal “evil paradise” with any accuracy, we would need to probe the meaning of neoliberalism. Numerous critics of neoliberalism draw a thread from Friedman via General Pinochet to George W. Bush, in a narrative where military force and privatization smash existing institutions to create a ‘perfect’ market. In such conditions, corporations are able to build monopolies based on their existing economies of scale. In the background, a shadowy combination of secret meetings, “old school ties” and a “revolving door” of industry hiring ex-government personnel (and vice versa) cements a basic exploitative relationship.

Whereas each of these trends – except, perhaps the ‘revolving door’, due to high levels of voluntary unemployment among pampered young Emiratis – plays a role in Dubai’s social institutions, they tend to constrict the free play of market forces. Having an urban plan is an instrument of the ruling clique itself, which is content to move between state and market solutions in support of perpetuating its own position and interests. This means the real issue is not the presence or absence of urban planning, but the competence (or otherwise) of the planners themselves.

If urban planning is an instrument of Al Maktoum rule, can the same be said of operating a “market in fear”? A necessarily sketchy concept, its evocative use – suggesting a kind of war economy profiteering from uncertainty – is an undeniable part of many aspects of city life. Facing outwards, the incentives for foreigners to move to or invest in Dubai are couched in terms of its security and stability in the region overall. Internally, this adds to the insecurity of the nationals, who complain frequently of becoming a minority in their own country. Add to corporate life a police force which for many years would try to reassure public safety by mainly disclosing that a crime had been committed at the moment the perpetrator was convicted – coupled with various panicky campaigns often best characterized as moral entrepreneurship – and it is clear that there is a large “fear factor” in public policy. At the same, the society has been slow to incorporate the modern trappings of “risk society”. On the ground, life lags behind the “homeland security” levels of fearful living seen in the West. For instance, research based

on interviewing CEOs suggests that, prior to the 2008 crash, local businesses were slow to adopt comprehensive Enterprise Risk Management, preferring instead the more dated “silos”-based approach (Rao, 2007). Unfortunately, critics of the Dubai model as a “fear economy” would prefer not grapple with such complications; instead they assume that a racial dynamic akin to one in 1980s America has transplanted itself to gated communities in the Arabian Gulf. Whereas local housing policy does operate a form of exclusion – characterized by unrelenting legal campaigns against large numbers of “bachelors” living in all kinds of “unsuitable” properties – such initiatives are designed to reassure local families who fear such undesirables moving into their neighbourhoods. Anti-bachelor campaigns appear disconnected from the needs of the foreign real estate investor, who may even view them as cruel and discriminatory.

To summarize so far, Dubai’s urban plan is frequently ad hoc and contradictory, rather than absent. Its alleged “fear economy” is better characterized as a battery of authoritarian and socially regressive measures which it is unable to incorporate consistently into its overall policy objectives. If anything, the preponderance of “fear” actually corrodes the vitality of civic life in the Emirate: who wants to live in a society where, upon describing the slightest inconvenience in interpersonal relations, the first question is always “what nationality?” If, as Hudson (2011) argues, citizens make cities, Dubai would do well to encourage a more active form of participation, shaping the existing plan to be much more in line with residents’ common interests. Whether Dubai in its current form could survive such a process is another story.

Lessons from Dubai for Chinese Cities

What Ben-Ami (2010) calls growth skepticism dovetailed with schadenfreude once the Dubai real estate market was hit by a credit-based financial crisis in 2008. By 2011, even the ostensibly neutral briefings given to the US Congress include reference to the “downturn [which] hit Dubai emirate particularly hard and called into question its strategy of rapid, investment-fueled development, especially of luxury projects” (Katzman: 24). The arguments that Dubai lacked planning and subscribed to an insincere vision of sustainability continued

even after an economic slowdown curtailed numerous building projects. Such sentiments even influence strong supporters of city life. Thus Edward Glaeser argues, in “principle, the combination of construction and quality of life is sensible, but the extraordinary extent of the sheikh’s building far exceeds the level needed to satisfy current demand for his city” (Glaeser 2011). Indeed, while Glaeser’s book *Triumph of the City* is subtitled “How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier and Happier”, one section bears the ominous subheading “Too much of a good thing in Dubai” (*ibid.*), despite recognizing the amalgam of established urban development strategies being deployed there.

Dubai’s lack of urban planning is a complaint made to sound plausible by willfully ignoring the genuine zoning that informed the city’s development. In the same spirit, critics suddenly develop an opportunistic interest in labour rights there, which is seldom applied to neighbouring Kuwait or Saudi Arabia. Throw in some descriptions of peak-time traffic – on Krane’s “Lawless Roads” (Krane 2009) – and further misrepresentation ensues. Although hard to prove, one suspects that one motive behind such a critique could be a suspicion of all “big projects”.

The notion of excess also extends into the discussion of airlines, specifically national carrier Emirates. Some accounts present the airline as the product of ambitious business practices (Krane, 2009), heralds of national pride (Butt, 2011) or even as the key to effective social forecasting about our future way of life (Kasarda and Lindsay, 2012). Conversely, some critics present this accentuated role for air travel as symptomatic of where contemporary society has gone wrong (Barnfield, 2011). As a response to Dubai’s debt crisis, some speculated about the possible takeover of Emirates by rival Etihad while presenting it as a form of deserved retribution.

Following the success of Port Rashid after 1972, Dubai opted to build on its geographical advantages attempting to develop Dubai International Airport (DXB) into an international hub. Less publicized, it continues to develop the airport Al Maktoum International Airport (DWC) into an equally versatile location for moving freight and labour, further enhancing such low profile but important activities as trade and light manufacturing. Such activities paved the way for a Small-Medium Enterprise (SME) sector, dominated by non-resident

Indian (NRI) and Iranian entrepreneurs, who live and work in a sector compartmentalized far away from the high-profile luxury market. The positioning of Dubai as a luxury resort features significantly in the hostile criticism described previously. Public Relations and press releases present almost every new development as a megaproject, regardless of its particular merits. Thus a core feature of many Dubai-focused controversies is their tendency to become distorted because of the integral role play by PR in establishing the Emirate’s “narrative”. Open and honest communications would not necessarily dampen international hostility to Dubai, but it would reduce the number of hostages to fortune being force-fed to the emirate’s antagonists. What lessons for Chinese cities arise from the Dubai story? From the vantage point of 2012, it appears that an excess of spin has made communication with the wider world problematic. On the surface, it seems that the “project” has been badly explained, estranging commentators from the Gulf state which has tried to transcend converting oil wealth into conspicuous consumption. However, before advising China to concentrate on perfecting its PR, it is worth noting that anti-growth prejudices make critics of modern cities extremely difficult to placate (to the point where the collected writings of “Britain’s foremost nihilist thinker” are introduced by writing off his late career, spent working as a publicist for Chinese special economic zones. [see the introduction to Land, 2011]. A second lesson from Dubai is that corporate communications are no substitute for genuine citizens, as Hudson (Hudson 2011; 2012) reminds us. Too many Dubai residents have little stake in their immediate environs, with their dual roles of expatriate employees and consumers coinciding with exclusion from playing a full role in the political process. Developing an engaged citizenry could also increase loyalty to the city, creating a tougher base of local support to reply to the critics.

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The Identity of a City and the City Contract

Justice Issues in Urban Planning

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*Keywords: Urban Planning; Justice;
Identity; City Contract.*

Introduction

Identifying the essence of a city is a problematic undertaking, but talking about its identity is relatively easier. Yet, the subject deserves serious consideration because of the role cities have in providing humankind with a locus of values and sense of belonging. Unfortunately, the identities of our cities are in jeopardy. The danger comes from commercial factors external to cities that have woven themselves into the fabric of our society in a rather insidious fashion. Therefore, my purpose in this paper is threefold: Firstly, I present an account of the identity conditions for cities; commensurate with the constant state of flux that characterizes most cities and the pattern of development they exhibit. Secondly, I argue that globalized consumerism robs cities of their authentic and socially negotiated identities and, in turn, compromises the role they play in human affairs. Lastly, it urges that humankind has an obligation to preserve those conditions that allow a city to maintain its authentic identity.

Beginning this undertaking properly requires common ground for conversation. I propose to think of the ‘essence’ or ‘identity’ of a city as the web of relationships between architecture, roads, sewers, laws, and policies as enmeshed with values, culture, and history. The relation between persistence and alteration, as it plays out in the particular case of the city, forms the necessary background for understanding what counts as justice or injustice in urban planning. To understand this relationship, I use “meta-urban planning” and architecture as examples.

The meta-planning of urban planning

A modern city can be identified in terms of what it contains: industry, geographical location, foods, neighborhoods, people, sports teams, etc. There is significant room for variation; a city might not have any professional sports teams, but it could have an excellent aquarium. The aspects above appeal to the physical side of the city: buildings, bridges, parks, and pipes to name a few. These aspects are always, or perhaps should always, be preceded by a plan. Some cities are evidently planned, as for example those with a gridiron structure. Others seem as if the planning process was only an afterthought. Nevertheless, planning remains central to the identity of a city just as landmark buildings, sports teams, and foods do.

Urban planning, especially in the context of identities, shows the extent to which aspects of the city must be thought about as in an interconnected web instead of in isolation from one another, and these circumstances set the stage for corruption and manipulation for economic gain, or political power. These actions in turn affect the defining characteristics of a city and infelicitously affect a city’s identity—even if the degree of influence is only marginal. For example, Lewis Mumford (1945, pp.10-11) argues: “*The principle effect of the gridiron plan is that every street becomes a thoroughfare, and every thoroughfare is potentially a commercial street. . . . The rectangular parceling of ground promoted speculation in land-units and the ready interchange of real property: it had no relation whatever to the essential purpose for which a city exists.*”

Assuming Mumford’s notions hold true depends on how one defines the essential

purpose of a city, which is a similar but different issue. Yet, planning is not a point of contention when asking about the identity of a city. It simply shows how planning is a part of the city that is not always visible at first glance, but it is always visible when one is cognizant of the city's layout. Mumford's point, however, exhibits the idea touched on earlier that city planning could be used as a means of manipulation for economic opportunities. In the everyday context wherein one would think about urban planning, the subject would only surface when urban planning as a system failed in some regard—or in the case of a natural disaster. If a city is planned out well enough, then "the trains should run on time," unless unforeseen events impede their performance since infrastructural efficiency is conducive to the general flourishing of the city's inhabitants. Hence, infrastructural efficiency is amenable to ethical evaluation. I propose to theorize this evaluation through what I call "the city contract."

The City Contract

In order to understand the idea of "the city contract," I shall first turn to Locke's arguments in favor of "the social contact," and then show which of Locke's ideas can be used to develop an ethics of urban planning.

Locke (1764, Chapter 8, Section 95) argues: *"Men [and women] being, as has been said, by nature, all free, equal, and independent, no one can be put out of this estate, and subjected to the political power of another, without his own consent. The only way whereby any one divests himself of his natural liberty, and puts on the bonds of civil society, is by agreeing with other men to join and unite into a community, for their comfortable, safe, and peaceable living one amongst another, in a secure enjoyment of their properties, and a greater security against any, that are not of it. This any number of men may do, because it injures not the freedom of the rest; they are left as they were in the liberty of the state of nature. When any number of men have so consented to make one community or government, they are thereby presently incorporated, and make one body politic, wherein the majority have a right to act and conclude the rest".*

From this passage, one sees that the contract between the governed and the governing depends on the contract amongst the people

themselves. The political body derives its power from the people by their own consent, and this key factor legitimizes the government's authority and the social contract. As long as these conditions are met, the social contract must be honored. While the social contract is in effect, it provides the people with stability. This stability gives the people the necessary conditions for "life, liberty, and the pursuit of happiness," or more specifically, human flourishing. This stability allows for social progression and, for those in cities, the social contract takes on new dimensions, one of which being "the city contract."

Even though the city is embedded within larger political structures (country, state, nation, etc.), the city also has a relative degree of autonomy, which allows it to function independent from larger political structures. This system of autonomy allows for the particulars of the city contract to change when necessary. This is an interesting point and it shows another way that the contracts differ. The city contract benefits from its relative degree of flexibility. The social contract would suffer in this regard because constancy is one of its primary strengths. The city contract, however, remains stable enough to provide this quality also, but to a lesser degree. By remaining stable, the city becomes predictable—to a degree of course—which enhances personal security for the citizenry and, in turn, creates a feedback loop wherein the two function together to maintain themselves. This aspect explains and appeals to the fundamental qualities of a city, being consistent while in constant flux. More importantly, though, the social contract provides the city contract with a working pattern to follow. This pattern allows the city contract to duplicate it for two kinds of related but separate specific sub-contracts: informal and formal.

Informal contracts are the modes of behavior, bio-cultural for the most part, providing citizens and the city with proper courses of action regarding non-rule based procedures. These procedures include (but are not limited to) all of the aspects of city life not governed by a law or policy. For instance, the way people walk down the sidewalk falls under this category; along with supporting a particular sport or sports team; transportation preferences; housing preferences, and other cultural proclivities. Things of this category often have a correlating formal law depending on the importance that a particular culture places on the thing in question. For instance, housing and transportation preferences, which are

informal, have a correlating formal aspect in some cities. Yet, in many instances, some of these formal aspects will have a higher-ordered formal law. For example, some will have state or national formal laws that are overruled by the city contract. Therefore, they at times determine the manner wherein cities must follow specific formal contracts. By the higher-ordered formal laws dictating the conditions of the lower-ordered formal laws, and the lower-ordered formal laws governing the choices of informal customs within cultural settings, the possibility exists that the higher-ordered formal laws could control the informal ones.

These cases are the most dangerous kind threatening the identity of a city. The danger lies in the fact that people should want their cities to be their city. People still relate to and are proud of their cities. Yet, there are cases wherein people no longer have the slightest concern about the defining characteristics of their city. There are a few different accounts worth considering, which explain this phenomena. One account says that the identity of one's city is simply listless. Life there is boring and the citizens like it that way. Fair enough. This sort of city welcomes corporations making themselves the dominating presence on the cultural horizon. The people of these cities have basically let their city's identity be (mostly) replaced and defined by the corporations that serve them. People often drive through these cities in the United States on the interstate. It is easy to recognize the outlet stores, home improvement stores, and chain restaurants speckled throughout as people drive along their vacation routes. A different account looks at the conditions surrounding these 'mega' businesses to see how the tax rates and codes, zoning issues, and intra-city politics to find out if these networks created or facilitated the conditions allowing or encouraging these (non-local) businesses to dominate the city's commercial life.

In the present context, one can employ the merit of Locke's thought by identifying tensions resulting from the trespasses of non-governing powers electing to commit offenses of the same or similar calibre originally worrying Locke. Yet, these powers, namely multinational corporations, lack social accountability. They lack the mere possibility of social accountability in this context because the society that they are accountable to is themselves, stockholders. They are external to the city. Yet, one could argue that "corporate

personhood" makes multinational corporations members of the community. However, if the majority sees this line of reasoning as nonsense devised to maximize profits for the multinational corporation, then these notions fail. Moreover, the manner in which Locke defines "community" clears up any cloudy concerns. For instance, Locke (1764, Chapter 7, Section 87) argues:

[N]o political society can be, nor subsist, without having in itself the power to the property, and in order thereunto, punish the offences of all those of that society; there, and there only is political society, where every one of the members hath quitted this natural power, resigned it up into the hands of the community in all cases that exclude him not from appealing for protection to the law established by it. And thus all private judgment of every particular member being excluded, the community comes to be umpire, by settled standing rules, indifferent, and the same to all parties; and by men having authority from the community, for the execution of those rules, decides all the differences that may happen between any members of that society concerning any matter of right; and punishes those offences which any member hath committed against the society, with such penalties as the law has established: whereby it is easy to discern, who are, and who are not, in political society together. Those who are united into one body, and have a common established law and judicature to appeal to, with authority to decide controversies between them, and punish offenders, are in civil society one with another: but those who have no such common people, I mean on earth, are still in the state of nature, each being, where there is no other, judge for himself, and executioner; which is, as I have before shewed it, the perfect state of nature".

Inferring from Locke's description above, the external parties not participating in a mutually beneficial relationship cannot share the distinctive aspects such as those provided by community membership. Therefore, they do not deserve having a voice about matters to which they are not entitled by the city contract. Yet, the fruits of the social contract—in this case coming from a flexible constitutional republic—are the force legitimizing the multinational corporation via corporate personhood. This aspect creates an interesting tension between the autonomy of the city and the authority of state. The fact that this tension exists shows two things: it shows

the contract is real because if it were not then the tension would not exist (forgoing another explanation). More importantly, though, it shows the scope and limits of the city's autonomy. If the citizens of the city want to have a greater sense of autonomy, those in power of the constitutional republic must make use of its flexibility and make some concessions.

Touching on the scope and limits of the city's autonomy provides an opportunity to talk about them. Earlier when I argued about the formal and informal aspects of the city contract, that was the scope. One knows the limits when one figuratively bumps up against them or crosses them. There are of course two sides to the limits: one from the side of the citizens and the other from the city. For the citizen, it is simple: obey the law. Even though there is not always a contingency between legality and morality, the fact remains that breaking a law (that one agreed to obey by living in the city) amounts to committing an ethically wrong act. This represents the formal side of the contract that the citizen must obey. As for the informal, citizens handle most instances themselves. This includes aspects such as fashion, art, lawn care, and general questions about taste or public aesthetics. There are instance however when something that seems informal crosses over into the formal such as lawn care. In these extreme yet rare instances, cities can fine citizens money for failure to maintain the aesthetics of their yard. In these cases, the lines between the formal and the informal are blurred, and the city has an obligation to act in accord with the law. And, to not do so would violate the subtle terms of the city contract. What gives this contract credence is the fact that there is an understood trust between the citizen and the city officials, who are after all, employed by the citizen. What is more, those working for the city have an obligation to perform their duties properly. Not doing so compromises the integrity of the city and in turn tarnishes the identity of the city. What is important is that this relationship—between the city officials/employees and the citizenry—adheres to a pattern that respects the integrity of the city contract. Relating to the identity of a city, on more concrete terms, however, are buildings, which is the next step in the trajectory of this discussion.

Building Buildings and not Building Buildings

Appealing to the urban aesthetics of cities, commercial buildings typically come to mind before anything else. Their commanding presence demands attentions. Collectively they provide a skyline. Individually they serve as landmarks. Often they are the markers of our memories. Cultural identity remains in their design. So do time periods and time itself in a sense. Karsten Harries (Harries 1997), for instance, argues: "There is a sense in which all architecture demands to be considered as also an art of time. This is suggested by the way we almost inevitably resort to temporal metaphors and to metaphors suggesting motion or its absence when we describe works of architecture." We differentiate time periods by the particularities found in architectural design, kinds of materials used; the purposes that buildings serve. Throughout our lives, we form our relationships through and with the buildings of our cities. This point, however, is not a mere "building fetish."

David Watkin (Watkin 1977) defends this view as the "spirit of age" argument focusing on the notion that buildings reflect a specific time-period in design. This line of reasoning comes under attack from Nigel Taylor arguing that it is difficult and contentious to defend this position. For instance, Taylor (Taylor 2000) argues: "[I]t is both conceptually and empirically difficult (and therefore controversial) to identify what is most characteristic of a particular age or culture. This is especially so in relation to Europe and North America over the last 150 years, where the pace of technological and social change has been such as to make it especially difficult, at any one time, to pin down what is the distinctive or dominant "spirit of the age". Taylor (Taylor 2000) then plays the "Nazi card" arguing that such an argument could slippery slope its way into preserving architectural values of the Nazi spirit of age. Taylor's objections fall short on two accounts. Firstly, because something is difficult does not mean that it is impossible, and in turn, Taylor appeals to ignorance. Secondly, because preserving architecture on aesthetic value, if it is the "spirit of age", allows the remote possibility that Nazi architecture deserves preservation. According to Taylor's argument, we should then not preserve buildings for this fact alone. By using this approach, Taylor discounts imperceptible notions carried along with the aesthetics of buildings such as the intrinsic value of the history of design culture;

spent labor value of history's working class, and the future-oriented appreciation by distant generations who will benefit by the existence of ancient buildings. This last aspect seems to presuppose an obligation to future generations regarding the preservation of the aesthetic value of architecture. Yet, the primary concern need not look beyond present generations. For instance, considering that people living today have an interest in future generations knowing the aesthetic value, conditions, and history of architecture, we owe it ourselves to ensure that such architecture remains. Just as we arrive at a point when it looks as if aesthetic value in architecture has secure ground, two new problems arise.

Firstly, how do we solve problems not so much about aesthetics per se, but when the public interest favors the demolition of a historic building because the changing needs of the city require it? Part of the answer lies in the question. Namely, appealing to the "public's interest" holds part of the answer, but this is not exactly a concern justified on utilitarian grounds. However, appealing to utilitarian notions is not a bad idea considering that buildings in public often affect many. Still, there is not a one-size-fits-all formula for these kinds of problems. We must avoid one pressing issue: employing practices such as eminent domain wherein a government seizes property for the sake of private interests not benefiting the public. Eminent domain, used in this way, violates the city contract because it goes around the city contract for the sake of private profit. Neither the city nor the citizen benefit from the misuse of eminent domain. The second concern lies in the following question: what shall we do when historic buildings go against modern attitudes concerning aspects such as sustainability and energy consumption? The answer is that we compromise by balancing the immediate needs with the needs of the future—assuming that we understand those needs properly. If we cannot retrofit sustainable measures, then we look for another avenue that will allow for amelioration. Nevertheless, we must always approach these situations gingerly because we spend most of our lives in these buildings. For instance, in the U.S. (EPA : 2011), the average citizen spends ninety percent of one's time indoors, and much of that time is in one of the 4.9 million commercial buildings. We are born in city hospitals; married in churches; divorced in courthouses, and work in offices. Usually buildings are always right in front of us. Yet, mentally they remain on the periphery at best.

This peculiarity warrants examination. After all, we do not only have the experience of being in buildings, but we experience them also. For instance, Harries (Harries 1997) points out: "In a more obvious way architecture is experienced with the moving body: we approach a building, walk by or around it, perhaps enter it, walk down a corridor or an aisle, up some steps, open the door to a low-ceilinged chamber, open a window to look at distant mountains. . . . the walk down a church aisle thus offers itself offers as a natural metaphor for the journey of life from birth to death." The sense of intimacy within Harries' sentiments indicates the deep connection that we have with buildings. Yet, we almost never think about them beyond initial contact. Pondering the distinct character of a building remains an activity reserved mostly for those who have a direct interest in thinking about buildings such as building inspectors and architects. If the unexamined life is not worth living, then perhaps the unexamined building is not worth living in. However, forward-thinking ideas such as sustainable architecture are examining previously unquestioned aspects of buildings such as energy consumption. For instance, Herbert Girardet (Girardet : 2000) argues: "Like other organisms, cities have a definable metabolism. The metabolism of most 'modern' cities is essentially linear, with resources flowing through the urban system without much concern about their origin and about the destination of wastes." For example, buildings account for forty percent of the total amount of energy consumed in the U.S. (U.S. DOE : 2011); industrial buildings take the bulk of that figure, followed by residential then commercial. While that percentage does sound high (USGBC : 2011), LEED certified buildings are slowly becoming commonplace with over seven thousand around the world; methods of "retrofitting" existing buildings are improving.

Rebuilding the Institutional Structure of our Institutions

The interesting note here about commercial buildings is that, thinking about how they do not have a positive sense of environmental values embedded in their design, they are not as ethical as they could be. Even though the architects and engineers of yesterday were not cognizant of these characteristics, today we have an arsenal of information allowing us to make better environmental choices. These notions appeal to the informal side of the city

contract. However, as building codes become more environmentally considerate, the formal side of the city contract will support them. Consider, for example, that in the last five years, over a dozen major U.S. cities have adopted green building codes. Scott Sayler (Matter Network : 2011) notes: "For years, cities have developed plans and voluntary standards for earth-friendlier buildings. When mandatory standards were enacted, they usually covered only public projects. Now, metro-politicians are realizing that voluntary green building standards accomplish about as much as opt-in greenhouse gas emissions control. Newer rounds of regulation affect private projects, and the truly cutting edge 'green codes' include residential construction as well." As certain cities go green, their identities change, and this is reflected in the their correlating city contracts.

Considering how specific buildings make cities unique, it does not seem too far-fetched to think that we can find a compromise for preserving historic buildings and supporting sustainability. As sustainability sets the agenda in urban planning and city management, it shows how our environmental values are improving. Architecture of this particular environmentally friendly character shows the first signs of improvement (for humankind's environmental values overall) because change is noticeable on smaller scales such as cities. Changes in architecture can be bold in two senses of that term. They can be bold in the sense that they exhibit how change is empirical and possible even though resisted by many. Secondly, they are bold in their design when the design pushes the limits of modern aesthetics—when they try something new and it works, they establish new patterns. New patterns break the mold. If we look at "life as an imitation of art," then bold art makes bold life. If cities function in the manner described previously, then bold architecture, which sustainable architecture is, creates institutions with better values. If our institutions shape us, then we will improve and shape our environmental values.

Lewis Mumford (Mumford : 1955) sums up notions such as these rather succinctly: "The prospects for our architecture are bound up with a new orientation towards the things that are symbolized in the home, the garden and the temple; for architecture sums up the civilization it enshrines, and the mass of our buildings can never be better or worse than the institutions that have shaped them." If we look at consumerism as the institution that shaped

the post-industrial West, then we gain a sense of how our buildings are, which has been described above. And, if we want to understand our buildings today, then we need to turn to today's dominant institution, which I argue is globalized consumerism.

If one needs a historical lens through which to scrutinize the existing conditions of consumerism, Thorstein Veblen's, *The Theory of the Leisure Class: An Economic Study of Institutions* provides an appropriate model (Veblen : 1912); this work focuses on the underlying pattern at play perpetuating its way through the chronological order of social studies. This pattern shows how those pulling the proverbial strings of social-political control do so through the formal and informal means mentioned earlier.

In essence, Veblen's thinking is consistent with the account of how the city contract works and how it falls prey to manipulation and control by clever parties who situate themselves for personal economic agendas. Robert Heilbroner (Heilbroner : 1953), however, maintains that Veblen's contentions no longer have a stake in the fight for socio-political explanation because they are outdated and pertain only to the time and place in which Veblen wrote, Chicago circa 1890. Yet, Heilbroner misses the point. For Veblen, this phenomenon does not disappear with the changing times. Instead, it manifests itself in forms that differ yet correlate to the changing times. What this means for the present context is that corruption holds steady as an intricate aspect defining our cities. In turn, corruption is part of the identity of the city, even though this corruption is not socially negotiated like other aspects of the city's identity. While the argument saying that corruption is inseparable from the socio-politico conditions of the city, it is not necessary that this is always the case. Corruption, or at least the high degree of it, does not have to be part of the city.

Toward Reclaiming the Authenticity of a City's Identity

People must be free to think for themselves if we want to keep the identity of the city "authentic." The manner in which I am using this term means that the people of the city must define the bulk of a city's identity through social negotiation, i.e. practiced cultural customs originating from the citizenry. This means that when it comes to cultural aspects, formal and informal, the community must

determine the degree to which external sources of culture influence the city. If citizens welcome external sources of culture and favor them over local flavor, the city still has an identity. Yet, the identity's composition comes from elsewhere. I argue that it comes from globalized techno-consumerism. We see the evidence of globalized techno-consumerism in the architecture housing our city's businesses; housing the products we buy, and housing our values. A strong objection to my views holds that cities are not isolated units and need to have outside aspects; cities are enmeshed non-native aspects and citizens want to hold on to those aspects. Fair enough. That being the case then a compromise seems fitting. We need enough consumerism to keep us connected to the world. Yet, we need enough authenticity to keep us from feeling alienated from our own cities. Lewis Mumford

(Mumford : 1955) argues: "The future of our civilization depends upon our ability to select and control our heritage from the past, to alter our present attitudes and habits, and to project fresh forms into which our energies may be freely poured."

The modern city always represents the highest point of our culture, which includes everything from technology to art. Yet, the city itself is a technology. It is also art. It is something that we should be proud of and want to pass on to distant generations. Yet, we must ask ourselves the following: which city do we want to pass on? Do we want to pass on a city that we made with our buildings, sports, arts, parks, and heritage—or do we want to pass on a city that we were tricked into buying? While this question is rhetorical, the answer is not. We have an interest in passing on our city; therefore, we owe it to ourselves to pass along something that we made, history.

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Contemporary Yet Traditional

The ongoing quest for a Chinese architectural identity

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Modernization and Tradition in Chinese Architecture

Ever since the beginning of wide-ranging political and economic reforms in the 1980s, China has invested great effort in its on-going modernization. Rapid development and urbanization has affected Chinese society on almost every level and has also shaped China's recent architectural history. In contemporary China, architecture and urbanization have come to embody and display collective achievements on the road to becoming a modernized country and society. Modernisation (现代化) in this context is seen as an empowering change for those who are part of it, and newer districts of Chinese cities such as Suzhou Industrial Park proudly name major urban thoroughfares "Modern Avenue" (现代大道) and major commercial landmarks "Harmony Contemporary Plaza" (圆融时代广场). Modernization has however also brought with it the destruction of centuries-old material and immaterial traditions (Figure 1). It is thus not surprising that although much of China's architectural development in the past three decades has centred on modernizing through opening up to and importing Western ideas, a parallel discourse on how to address the continuation or reinvention of tradition has continually accompanied efforts to modernize. In this paper, I discuss contemporary architectural developments in China in the context of the simultaneous desires to both modernize and to respect and maintain tradition. Since the early 20th century, the question of the relationship between

modernization and tradition has aroused great interest and great debate among Chinese architects, and it continues to drive the quest for a Chinese architectural identity today. The concern for a "new tradition" has resurfaced at every stage of China's architectural development since the early 20th century, in spite of repeated abrupt and politically charged phases of breaking with traditions and interruptions of continuous architectural discourse. In the following, I argue that modernization and tradition in Chinese architecture are not at odds with each other, but to the contrary, architectural modernization in China is linked on many levels to a reinvention of tradition in architectural terms. To do this, I frame recent Chinese architectural developments within their own context rather than comparing them to Western precedents, echoing Rowe and Kuan (Rowe and Kuan: 2002), who argue that modernization in China is self-determining and that it differs in significant respects from processes of modernization experienced in the West. Faced with the challenges resulting from increasing contact with technically advanced imperialist Western powers in the 19th and 20th centuries, concerned Chinese scholars began to search for ways to somehow adapt and react. Zhang Zhidong (张之洞) argued in an influential essay ("Exhortation to Study", 劝学篇) in 1898 that the survival of Chinese culture depended on using Western knowledge in a way that could maintain and enact a core of Chinese learning (中学为体,西学为用). Along



Figure 1 : Newly constructed large-scale suburban quarters in Suzhou replace villages and farms

this line of thinking, a widely shared and self-conscious attachment to and concern for tradition among Chinese architects in the earlier 20th century resulted in a perspective that saw the origins of “essence” (体) – or

Chinese architectural identity – as firmly located in Chinese tradition, whereas “form” (用) could be derived from emulating imported precedents (*ibid.* 2002). The search for authenticity and identity in architecture begun more than a century ago as a consequence of China’s encounter with the West continues to have a major influence on Chinese architects’ development of contemporary architectural expression.

Perspectives on architecture similar to Zhang Zhidong’s can still often be found underlying architectural discourse in China today. With the question of what may constitute “Chineseness” – or “Chinese essence” in architecture so inextricably connected with interpretations of tradition, architectural modernization in China may paradoxically generate (and be generated by) a rediscovery, reinterpretation and reintegration of the past. In the remainder of this paper I discuss contemporary Chinese architecture and its associated discourse in light of the long search for a “new tradition”. After briefly charting the development of Chinese architecture in the 20th century, I outline several central aspects of the contemporary discourse surrounding the question of “Chinese architectural identity”, including architecture as an imported profession, cultural values, the distinction of art from architecture and questions of national identity. As the scope of this paper is limited, I present these aspects briefly and in breadth

rather than in depth, hoping to provide those not familiar with contemporary discourse in China a glimpse of architectural developments as they can be seen from within.

Architecture as an Imported Profession

Historically, there were no professional architects in China. Buildings were designed and built primarily by craftspeople, based on knowledge handed down from master to apprentice orally or, in the case of official buildings, following formal government codes (Liang : 1934). Architecture did not form part of the intellectual canon of arts – such as painting, calligraphy or music – that China’s elite typically pursued in classical education. With gradually increasing contact and exchange with the West, architecture as a profession was imported into China first by foreign professionals working in the Western settlements of the trade ports in the late 19th century, and later by those studying architecture overseas and returning to China (Kvan, Liu and Jia : 2008). After the fall of the Qing government, the search for a new yet Chinese architecture formed part of the search for a new national image that would suit the Republic of China. Buildings combining new materials with traditional Chinese stylistic elements became part of the image of the Chinese Nationalist government during the 1920s. The new style was developed to a great extent through the works of Henry K. Murphy, an American architect working as architectural advisor to the Chinese government at the time.

The introduction of Western building forms and techniques and later, architectural education modeled on Western precedents, gradually led to the establishment of professional architectural practices in China in the early part of the 20th century. In effect, the importation of the architectural profession constituted a sharp break with existing modes of building as traditional architecture was now associated with craftspeople, whereas Western-style professional architects pursued different styles of working and enjoyed a higher social status. Somewhat ironically, the subject of and concern for architectural history was only established through the efforts of returning overseas educated Chinese such as Liang Sicheng (梁思成) and his wife Lin Huiyin (林徽因), who modeled the subject as a parallel to Western architectural history. There seems to have been little concern for a linearised, collection- and preservation- oriented account of architectural history in China until well into the 20th century. Liang Sicheng's work in establishing a historical account of Chinese architecture led to him being considered the "father of Chinese architecture" today.

The self-consciousness emerging from the importation of Western approaches to design and construction led to new architectural questions in the republican and early communist era, such as the "big roof debate". This debate first accompanied the development of architecture representative of the Nationalist Chinese government in the 1920s, and was resumed again after the establishment of the communist People's Republic of China during the 1950s. Already Henry K. Murphy had drawn on official palace typologies that emphasized large traditional roofs for his design of universities and large municipal buildings. In a similar manner, Liang Sicheng – an influential figure in Chinese architectural circles – saw the large tiled roof with curved eaves as the salient feature of traditional Chinese architecture (Liang : 2007). The big roof thus also formed an essential element in Liang Sicheng's proposal for a "national architecture" that was invited by the Communist Party of China in 1953 (Fairbank : 2009). In the works of Liang Sicheng and his generation of architects such as Yang Tingbao (杨廷宝) as well as his students such as Zhang Bo (张镈), Wu Liangyong (吴良镛), Dai Nianci (戴念慈) and Zhang Jinqiu (张锦秋), this led to design approaches that aimed to create contemporary yet Chinese architecture by blending new materials and functions with

large tiled roofs adapted from classical formal temple and palace architecture. In particular in Beijing, this approach was quite influential and generated a number of characteristic buildings such as the National Library and the Beijing Railway station. In the late 1980s and early 1990s, the big roof style was again strongly encouraged by the municipal government of Beijing who aimed to "recover the style of the old capital" (Xue : 2005). The Beijing West Railway Station, constructed in 1996, remarkably resembles the large construction projects of the 1950s. Coastal cities such as Shanghai or Guangzhou meanwhile were more exposed to foreign influence and subsequently adopted more Westernised building types and styles than inland cities. This difference remains visible today, although Beijing has worked hard to add Westernized landmark architecture to its portfolio in recent years. Tradition-based approaches to design based on Liang Sicheng's analysis of traditional architecture have influenced the design of new building types such as high-rise office towers even in coastal cities. Within China's architectural community, high-rise towers were (and often still are) assumed to consist of a base, a middle, and a "hat", in analogy to traditional temple and pagoda typology. This parallels similar approaches in the West in which high-rise buildings were composed in analogy to classic column orders. The effects of this approach are clearly visible in the skyline of Shanghai, or example. After the Cultural Revolution brought architectural development and discourse to a complete halt for almost 20 years, the stabilizing and opening up of China since the early 1980s was accompanied by enthusiasm for both new commercial ideas as well as foreign ideas. Architectural references to tradition have also made a comeback, in two different forms: Tradition is pursued by architects in discourse and built work as the question of "Chineseness" in architectural design resurfaces, and it is frequently employed for commercial purposes. Traditional references in architecture have considerable commercial value within China as the break with tradition enforced during the years of the Cultural Revolution also created a widely shared interest in or even yearning for a nostalgically embellished past. With national and international tourism increasing steadily, newly constructed or reconstructed picturesque "old streets" (老街) have become lucrative investments in many Chinese cities. In residential estates and interior design,

“Chinese style” is similarly popular but typically follows superficial and simplified understandings of tradition. Architectural discourse and practice in China is significantly influenced by the structuring of the profession into large Design Institutes (Kvan, Liu and Jia : 2008) that are mostly commercially oriented and, ever since their establishment in the early communist era, closely connected with the government. From the 1950s until the 1980s, all private architectural practices in China were subsumed into the state-controlled Design Institutes, which still produce most of the planning and design work in China. Architects working in the Design Institutes tend to adopt a conformist stance where expectations are met and little design experimentation and exploration are pursued. Much design work produced by the Design Institutes seems to continue a pragmatic, simplified classical style mixed with modern elements - a style that was acceptable even throughout the more ideologically charged phases of Chinese recent history (Li : 1999). Small private practices are starting to change this state of affairs but their work, although highly publicized, is typically of small scale and little influence. Any design work done by private practices furthermore needs to be submitted for planning approval through a Design Institute. Division of labour throughout design processes and a focus on the functional and economical are deeply entrenched in the working modes of the Design Institutes. Architects typically design large-scale plans up to the scale of 1:100 within short time spans and leave responsibility and control over the detail planning as well as the actual construction process almost entirely to contractors.

contributions to a field once they progress to artistic maturity. Teachers tend to discourage the challenging of established modes of practice by students, whereas students expect teachers to authoritatively direct their work. Judgements of appropriateness are thus typically dependent on lineages that implicitly determine loyalty to a particular body of work or thought. Individuals tend to see their contributions within the framework of such lineages and relationships rather than as outcomes of their personal self-realization. The focus on architectural ‘isms’ expressed in terms of abstract ideas that can be observed in Western discourse is not nearly as strong within Chinese architectural discourse. Instead, Chinese design culture seems to value particulars, in particular personal experience, over theoretical concerns (Herr : 2011). Chinese students returning from overseas education, however, often experience a break in this lineage thinking and reposition themselves in a more individualist framework. Among architectural practitioners, Ma Yansong of MAD (马岩松) and Hua Li of Trace Architecture Office (华黎) have followed this pattern. Some returning from overseas education maintain loyalty to a particular tradition of thought in a traditional manner but adopt a Western teacher and Western body of thought to follow. Gu Daqing (顾大庆), Wang Junyang (王骏阳) and Zhu Tao (朱涛) are influential scholars whose work introduces Western-style thought - in particular, notions of tectonics and critical regionalism - into the Chinese context.

Judgements of architectural appropriateness within China are also influenced by and derived from recommendations made by political leaders. When the newly established People’s Republic of China faced dire times and lack of resources, Zhou Enlai (周恩来), then prime minister, encouraged architectural development according to the priorities of “usefulness, functionality and beauty if possible” (适用经济美观). These priorities have become entrenched in architectural thinking in China and are invoked even today by figures as influential as Wu Liangyong as a moral framework for architectural practice. Such priorities also underlie the Design Institutes’ continual focus on pragmatic and economic aspects of architecture in an ideologically sanctioned framework of appropriateness. Severe scarcity of resources combined with intense political pressure faced by Chinese architects from the 1950s until the early 1980s resulted in an industrialised, reduced and

Cultural Values in Appreciating and Designing Architecture

Thinking as well as the expression of viewpoints within contemporary Chinese architectural discourse take place based on cultural values that condition specific ways of appreciating and evaluating architecture. Confucianist values of respecting leaders, teachers and elders generate a culture of valuing continuity and respect to tradition that has not been altered much even by breaks as radical as the Cultural Revolution. As in the traditional arts, students of architecture are expected to learn first by following and studying the masters, and make their own

simplified architectural language that, while stemming from quite different motivations, may be interpreted as Modernist from an outside perspective. The focus on functionality and economy has had far-reaching impact on Chinese architectural design culture.

Architectural design teaching and practice typically focuses on plan-based functional layout, which creates a characteristic design language of buildings consisting of compact clusters of compartmentalized spaces dedicated to particular functions. The design of building elevations is typically seen as an embellishment and consequence of plan layouts.

Within China architecture is often appreciated and assessed in an emotional framework. Composition, sense of comfort, appropriateness, sense of poetry and sense of art all play a part and are expressed in personal, emotional language in addition to abstract rational reasoning. In the case of building design, for example, the focus on functional layout described above at the level of individual buildings is often complemented with a loose and irregular site layout that is reminiscent of pavilions in a garden. Chinese contemporary discourse further features characteristic ways of speaking and writing that derive from traditional Chinese philosophical, artistic and epistemological frameworks of thought (Li and Yeo : 2007; Herr : 2011). Discourse is traditionally framed less in terms of Western-style dialectics but as an exchange of expressive comments that primarily appeal to emotion and will elicit agreement through empathy, for example by appealing to the readers' sense of appropriateness, values or personal, concrete experience. In a recent lecture to a Harvard University audience, architect Wang Shu (王澍) for example presented a series of images showing one of his buildings with the comment that the shown images may not appear special, and advising the audience to visit the building in person to experience that it was indeed a very special place. Even critical essays employ this way of appealing to emotion, such as Zhu Tao's "Traditional and Modern, Tradition and Us" (2002).

Architecture and Art

Although architecture was not part of the canon of arts pursued by traditional Chinese scholars, architects such as Liang Sicheng (Liang : 2007) tend to present it in a framework that refers to classical rules and types or to Chinese garden design. This positions the architect as a traditional scholar and contrasts with the more pragmatic understanding of architects as providers of functional and economical buildings that is common among contemporary architecture professionals in China, in particular those working in the Design Institutes. The differentiation between architecture understood as a profession and architecture understood as a form of art seems quite strong within China, and recently became explicit with the awarding of the prestigious international Pritzker Prize to Chinese architect Wang Shu in early 2012. In its citation, the international jury commented: "The question of the proper relation of present to past is particularly timely, for the recent process of urbanization in China invites debate as to whether architecture should be anchored in tradition or should look only toward the future. As with any great architecture, Wang Shu's work is able to transcend that debate, producing an architecture that is timeless, deeply rooted in its context and yet universal." (Pritzker Prize announcement 2012). After initial disbelief, the news of a Chinese architect being awarded the Pritzker Prize provoked great pride and enthusiasm among Chinese architecture students. Among the professional architecture community however, the response to the award was mixed. Wang Shu tends to be perceived as too young to receive such a prestigious prize, and as not representative of contemporary Chinese architecture – instead, he is often described as an artist, implying that his work is removed from professional architectural practice. In February 2012, the same month as Wang Shu's Pritzker Prize award, the Chinese President personally presented the country's top architectural honour, the 2011 State Supreme Science and Technology Award of Chinese Academy of Sciences, to 89 year old Wu Liangyong, a former student and collaborator of Liang Sicheng. Among Chinese architecture professionals, this award was greeted with wide approval. The difference between the two awards illustrates differences in appreciating and valuing architectural work from within and from outside China, and shows the on-going lineage-based tradition within the profession.

Both Wang Shu and Wu Liangyong are engaged in the collective search for a “new tradition” in Chinese architecture. However, the two architects have different perspectives on what constitutes traditional architecture. Wu Liangyong is primarily concerned with traditional architecture and urban planning that orients itself towards large-scale government projects. Wang Shu in contrast consistently invokes vernacular architecture when calling for a rethinking of traditional architecture and presents himself as an “amateur”, suggesting an identification with the unknown craftsman-builder of ancient times rather than with contemporary architecture professionals. Where formal architecture stressed rules and grammar, and thus lent itself to the Beaux Arts-educated generation of architects thinking in terms of styles and types, the younger generation of contemporary Chinese architects, exemplified by Wang Shu, seems to find tradition primarily in vernacular architecture and locally sourced materials (Figure 2). The two approaches are different in

Institutes. Beyond architecture as art or architecture as profession, the reference to vernacular architecture results in a new category: architecture as local craft. Based on contemporary discourse found in Chinese journals such as *Architecture and Culture* (建筑与文化), this direction seems to hold more promise for future architectural developments (Chakroff : 2012). In this context, Kenneth Frampton’s call for a critical regionalism, introduced to China through overseas educated students, is seen as highly relevant to contemporary Chinese architecture, and his works are widely read in their Chinese translations. The notion of ‘tectonics’ is perceived as an appropriate way of addressing the issue of critical regionalism in terms of structural and spatial expression of local contexts (Zhu : 2002; Gu and Bertin : 2010).



Figure 2 : Vernacular references in the Xiangshan campus of the Chinese Academy of Art, designed by Wang Shu

as far as the former emphasizes the rule-governed style of official buildings and thus uniformity, whereas the latter allows for variety generated through local conditions. Until today, the formal style is common in “official” buildings such as the Chinese Shanghai Expo Pavilion 2010, whereas younger and more experimental practices such as URBANUS explore vernacular references, such as the urban Tulou (土楼) building for lower income residents in Guangdong. As employed in young practices, vernacular references and inspiration also serve as a way to avoid the stiffness that often goes along with work produced by the Design

National Architecture

Underlying the widely echoed sentiment that Chinese architecture should recover its “Chineseness” is a tendency to think of architecture as an expression of national identity. From the distinction of Chinese “essence” and Western “form” at the beginning of the 20th century, to Mao Zedong’s (毛泽东) call to “make the past serve the present and the foreign serve China” (古为今用, 洋为中用), priority was consistently given to a national focus. Thinking in these terms is motivated in some contexts by political ideology, but to an even greater extent by ethnocentrism and a shared desire for national pride. The historical background of this desire is a long struggle to develop China from a feudal society into a

modern nation at eye level with other developed countries. In this struggle, calls for more development and progress typically appeal to an ethnically framed “we” as a precondition for national identity.

In Chinese language architectural essays and journal articles, authors frequently invoke such a “we” that refers to those of Chinese ethnicity, in particular to those born in mainland China. In Chinese articles, emotional appeals are often made, while in similar Western articles, abstract argument or critical discourse is the preferred form of connecting to the audience. Zheng (Zheng : 2012) characteristically writes in a typical scholarly paper: “Unless we understand the core content of our architectural culture in sufficient breadth and depth, the artistic style and form of cultural meaning cannot be expressed thoroughly. Today Western culture strongly influences and stuns our country’s culture, which is evident from Western architects being in charge of a great number of domestic Chinese architectural projects” (translation by the author). The emphasis on national identity and national pride has transcended political changes over the past decades and forms the basis of a recent tendency to foster recovery of national treasures and icons. In many cities, for example, traditional temples are currently reconstructed or even newly constructed in adherence to old examples despite China’s

architectural tradition in contemporary buildings are of commercial value. Newly constructed commercial ‘old streets’ have thus sprung up in many cities around China, and some cities such as Xi’an seem determined to pursue a “fang gu” (仿古) style on a larger scale. “Fang gu” refers to the modeling of the new on tradition, which has a range of possible interpretations. On the one hand, it can imply construction as in traditional times but it can also mean a much more superficial disguising of reinforced concrete structures - such as shopping malls - as traditional timber structures with tiled roofs (Figure 3). These developments, however, often seem quite crude and do not seem to contribute much to a further development of contemporary ‘Chineseness’ in architecture. Overall, the concern and quest for a new yet traditional architecture remains bound to a national level: Even though Wang Shu has received much international exposure since his Pritzker Prize award, the discourse on contemporary architectural “Chineseness” seems to receive little attention from outside. Many architects well-known in China, such as Li Xiaodong (李晓东), Liu Jiakun (刘家琨), Zhang Lei (张雷) or Tao Lei (陶磊) remain mostly unknown in the international architectural community and very few have built outside China.



Figure 3 : New buildings modeled on traditional precedents in the ‘fang gu’ style in Xi’an, China

cautious attitude towards religion. Similar to the early years of the People’s Republic of China, explicit references to traditional architecture are put to work to appeal to politicians, tourists and the general public alike. As tradition appeals to the general public, references to

A New Vernacular?

With the experience of globalization following China’s joining the World Trade Organization in 2001 and a persistent concern regarding the maintaining of identity in times of rapid change, the call to recover traditional values has intensified in recent years. In this context, a return to Chinese cultural foundations is seen by many to provide a source of “Chineseness”.

Among different generations of Chinese architects, however, views on what constitutes tradition vary. The generation of architects who returned from overseas education before the establishment of the People's Republic of China was primarily concerned about the preservation and documentation of traditions that were still in existence but changing rapidly with the modernization of China. Their focus was primarily how to import new ideas in a way that would continue old traditions by new means. This generation also brought with them a sense of architectural appropriateness that was based on the Beaux Arts education they had received overseas. For some time, traditional references were employed as part of a building style that, as Chairman Mao Zedong suggested, could help to appeal to the population at large and show continuity and stability of the newly founded People's Republic of China (Rowe and Kuan : 2002). Following a complete break with tradition during the years of the Cultural Revolution, and a rapid development of Chinese architecture following the political and economic reforms of the 1980s, China experienced modernism and postmodernism more or less simultaneously. After this period of eclecticism, the quest for "Chineseness" in architecture is once again at the centre of architectural discourse within China. Among contemporary Chinese architects, the search for a new Chinese architecture increasingly involves inspirations from and reinterpretations of Chinese vernacular architecture rather than classical temple and palace architecture. New directions are being derived from observing and adapting local ways of building, and often from addressing social dimensions of architecture. The work of the large Design Institutes is unlikely to foster such exploration due to their organizational size and structure. With an increasing number of independently thinking and working small- to medium-size practices actively pursuing the question of the relationship between the modern and the traditional in innovative ways, however, the development of a new yet "Chinese" architecture is well under way.

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Lost in between Cities: Two films of Wuhan from 1990s to 2010s

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Overview

From 1990s to 2010s, there was a period of deeply changing for both Chinese cities and society. As success in rural reform, the labor surplus force flowed from rural to urban areas. They promoted the rapid development of the city, and were coerced by the rapid development of the city. We can find, through two films of Wuhan: So Close to Paradise (1996) and Luxury Car (2004), how the residents lost in city space, and the cities lost in development. Although living in a same city, how many memories and images of the city we can share with each other? Although the personal image of city is abundant, only the public image can become the basis of our communication. There is no doubt film is such a strong media to build a public experience and image.

The fifth generation of Chinese directors is focused on country life in rural area, while the sixth generation of Chinese directors is focused on city life and the changing of cities. With the development of the economy, the city has to become a container of desire. Through a female's life story, the films tell us the pain of Chinese city growth in this period.

These two films were both taken in Wuhan. famous for the Yangzi River and the Hanshui River, Wuhan was known as the thoroughfare of nine provinces for hundreds of years. With the rich water location, in Imperial China, Wuhan had prosperous inland water transportation. In modern time of China, Wuhan was one of the first open ports. Under the impact of concession culture, the city was built on transportation, business and service. Today, there are no determinate areas of city centre or old town in Wuhan. It was made by three different downtowns, with different sources and cultures. On the pace of Chinese urbanization, Wuhan was awaked by its old

port culture, and then got lost in rapid development.

We are concerned on how the city image should be built in films, and we should look for what kind of public city images are built for residents. After So Close to Paradise and Luxury Car, today in Wuhan, the Nan'an Zui is gone, the third ring highroad has built, and the subway will be opened in this year. The city somehow is becoming to "another Wuhan" in real life. What kind of Wuhan will be shown in film? Can we find our way to recognize our city: Wuhan?

Metropolis and Film

As Kevin Lynch said, "Even citizen has had long associations with some part of his city, and his image is soaked in memories and meanings." It is really concerning about the personal experience and the knowledge of the reality, which are endless, abundant and individual. It is the abundant transmission and exchange that makes the individual memory of realistic cities and mental images present, which can expand the methods for planner and architecture to observe the city space. Film has visual verisimilitude resulting from the mechanical duplication and projecting, and truly brings in time, illusion of movement, montage and audio that make film become the effective intermediary for us to recognize and represent the city environment.

The fifth generation of Chinese directors generally pay attention to the destiny of persons in villages, while the sixth generation ones mainly focus on the theme about metropolis through their works, because the metropolis has been the container of people's desires as the result of economic development. Some of the directors are interested in the

emotional dilemma of the metropolitans and make a mirror for the youth to represent their perceptual world in the crossing centuries. Some show solicitude for the survival conditions of lower people in the cities, which reflect the proceeding transformation of Chinese economic development nowadays. There are two films, So Close to Paradise by Wang Xiaoshuai in 1994 and Luxury Car by Wang Chao showed in 2006, which were shot in Wuhan and in which the protagonists swarm into the city from the villages and seek a livelihood.

Choosing this city is because what is said by the director, Wang Chao:

"Wuhan is a very typical Chinese city. It reflects the current China more accurately than Beijing or Shanghai. Two long rivers run through this city: the Yangtze and the Han. During the day you can see a lot of ordinary people taking ships across the river to work. Along the riverside, there are still some old British or French buildings left from the pre-revolution era. The city is a combination of tradition and modernity, urban and rural. It is representative of most cities in central China."

Filmic Space and Architectural Space

Space as it appears in the film is a subject to the narrative. Eric Rohmer, French movie master, delineates space into three distinct types:

1. Architectural space,
2. Pictorial space,
3. Filmic space.

Architectural space is the physical location where the film is shot. Pictorial space is the film image representing the world, which cares about the shapes and color, specially paying attention to the type of camera lens, the depth of field, height and tilt, etc. Filmic space, which includes both the audio and the off-screen space, articulates both the pictorial and architectural space within the given narrative, creating an imaginary place through a shot sequence or a montage suture.

The paper analyzes the various cinema means of representation in these two films, which aims to understand how to rebuild mental potential space through the elements provided by the two films.

Different directors produced different legibilities of Wuhan on screen with different effects. It is closely related with the background of times,

creative idea and aesthetics standard of directors, which is also a concern in the paper.

So Close to Paradise, Walk, Topographical Coherence

Background of urbanization

This film is finished in 1994, shown in 1998 and tells the story that took place at the end of 1980s. So many farmers swarm into the cities for their dreams result from the increasing of employment of non-peasantry after Chinese Reformation, especially since the middle of 1980s. The start of urbanization of Wuhan is slow because of the national macroscopic policy to control the metropolis dimensions strictly. Hankou is the central urban area (downtown) during this period.

The city image

The marked city images of Hankou are old communities including the ordered ones called Li-fen with red roofs and the disordered ones with labyrinthic lanes, old buildings in the former foreign settlements and compact road network. The daily life of the common residents in the city is just the public memory.

The labour that swarmed from the villages usually lived densely in the suburb, the gap of some districts lacking of management and old buildings with low rent in the former foreign settlements. They share the public space with local residents, go out by foot or by bus as do the local people in the central district with high density of population.

The shooting locations of this film are all typical real life scene, especially for two scenes. One is the rent house by two protagonists, Gao Ping and Dongzi, which located in Nan'an Zui in Hanyang and the river shore of Hanshui River. Another is LiLi Nightclub, the night workplace of Ruan Hong, located in the basement of the Bagong Apartment, Hankou. Nan'an Zui is a cape of the Hanshui River to the Yangtze River and separated from the main district of the city by the Turtle Hill. It is not easy to access to this area and always flood in summer. The outsider and local lower residents are living here which result in the housing of slum. On the other hand, it is also the key nodal point of water way with numerous marinas and is opposite to the Han Zheng Street, the famous small-wares terminal market and produce centre. So the Han Zheng Street provide the opportunities for the peasant worker to make a living. Nan'an Zui is pushed

over to build City Park by the government so that it can be seen in the historical photos. The Bagong Apartment is a residence house in the former Russian Settlement, enclosed by the Poyang Street, the Dongting Street and the Lanling Road. Its basement and opposite cinema on the side of the Dongting Street are rebuild to be various clubs. The spaces full of desires are reduplicated rapidly produced at a low price in the developing Hankou.

Filmic strategy

The director, Wang Xiaoshuai, has always lived in Wuhan since his childhood and has a clear express on the old urban area in Hankow and Hanyang. The sites represented in the film match the collective memory of the residents born after 1970s and the elder. The two places are repeatedly presented in the film and to make the sense of site by combining the adjacent locations in the reality (Jianghan Road, Qianjin Forth Road, Passenger Transport of Wuhan Harbor, Longgang Vessel Restaurant). It implicates that the director think highly of the influence of real urban form and space to the relationship between the person and space in the film. It is similar to the manner of Eric Rohmer to treat the urban real space. Eric Rohmer is sensitive in the space of building and city, focusing on spatial sequence, and requests that the film space is precisely corresponded to the real topography and urban space, thus guiding the public to its orientation. His most successful works attribute success to the uninterrupted walk and the small coverage of the film plot. Either apply a long take to following shoot, or keep the space-time continuity by cutting and editing. Space-time Leap never appears in his film in which there are ample clues for audience to know where the protagonists are and where to go. The strategy of Topographical Coherence is good for the identification of the cities shown in the directors' films. Although Wang Xiaoshuai does not intend to do precisely as Rohmer, his shooting region is small in the city. Characters in the film all go on foot. The film's spatial relationship is created faithfully according to the real city spatial relationship, with excellent visuals. Two fragments are given below to analyze their topographical coherence:

1.In the forepart of the film, Gao Ping is drinking at the booth flanked the Jianghanquan while a strange girl is passing fast by him. The scene is shot facing the glass curtain with the

images of surrounding people and buildings. The camera begins from pan towards to left with the appearance of the girl, and then shoots Gao directly. It smoothly entirely expresses the city environment by way of glass reflex and camera's pan. If you are careful enough, you can realize the strange girl is Ruan Hong who appeared in the subsequent plot. It is the faithfulness to real urban space that brings delicate help to the narrative. The subsequent plot tells us Ruan lives in Miaojia Hotel nearby the Jianghanquan, as a result, the lane by the side of the Jianghanquan is the daily route for her. This meeting as passers-by is NOT a groundless plot, but an everyday event in their lives. In a sense, it reflects the closure and compression of Wuhan urban space at that time.

2.In the middle part of the film, Ruan furiously runs out of Gao's dwelling and goes to Hankou, then walks from Qianjin Forth Road to Passenger Transport of Wuhan Harbor beside the Yangtze River. This segment is not a long take shooting, but an editing of three following shots from three different locations; even so, the position, size and moving direction of the heroine's images on the screen are kept in coherence in both shots. This type of edit called jump cut, which causes a deliberate jarring effect and emphasizes the discontinuity between shots. The director, however, has a mind to make the moving direction of the heroine in the first two scenes accord with the position of the third place in real space, and appear the same street mark in the first two scenes as well; so that makes the editing correspond the real geographic relationship between the various places.

"So Close to Paradise" makes it easy to mark the scene locations, and construct the protagonists' paths in the real coverage of this story (Figure 1). One plot of the film is: After fighting with Gao, Ruan left her boyfriend's place. Dong zi was caring about her, and followed her all the way. Their path can be traced on map (the dotted line in Figure 1), from 2 to 5, then 6, finally was 7. They had a chat at the site 7, which is in the middle of their dwellings (8 and 2). Another path, from 4 to 8, is Ruan Hong's everyday walking path.



Figure 1 : The scene locations and the protagonists' paths in *So Close to Paradise*

Luxury Car, Creative Geography Background of urbanization

This film is finished in 2006. The second bridge across the Yangtze River built on 1995, one year after *So Close to Paradise* was finished, which is an important event of the construction in Wuhan. Since then, Wuhan has its first circle line road to interconnect three separate districts. With the international and domestic hot money flow into Wuhan, the proceeding of urbanization of Wuhan is boomed and takes on important dual historical tasks to modernize and internationalize. The city carries out serial important measures to expand outside, to control the dimension of main districts, to optimize its function and industrial distribution, to disperse the population of main districts.

The city image

The people who shared the city public space began to differentiate tremendously. The capitalists and white-collar workers become advantage groups and hope their cities become the global metropolis, which symbols

include skyscrapers, shopping malls and leisure places, to match their own portraits. Thus the image of downtown is rewritten according to the will of the advantage groups. The local lower residents and the outside workers become disadvantage groups. The old communities are demolished and rebuilt in other place. The job opportunities in the outskirts attract the crowd to move out and the population density begins to reduce. It contributes to the change of urban space and structure of population. The physical existence gradually is gone with the change which consisted of the public collective memory and replaced by tourist attractions and new landmarks built by the rising sharply icons, such as the Yellow-crane Tower, the Qingchuan Pavilion, and the television tower on the Turtle Hill. Since then, daily life was gone from the urban image of Wuhan. It is sarcastic that the local people redefine themselves through these new landmarks. The change of structure of urban space gives impact on the manner of people's daily movements. Car and other public transport system make the people evidently change their life style and rhythm. Drifting, a kind of coherent existence in the vast layout of

Wuhan, become more and more notable image of the city transportation.

The above mentioned points are reflected in the plots of Luxury Car. Li Qiming, a village teacher, goes to Wuhan to look for his missing son that went out to work in the city. He temporarily lives in his daughter Yanhong's place. Yanhong works in the Paradise Night Club as a bar girl, and also a lover of her boss Dage. The old kind cop accompanies Teacher Li to seek for the son all around by bicycle from the motor vehicle freight transports, construction sites to refectory, which almost is an investigation of the working places on the outskirts. Dage guides Li Qiming and his daughter travel around the well-known scenic spots in Wuhan in a most polite manner, and ask whether the skyline in Hankou looks like Hong Kong. In fact, the outline of city, as a metropolitan image for self-expression, has been emphasized in the opening shot of the film, which is captured on the steamship from Wuchang to Hankou through wide-angle lens and filter.

The persons in the film stay with the transportation modes most of the time, such as bicycle, taxi, private car, steamship, light train and train. The souls of protagonists are wandering as well.

Filmic strategy

Filmic space can be called as a "superior unity" that binds viewers with the world created by film. In the film, a shot is just like a cell; different spaces appear on screen one by one, and compose a new whole with geographic homogeny. According to the conception of the creative geography, the shots, as cells, are extracted from the city, in spite of the locations without any space continuity. Some films couldn't grasp the city geography deeply, but for outsider to seek novelty as film cartolina, such as Roman Holiday (1952).

The various scenes of urban space in the Luxury Car look bright and pretty. But they are highly symbolized because they are not topographical coherence in reality. Many audiences, who know Wuhan well, can distinguish the scene locations of this film, which are: Jianghanguan marina, the Second Bridge across Yangtzi River, the Qingdao Road, the First Bridge across Yangtzi River, Light Train, the campus (Cherry Garden) of Wuhan University, Dural Lake Bridge, Zhonghua Road Marina, Yangtzi Street and so on (figure 2). But the people, for example, historian, perhaps disappointed deeply who want to reestablish the city map through the

film fragments. It does not obstruct most audience to understand the film. These spots intersperse in several districts of Wuhan city, jumping in city spatial geography, showed as the scene locations distribution map.

The film shows us numerous urban fragments which are fractures in the urban topography, but the plots make the fragment spaces coherent in time. The succession of plots makes the sequent locations present a recognized spatial relationship, and help audience roam in surreal psychic maps of themselves.

On the positive side, Wang Chao doesn't delete irrelevant information and pictures to the theme of the plot as the film cartolina does. Instead, he establishes a plausible network of city-spatial geography to integrate all spots, meanwhile there remains some details of urban environment in the scenes.

The most obvious method is to use cars to link and sew-up creative geography. We can divide the film into six parts according to the six days living of Li Qiming in Wuhan. There are eight scenes of the protagonist in cars, which are close shots or close-up shots, four of them with dialogue plots are closely related with the total film narrative. The bicycle, as a stage property, make some disperse and undefined spots bind together rationally in the two key days when Li and the old cop are looking for Li's missing son.

The film presents the connection of different places, so that the drifting image of the real urban movement takes on a kind of filmic expression. For example, the director willfully makes a shot to change at the moment when vehicles run fast in the foreground and instantly hide other contents in the scene. It becomes a regular way to deal edit point of shots in the film, which makes the irritable sense in street prominent.

After the film was released, most local viewers think that the city in the film is a kind of away from the real Wuhan. It looks familiar and strange because of the following three points:

1. The scene locations are remarkable where the local people have abundant spatial experience in the real city geography. It easily recalls the viewers' memories. As the map shows, the scene locations are densely distributed in the region within Inner Ring Road except three spots, Paradise Night Club, Guiyuan Buddhist Temple and Wuhan University, which are separately located in three districts of Wuhan. These three places



Figure 2 : The scene locations in Luxury Car

accord with the function of each district and have symbolical meanings in the film.

2. The Luxury Car was shot by digital videotape. So the image style is so different from this director's films shot by cinefilm. The depth of field of DV is so terrible that the scenes lack depth, and the background is too clear. It results in two aspects: First, the objects in both background and foreground are both clear. Thus, it looks as the person is tied to the environment, and the viewer could easily read the details of the environment, and define the position and orientation as well. Second, the scenes which are lacking of depth bring about the compressions of depth of the real space in the shooting sites, and make the space become flat and shallow. So the scenes in the film are so different from the real spots.

3. The Yangtzi River and Han River have definite influence on the spatial layout of Wuhan city. The local people are sensitive about the position of Yangtzi River and the relationship between the roads and Yangtzi River, when they live in the city day-to-day. Thus the coherent scenes of 1-2-3 and 3-4-6, according to the logic of creative geography, seem repugnant to common sense in the mind of local viewers.

Film and Metropolis

The public memory is changed more and more fast with the change of times. The film is a new cognition structure that could assist us to establish the identification of city images and communicate the private memory. The methods are diverse and ceaselessly innovative for film to construct the urban spatial relationship.

The vast majority of urban planners and designers have reduced the human experience of environment to mainly what can be visually taken from maps and models. Films of cities have contributed to change in perception and the way we look at cities; consequently films expand our sense of experiencing the city.

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Yingzao Fayuan: Two Editions by the Carpenters and the Architects in 1900s

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Keywords:

Yingzao Fayuan; Carpenter; Architect; the East; the West; Early modern times.

Overview

This paper focuses on a grammar book of Chinese traditional carpenters in the 20th century, named Yingzao fayuan 营造法原, "Basic Rules for Building" or "Source of Architectural Methods". Firstly, Yingzao Fayuan was written by both carpenters and architects, between 1927 and 1937. The author, Yao Chengzu 姚承祖, was a famous master carpenter, who was born in a carpenter's family, and grew up to be the leader of Suzhou Luban Guild at the time; and the adapter, Zhang Zhigang 张至刚, was one of the first architects trained by a Chinese university, who was student of Yao Chengzu and Liu Dunzhen. The first proofreader, Zhu Qiqian 朱启钤, was the creator of the Society for Research in Chinese Architecture, and the founder of Yingzao Fashi 营造法式, "Treatise on Architectural Methods". The last proofreader, Liu Dunzhen 刘敦桢, as famous as Liang Sicheng 梁思成, was educated abroad, and was one of the founders of Chinese collegiate architectural education. Both the authors and the proofreaders of this book are important representatives of Chinese architectural history in the 20th century.

Secondly, Yingzao Fayuan is a good choice for a case study, both for clarifying the relationship between carpenters and architects, and for showing the influence of architecture to Chinese carpentry from the West to East in that era. Before 1900s, there was neither architect nor architecture in China. Modern architecture came into China from the West through foreign architects and returning Chinese architects who had received their architectural education overseas. The impact

of new ideas made Chinese traditional carpenters try to catch up with the times, and the collegiate education institutes of architecture were established one by one. Yingzao Fayuan was born in that era. The two editions of Yingzao Fayuan made it a very special example with which to study the difference between carpenter and architect, and the East and West.

Finally, the purpose of the manuscript and the original work of Yingzao Fayuan, which was written by Yao Chengzu, was as a text book for second-year-students in the architecture department of Suzhou Engineering School. When the manuscript of texts went missing in the war, the manuscript of drawings was kept by a "Xiangshan Gang" carpenter. Then the original drawings were printed in 1978, which was named Yao Chengzu Yingzao Fayuan Tu 姚承祖营造法原图, "The Drawings of Basic Rules for Building by Yao Chengzu". The modern edition of Yingzao Fayuan was rewritten in 1935 by Zhang Zhigang and Yao Chengzu, accomplished in 1956 by Zhang Zhigang, and proofread in 1957 by Liu Dunzhen. Its first printed edition was finally published in 1959. In short, in this paper, the two editions will be called the original drawings and the modern edition. To contrast two editions, is the main content of the paper, divide into six aspects from texts to drawings and details:

The paper will conclude in three further questions about the background and the influence of the Yingzao Fayuan. Although this book is a record of old times, it helps us to understand more about the changing of

traditional carpenters and modern architects in 1900s.

Introduction of Yingzao Fayuan

Yingzao Fayuan 营造法原, “Basic Rules for Building” or “Source of Architectural Methods”, is the “Xiangshan Gang” 香山帮 Ordering of Chinese traditional wooden building, which was compiled in the twentieth century on the basis of a “Xiangshan Gang” carpenter’s manual from the late Qing Dynasty to the early years of the Republic of China.

They are two typical types of Chinese ancient books and documents on carpentry and building. One type is concerned with imperial orders or records by government officers, such as the Yingzao Fashi 营造法式 in the Song Dynasty (960-1126), and the Gongbu Gongcheng Zuofa 工部工程做法, “Building Methods of the Board of Works” in the Qing Dynasty. These books laid down architectural standards for imperial China, in order to unify construction standards, control costs, and prevent corruption. The other type of book is the carpenter’s manual, such as the Lu Ban Jing 鲁班经, “Classic of Lu Ban” in the Song and Yuan Dynasties (1279-1368), and the Yingzao Fayuan in the late Qing Dynasty.

In A Pictorial History of Chinese Architecture, Liang Sicheng 梁思成 (1909-1972) described Yingzao Fashi and the Gongbu Gongcheng Zuofa as “two ‘grammar books’ on Chinese architecture”⁶. The Yingzao Fayuan, as an introduction of the “Xiangshan Gang” timber building’s orders, in many respects, is the grammar book of the “Xiangshan Gang” craftsmen in the modern sense of the word. The Yingzao Fayuan has two editions: The original manuscript by Yao Chengzu 姚承祖 (1866-1938), who was a famous master carpenter of the “Xiangshan Gang”, and the modern edition by Zhang Zhigang (1909-1983), who was one of the first generation of Chinese architect trained in China. The first proof-reader of Yao’s original manuscript was Zhu Qiqian 朱启钤 (1871-1964), also the creator of the Society for Research in Chinese Architecture, and the discoverer of the Yingzao Fashi and Yuanye 园冶. The proof-reader of the modern edition was Liu Dunzhen 刘敦桢 (1897-1968), who was a well-known architect like Liang Sicheng.

Although the original texts were lost, the original drawings by Yao are preserved the book named The Yao Chengzu Yingzao Fayuan Tu 姚承祖营造法原图, “The Original Drawings of the Source of Architectural

Methods by Yao Chengzu”. The book known today as the Yingzao Fayuan was edited by architect Zhang. These two editions of the Yingzao Fayuan are good choices of case study, both for clarifying the relationship between the “Xiangshan Gang” carpenters and the earliest Chinese architects, and for understanding carpenters’ and architects’ work in pre-modern China.

The carpenters and Gongbu 工部, “the Board of Works”, were in charge of all the building projects from dwelling house to palace. Modern architecture came into China from the West through foreign architects and returning Chinese architects who had received their architectural education overseas. The impact of new ideas made Chinese traditional carpenters try to catch up with the times, and the collegiate educational institutes of architecture were established one by one. Yingzao Fayuan was born in that era. The process of writing the book was also a cooperation between carpenters and architects. The two editions of Yingzao Fayuan made it exemplary for studying the difference between carpenter and architect, and the East and West.

Authors and proofreaders of the book

As stated above, the Yingzao Fayuan has two authors: Yao Chengzu and Zhang Zhigang. Yao Chengzu is the author of the original work, while Zhang Zhigang is the author of the modern edition, who added texts and photos, and redrew all the illustrations from the original work. The Yingzao Fayuan also has two proof-readers: Zhu Qiqian and Liu Dunzhen. Zhu Qiqian is the first proof-reader. He not only gave important advice to Yao Chengzu, but also wrote an essay about the landscape drawing of Buyun xiaozhu 补云小筑, “Buyun House”. This essay helps us to know the worth of Yao Chengzu’s work. The second and last proof-reader is Liu Dunzhen. He was the first reader of Yao’s work, and the one who encouraged Yao to complete it. He was the teacher of Zhang Zhigang, and a close friend of Zhu Qiqian. In the end, he used his power to help to publish the modern edition of the Yingzao Fayuan.

Yao Chengzu 姚承祖 (1866-1938)

The original author of the Yingzao Fayuan is Yao Chengzu, who was an outstanding leading

master carpenter of the “Xiangshan Gang” around 1900. After Kuai Xiang 蒯祥 (1397-1481), the principal designer and chief builder for the Forbidden City in Beijing, Yao Chengzu was the next best-known member of the “Xiangshan Gang” celebrated both for his building works and the Yingzao Fayuan. Yao Chengzu is also known as his style name (Zi 字)7 Hanting 汉亭, and the pseudonym (Hao 号) Buyun 补云, “The upkeep and maintenance of clouds”. Yao Chengzu was born in a carpenter’s family in Shuli valley 墅里村, Wu Xian 吴县, Jiangsu Province 江苏省, on May 2nd 1866, the late Qing Dynasty. He died on June 18th 1938.

In 1912, Yao Chengzu was the head of the Lu Ban guild of Suzhou. In the 1920s, he was one of the best carpenters of the “Xiangshan Gang”. Meanwhile as a master carpenter, Yao was engaged to teach the national building method 本国营造法 at the architecture

department of the Suzhou Engineering School 苏州工业专科学校 in 1924. The drafts of the Yingzao Fayuan were the textbook of this course, which he wrote for students there. Yao Chengzu built many buildings throughout his life. Unfortunately, because most of his works are traditional residences or gardens, after the wars and changes of government, few of them have survived. Today, there are only four of his works to be found: the Plum Blossom Pavilion 梅花亭 in the Xiang Xuehai 香雪海, “scented snow sea”, in Suzhou; Ouxiang Xie 藕香榭, “the Lotus Fragrance Anchorage”, in the Yi Yuan 怡园, “the Garden of Pleasure”, in Suzhou; the Main Hall of Lingyan Temple 灵岩寺 in Mudu 木渎; and the Yan Family's Garden 严家花园 in Mudu.

Zhang Zhigang 张至刚 (1909-1983)

The adaptor/editor of the modern edition of the Yingzao Fayuan, is Zhang Zhigang. He was one of the first generation of Chinese architects trained in China, and joined the Chinese architectural collegiate education system as soon as possible. He had participated in some live projects, but most of his works were connected with studies of Chinese traditional wooden building or the training of young architects in Chinese higher education institutions.

He was also known by his style name Yongsen 镂森. He was a student of the first Chinese college department of architecture, Suzhou Engineering School in 1926. Liu Dunzhen and Yao Chengzu were his teachers. One year

later, he transferred to National Central University 中央大学. After graduating in 1931, he became a lecturer in the department of architecture of his alma mater. Meanwhile, from 1932 to 1940, he worked as an architect, participating in the design of the Sun Zhongshan Mausoleum 中山陵 in Nanjing and some other projects. After 1949, the focus of his work shifted to teaching and research in Nanjing Technology School 南京工学院. Because of his talent, at the request of Liu Dunzhen, in 1935, Zhang became the assistant of Yao Chengzu to help him writing his great work, the Yingzao Fayuan. Like Yao Chengzu, Zhang Zhigang was born in Wu Xian. They spoke the same Wu dialect 吴语, and shared the same local culture, which made it easy for them to understand each other free of all obstacles. It was necessary because: in the original texts of Yao Chengzu, many names of the parts of building constructions were written in the phonetics of Wu dialect, which is one characteristic of oral education. On the other hand, Yao Chengzu had recorded a number of examples of mnemonic rhyme used as mnemonics in carpenters’ work. Even as a fellow townsman, Zhang Zhigang thought the mnemonic rhymes hard to understand by an outsider.

Zhu Qiqian 朱启钤 (1871-1964)

Zhu Qiqian, the first proof-reader of the Yingzao Fayuan, was a brilliant Chinese statesman, a cool-headed businessman, and a most learned scholar. He made an outstanding contribution on the research into Chinese traditional wooden building. Zhu was the creator of the Society for Research in Chinese Architecture 中国营造学社, and the discoverer of the Yingzao Fashi and Yuanye. Without any exaggeration, he was a founder of Chinese architectural history.

Zhu had the style name Guixin 桂辛, and pseudonym Huo Gong 蠡公. He was born on November 12th 1872, Xinyang city 信阳, Henan province 河南, in an aristocratic family. Zhu Qiqian died in February 1964 at age of ninety-three.

Zhu had a long-standing amateur interest in Chinese architecture. When he was fifty-six, in 1928, he set up the Society for Research in Chinese Architecture. He offered a job to Liang Sicheng and Liu Dunzhen as directors in his Society for Research in Chinese Architecture in 1930’s. Zhu Qiqian wrote several studies of Chinese cities based on information in the classical texts. This private institution has

remained an effective research institution on Chinese architecture until nowadays. In August 1932, Liu Dunzhen brought the manuscript of the Yingzao Fayuan by Yao Chengzu to Beijing, and handed it to Zhu Qiqian. As the first proof-reader, Zhu found that the text “can be sourced to the Northern Song Dynasty (960-1126), and was still in use in the Ming and Qing Dynasties (1368-1912)上承北宋,下逮明清”, and “It is worthwhile to hand on the real orders of unofficial architecture in the south of China 足传南方民间建筑之真相”. Although his name does not appear in the modern edition of the Yingzao Fayuan, Zhu Qiqian gave some rare advice to Yao Chengzu, as shown by his contribution to the book.

Liu Dunzhen 刘敦桢 (1897-1968)

Liu Dunzhen, the last proof-reader of the Yingzao Fayuan, a leading architect, was an expert of the history of Chinese architecture and one of the best architectural educators. He was a precursor of historical research on Chinese ancient architecture, and a founder of Chinese collegial education of architecture. Liu was also known by the style name Shineng 士能, and the pseudonym Dazhuang Shi Zhuren 大壮室主人, “the host of Strong Room”. Liu Dunzhen was born on September 19th 1897, Xingning 新宁, Hunan province 湖南, in an official's and scholar's family. In 1913, he went abroad to Japan, and three years later, he entered the School of Engineering at the Tokyo School of Higher Education (in 1929, it changed its name to Tokyo Engineering University). In his second year, he transferred to the Department of Architecture. Graduating in 1921, Liu Dunzhen worked as an architect first in Japan, then China. In June 1925, Liu became a professor in the Department of Construction at Hunan University 湖南大学. By invitation of Liu Shiying, in 1926, he worked in architecture department at Suzhou Engineering School.

Liu Dunzhen recognised the skills of Yao Chengzu at Suzhou Engineering School, where they worked together as colleagues. Yao Cheng showed his manuscript of the Yingzao fayuan to Liu, asking for advice. Liu Dunzhen brought the draft to Zhu Qiqian. Based on Zhu's advice, Liu found Zhang Zhigang, a young fellow, townsman of Yao, to help Yao with the adaptation of the book. In the war years, Liu Dunzhen kept the final draft of the

Yingzao fayuan with him throughout his travels. He was the one who asked Zhang Zhigang to edit the book again in the 1950s. He was the final proof-reader of the book. In simple words, without Liu Dunzhen, the Yingzao fayuan would, like the Mujing, have been destroyed by time, allowing only a few words to be retrieved from scholar's quotations.

Process of writing the book

The purpose of the manuscript and the original work of Yingzao Fayuan, which was written by Yao Chengzu, was as a text book for second-year-students in the architecture department of Suzhou Engineering School. When the manuscript of texts went missing in the war, the manuscript of drawings was kept by a “Xiangshan Gang” carpenter. Then the original drawings were printed in 1978, which was named The Yao Chengzu Yingzao fayuan tu. This was an internal document, limited by numbers and readers. Until 2004, the book was formally published as an appendix, in The Building of Suzhou Xiangshan Gang. The modern edition of Yingzao Fayuan was rewritten in 1935 by Zhang Zhigang and Yao Chengzu, accomplished in 1956 by Zhang zhigang, and proofread in 1957 by Liu Dunzhen. Its first printed edition was finally published in 1959, named Yingzao Fayun. On the cover of the modern edition of the Yingzao fayuan the names of authors are given: Yao Chengzu, the original author; Zhang Zhigang, the editor; Liu Dunzhen, the proof-reader. In 1986, the Yingzao fayuan was published in a second edition, re-edited by Zhang Zhigang. In short, in this paper, the two editions will be called the original drawings and the modern edition.

To contrast two editions, is the main content of the paper, divided into six aspects:

About the text

In the preface of the Yingzao fayuan, Zhang Zhigang gave a detailed account to his work by Yao Chengzu's permission. In another words, although the modern edition was based on Zhang Zhigang's education, he was farsighted to keep the calculations for preparing a building, the timeframe of building, and the mnemonic rhymes in carpenter's words, and treating them as the spirit of the book. In addition, Zhang was very careful to correct errors in words. Most of the words he changed were wrongly written characters because of the limited education of the carpenters, and the Wu

dialect. Some of them, if kept in the original, would cause misunderstanding. Even so, except for this covered by Yao's permission, he kept several terms in carpenter's dialect, to show his respect for craftsmen.

About the plans

First of all, the original drawings reflect the process of carpenter's accepting a project (Figure 1): There are two plans of a vernacular house. The one on the left is the site plan of original house before adding new buildings. The one on the right was designed by Yao Chengzu. He used these two pictures to discuss with the host and for competitive bidding with other carpenters. He designed a full-rigged mansion with two halls, four courtyards and a garden. The original single-storey house becomes two double-storied houses. All the length measurements are written with Chinese traditional measures, the basic unit is "Chi 尺".



Figure 1 : Plans of a folk house by Yao Chengzu

Secondly, two contract plans of the same building, with carpenter's and architect's focal points are shown. For example, two plans of the east mansion of Lingering Garden 留园 in Suzhou (Figure 2). The left one is Yao's drawing, while the right one is Zhang's drawing: Clearly, these are different designs for the same building. Because nearly ten years divided these two presentations, the carpenter cares about the design, while the architect records the real building as part of Chinese traditional building. Yao's drawing notes how to use the house, including the servant's passageway, the guest passageway (the words note on the yellow long passageway of the left drawing), and the four wells in the yards (the red dots).

The sections

The carpenter and architect have different attitudes treating the construction of the buildings. In all the sections, Yao used to put the entrance of a building on the right side, while Zhang preferred to put it on the left. Since in the plans, both carpenter and architect put the south side at the bottom and the north side at the top, these drawing habits of sections might come from different reading habits. Yao had received a Chinese traditional education, and lived in late imperial China. His reading, writing, and drawing habits were from right to left. Zhang was trained in the new western educational system. His reading, writing, and especially drawing habits changed. When he redrew the sections, he put the entrance on the left to fit the modern reading habit: from left to right (Figure 3).

The perspectives

The original drawings show a different kind of intuitive perception. Carpenters used to mix all kinds of views in one picture, but the architects' pictures conformed to a strict science, with the plan, elevation, and section used to reflect different views of the building (Figure 4)

The details

Looking at the details of building, carpenters pay attention to how to make it, while architects focus on what it looks like (Figure 5). A parallel instance is on the section. Yao's



Figure 2 : Plans of the east mansion of Lingering Garden

drawings exaggerate the features of every style of building, to define each in contrast with another. But Zhang's drawings rigidly adhere to scale. The difference in style is almost ignored if the reader is not making a careful search in the drawings (Figure 6). Carpenters care much about the building details, while architects are less concerned about them. (Figure 7).

The Measurements

According to Chinese measure, the numbers, which were chosen to be used in buildings, have specific meanings. The original drawings keeps all the important number, and some of them were even written in Suzhou numerals 苏州码子, “Hangzhou”. But in modern edition, all the Chinese measures were changed to the international system of units and Arabic numerals, which made the drawings having exact scale, but lost the internal meanings (Figure 8)

The most important contribution of Zhang Zhigang about drawing is that he edited the drawings with a clear logic: begin with a plan of a large residence, then turn to sections of all the eleven common styles of buildings, then eight styles of beams and three kinds of frames, including details of small parts; continue with different roofs and six kinds of Paike; then go on to two examples of real temple buildings. Carpentry work is ended with three styles of internal partition walls, six styles of windows, twenty-five styles of internal doors, and six styles of wooden railings. After that, there are drawings about the bricklayer's and the stonemason's work: gates and gable walls, nine styles of laying a brick; up to eight styles of ridges; twelve styles of decorated tops for walls; twelve styles of corners of stone gate frames; thirty-six styles of traceries for walls; and twenty-seven styles of paving the path out of doors.

Concerning carpentry work, Zhang Zhigang added drawings for internal woodwork. In

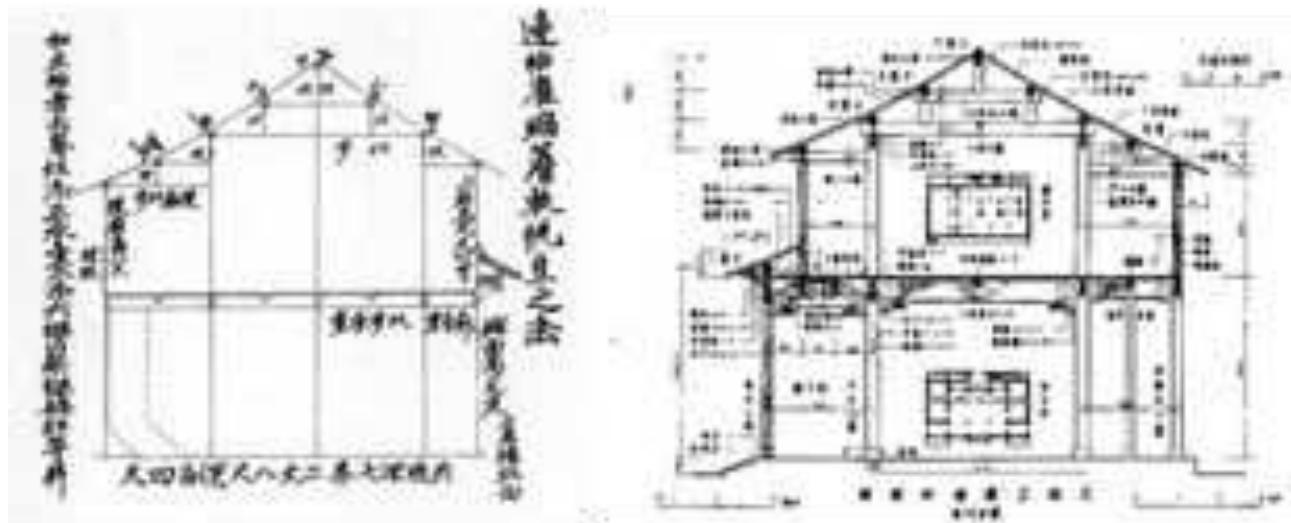


Figure 3 : Sections of a same style of double-storey Hall

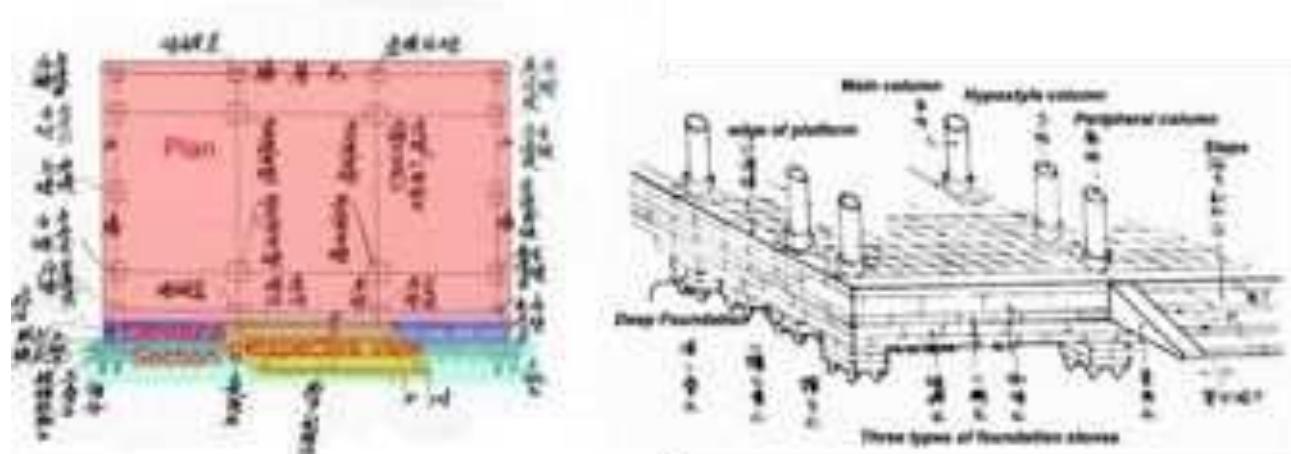


Figure 4 : The ground floor and steps of a building

In China, it was a separate carpenter who made the internal work called Joinery work, which focuses on detailed divisions of architectural space, and endows buildings with various characters and identities, as well as defining the building's function. The joinery worker does not belong to the carpenter's group, who build the structural frame, and are in charge of building buildings and gardens. That is the reason Yao Chengzu didn't pay attention to joinery work. Zhang Zhigang, as an architect, considered the building work and the joinery work as integral in Chinese ancient building, so he drew the pictures in a meticulous way, to keep the balance of both works.

About other works, Yao Chengzu only gives a few simple examples of stone gates, gable walls, the laying of brick. He best explained the styles of ridges, which is the part of the roof to define the social hierarchy of the building. Zhang Zhigang extended Yao's work to the styles of paths and traceries, which makes the book more complete, like a dictionary of all the "Xiangshan Gang" craftsmen, not only the carpenters. The photographs, like the forms (sheets), have proved a very useful modern method for helping research. Thanks to the pictures taken from 1935 to 1937, before the Anti-Japanese War (1937-1945) and the civil war in China (1946-1949), before the Culture Revolution (1968-1977), we have a record of many buildings since lost. Some were

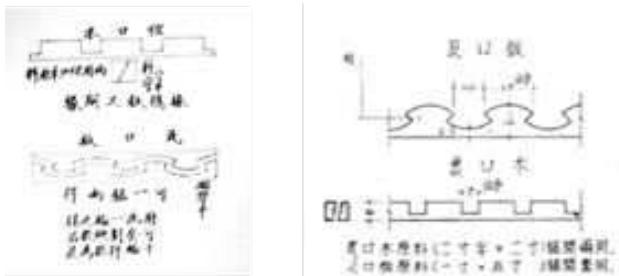
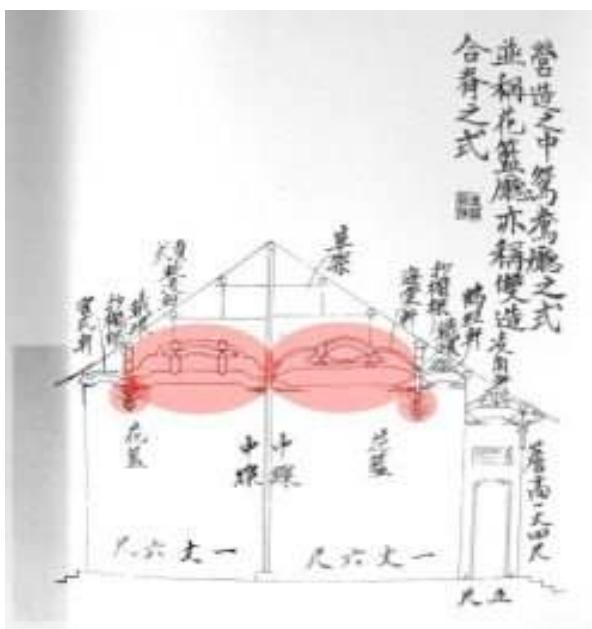


Figure 5 : Likou Mu 里口木 and Wakou Mu 瓦口木 (The forms of eaves)



Conclusion

To conclude on the bibliography of the Yingzao Fayuan, some more general questions might be asked, such as: what was the purpose of combining carpenter's and architect's work in a book introducing carpentry work? Which is the reason that happened in the 1900s in Chinese? And is there any connection of current construction timber methods in China with the book examined? Has this knowledge been forgotten by artisans and technicians or is

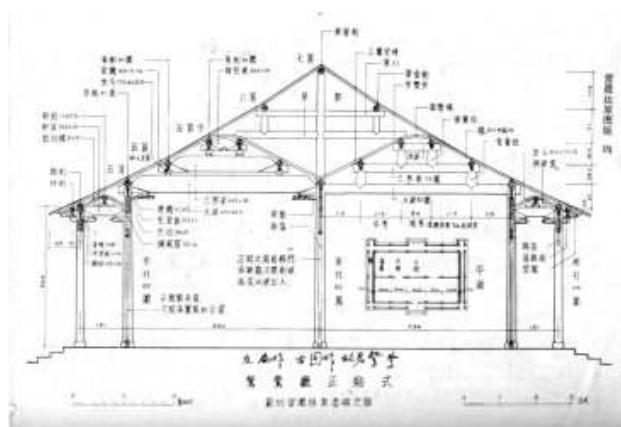


Figure 6 : Sections of the Mandarin Duck style Hall

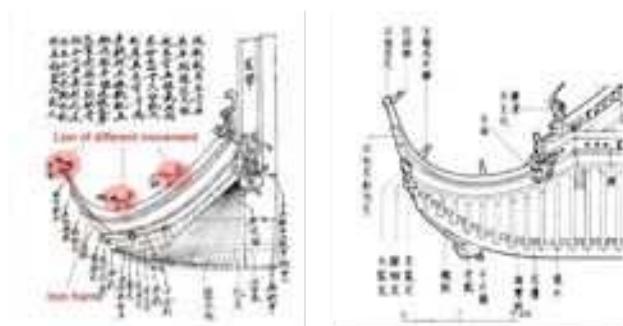


Figure 7 : The lions on the roof angle

ruined or demolished, others were spoiled. The buildings which were repaired and reconstructed in the 1980's were built in a different time and culture, in some modern ways. The photos by Zhang Zhigang are a rare surviving find for further research.

Arabic numerals	数码:	1	2	3	4	5	6	7	8	9
Vertical style	纵式:	/	II	III	IIII	IIII	T	TT	III	III
Lateral style	横式:	-	=	=	=	=	—	—	—	—

Suzhou code 苏州码: |、II、III、×、召、十、二、三、夕

Figure 8 : Numbers of Suzhou code

it still alive?

The Yingzao Fayuan is a book which originates from a carpenter's family secret book, and ends as a summary for carpenters and architects. The purpose of this book, for Yao Chengzu, was to hand on the experiences of the "Xiangshan Gang" carpenter; for Zhang Zhigang, it was to record the works of the "Xiangshan Gang" craftsman; for Liu Dunzhen and Zhu Qiqian it was to keep the orders of Chinese ancient Building in the South of China. The different purposes led to the different editions of the Yingzao Fayuan. The modern edition lost some original information about



Figure 9 : The Suzhou code used in Yao's drawing

carpentry, but gave a new life for the whole book.

From the late Qing Dynasty to the early Republic of China it was a changing time and a pre-modern era, a period full of dramatic social, political and academic changes. European traditional architecture came into China from the West with foreign architects from 1842, the last year of the First Opium War; and modern architecture came with new foreign architects and returning Chinese architects who had received their architectural education overseas from the 1910s. The early modern architecture grew in intensity from the 1920s to the 1930s. The impact of new ideas drove Chinese traditional carpenters to try to catch up with the times, and the collegiate education institutes of architecture were established one by one at the same time. Carpenters and architects played their different roles in this period. The two different education systems attempted to work together. The Yingzao Fayuan is the result of that cooperation. These two educational routes had a great influence on the younger generation up to now.

The Yingzao Fayuan was written at a changing time for Chinese architecture. During that time the Chinese traditional wooden buildings were replaced by modern concrete buildings step by step. Carpentry's decline caused the number of carpenters to decrease rapidly; the old traditional craftsman skills were nearly lost. The Yingzao Fayuan grabbed the attention of leading architects at that time, making possible the protection of old buildings and retention of old skills at least in literature. After its publication in 1959, the Yingzao Fayuan spread fast and widely, and gave another chance for the "Xiangshan Gang" carpentry. The "Xiangshan Gang" traditional building

techniques began to revive in 1980s, and became an international intangible cultural heritage in 2009. Nowadays, this knowledge has been carefully kept by the new generation carpenters of the "Xiangshan Gang". The Yingzao Fayuan benefits from all these successes.

(*All the translations and colors added to the figures were made by the author of this paper; All the words in the brackets in the translation of quoted words are added by the author as well.)

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Masterplanning Chinese New Towns:

Designing Permeable Connection and Movement Framework for New Town Development

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Keywords: *Masterplan; New Town; Connection; Movement; Qianjiang CBD*

Abstract

The concept of the “New Town” was generated initially in the UK in the early to mid-20th century. Its inspiration came from Ebenezer Howard’s original “Garden City Movement” of the late 19th century. After decades of development, new towns in western countries have transformed from the early generations of re-accommodating a lower-class population and reducing development pressures on inner city areas of large cities, to become an important part of an urban renaissance. Indeed, proposals for eco-settlements have become more dependent urban developments during the last two decades, with sustainable architecture and urban design, reinforced movement connections, and provided with complete packages of social and welfare community facilities.

In China, significant economic growth since the open-door policy has led to a dramatic increase in urbanization. The concept of 'New Town' was officially introduced to China's national policy agenda in the central government's Tenth Five-Year Plan (2000-2005). This encouraged large urban areas in China to consider building new towns and to seek more extensive developing

prospects in order to mitigate the existing pressures upon the city. As a result, a wave of new town construction has rapidly spread throughout many cities during the last decade. Most of these new towns in China have been achieved following comprehensive masterplans. Although new towns have brought enormous development opportunities for many cities, there are also a myriad of

criticisms and questions along with them. Do they have sufficient masterplans that can address complex issues affecting each individual city? Has each new town been circumspectly designed to deliver high quality places during their masterplan stage under this fast development trend? This particular paper will be focused on connectivity and movement design in Chinese new town development. They are the essential themes in urban design and certainly one of the primary considerations when designing a masterplan. The first part of this paper will review western literatures to comprehend what a masterplan should consist of and why successful masterplanning is still the key for new town development in China. In the second part, the paper will critically examinee and analyze the masterplan for Qianjiang CBD development in Hangzhou according to urban design literatures and theoretical basis, focusing on designs for its connectivity and movement.

Introduction: What is a Masterplan?

The term “masterplan” is used frequently in various fields. It was first introduced as a planning tool to guide and manage urban growth in the 1947 Town and Country Planning Act in the UK. In planning terms, urban masterplans are long-term plans, which consist of analysis of the existing situations of a city (e.g. land use, economic and social aspects), forecasting future development and illustrating

proposals for the general growth or redevelopment of parts of the city. Different from planning, urban design masterplan is a strategic and a physical plan for the development of an extensive site, which acknowledges the interdependence of urban systems and communities, as well as effects from wide range of global issues such as sustainability. It often concerns as "spatial masterplan", which deals with changes in a defined physical area to set out proposals and implementation strategies for buildings, spaces, movement and land uses in three dimensions (Urban Task Force, 2005).

"Masterplans are strategies for physical, economic and social change. They are not blueprints for development but show how places can work for the better in the future and what needs to be coordinated and controlled to achieve this over time." (CABE, 2004, p.2) Compared to designing a single building, large scale urban development, such as new towns, can have significant influence on the characteristics of a whole city. Therefore, comprehensive range of urban elements must be considered and their relationships in space should be understood in order to ensure urban sustainability and flexibility over a certain period of time.

What Makes a Successful Masterplan?

According to the research done by the Urban Task Force in 1999, a successful masterplan must comprise the following six crucial features: (shown in Table 1 below)

A spatial masterplan is a sophisticated model which contains physical expressions of urban design and the characteristics of the form of development. Similar to aspects of the development, masterplan should help to define the overall layout of the place, its scale, appearance and landscape.

Visionary	It should raise aspirations and provide a vehicle for consensus building and implementation
Deliverable	It should take into account likely implementation and delivery roles
Integrated	It should fully integrated into the land use planning system, while allowing new uses and market opportunities to exploit the full development potential of a site
Flexible	It should provide the basis for negotiation and dispute resolution
Participial	The result of a participatory process, providing all the stakeholders with the means of expressing their needs and priorities
Applicable	Equally applicable to rethinking the role, function and form of existing neighbourhoods as to creating new neighbourhoods

Table 1 :Six Key Features of a Successful Masterplan (Source: CABE, 2004, p.2)

Aspects of Development Form		Essential Contents for Masterplan
Layout	Urban Structure	Shows how streets, square and open spaces of a neighborhood are to be connected.
	Urban Grain	Identifies the movement patterns for pedestrians, cycling, car or public transportation as well as looking at the needs of service and refuse vehicles;
Landscape		- Sets out suggested relationships between buildings and public spaces;
Density and Mix		- Sets out the basis for the provision of utilities and other infrastructural elements;
		Determines the activities and uses which will take place in the area;
Scale	Height, Massing	Relates the physical form of the site to social economic and cultural contexts and takes account of the needs of people living and working in the area;
	Details	Shows ways in which new neighborhoods can be integrated into existing communities, and built and natural environments;
Appearance	Materials	Defines the height, bulk and massing of buildings

Table 2
Summary of Key Aspects of Development Form with Relate Essential Contents for Masterplan (Source: DETR 2000, p.16, CABE, 2004, p.3)

Masterplanning Process

Place-making is never a quick-and-easy process. It is a creative process which can cover various spatial scales and timescales, ranging from city-scale masterplans over decades to a single development site with groups of buildings. It is also can be an iterative and time-consuming process as it manages the balance of control and collaboration between government and their partners to integrate different themes and motives, and engaged with wide ranges of interested stakeholders to generate the best contributions to the overall quality of a place. Normally, a standard masterplanning process consists of three stages:

- 1.preparing and defining a strategy,
- 2.creating a detailed plan, and

3. turning the plan into reality. These three stages are fluid, however when different interests and opinions are gathered in practice, they are normally overlapped and informed each other.

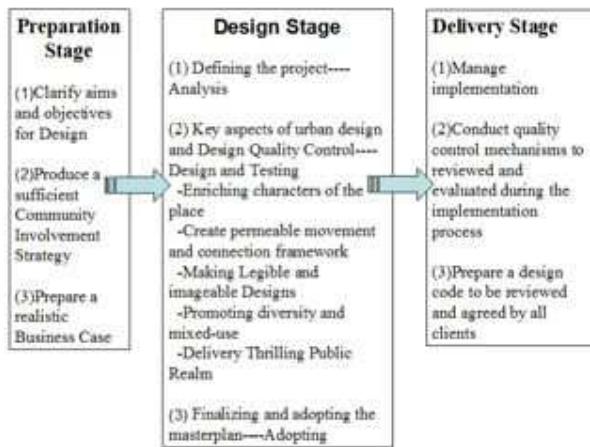


Table 3 : Masterplanning Process and Key Tasks during Each Stage (Author's Own)

Masterplanning New Town Developments in China: Planned or Unplanned?

What is a 'New Town'

There are various definitions for the term 'new town' according to different development circumstances. The British definition of new town is widely accepted as "a newly created town, either on a green-field site or around a pre-existing settlement, planned to relieve overcrowding and congestion in the major conurbation by taking in the overspill population" (Oxford Dictionary). The International New Town Institution (INTI) has distinguished a new town from a historical or original city as "the political act of founding a city and then enlisting professional to draw up a masterplan in order to establish an urban community from scratch on a spot where there was none before" (Provoost (Eds.), 2010).

Planned City

Over the last century, many countries, especially in Europe, have fully adopted formal planning process to control urban growth and development. Planning is often regarded as a purely top-down political approach to control over urban development through a pre-set

blueprinted masterplan which determined only by certain professionals. However, due to the strong-modeled planning and design tradition, planned city started to be criticized for its inflexibility and inappropriateness during the late 20th century. Building new towns is always closely connected to political act and power. Strong political control over planning has restricted the development and popularity of new towns in Europe. As a result, besides a few symbolic successful developments that government created as urban manifestos (such as Milton Keys in the UK and Almere in Netherland). Many others are more likely to be considered as "not highly rated and have a negative image, areas seen as being full of cheap, small dwellings and are regarded as ghettos or dismissed as 'dull'" (Provoost (Eds.), 2010).

Unplanned City

The idea of the unplanned city was widely raised in the 1980s, along with relative theories such as the informal city and organic growth of city. Its concept focuses on the social-economic aspects of urban planning and design rather than the formal physical forms and urban structure, giving local people and stakeholders the freedom and priority to create a self-organized city that is more appropriate for its organic growth. Lynch (Lynch : 1984) describes the city to be a field of human interaction as many of its features owns to the model of 'organic city growth'. He believed that the city is a state of permanent changes at all its level, and their essential property of attraction can lead to natural urban transformation, which is most commonly as improving quality of life. Christopher Alexander (Alexander : 1987) also believes that city is a product of a huge network and cooperation of processes, therefore the "wholeness" is the essential theory for urban design.

Nevertheless, unlike new towns in European countries, where strict planning regulations are applied and their social-economic conditions are far better than many other parts of the world. In many developing countries, informal settlements and slums are considered as unplanned, natural phenomenon that low-income populations feel comfortable with. In countries, such as Pakistan and Tanzania, even new towns have been developed on the basis of the original masterplan, they will more likely to end up with no resemblance to those original plans (Provoost (Eds.), 2010). Just like Brillembourg et al. (2005) have argued, if the formal European theory of masterplan as urban

blueprints is fundamental, then self-organization is the driving force in the rest of the world, because, in reality, informal settlements accommodate about one billion people around the world.

China's Unique Circumstances for New Town Development: A Combined Phenomenon

New town development in China is quite a distinct case. Despite the similarity that ultimate political power is still the key determining force, its arisen is heavily influenced by the country's accelerated urbanization process under its rapid social-economic growth after the nation's remarkable economic reform in 1978. The birth of Chinese new town occurred in the late 1990s when enhancing social-economic development, coordinating industrial structures and improving urban competitiveness have become extremely important for large urban areas and their surroundings. On the other side, fast development and urbanization has caused critical social problems like high population inflation, pollution, traffic congestion, disorder of urban functions and distributions in almost every medium and large cities (Cai and Guo, 2007). As a solution, formally introduced in the Nation's Tenth Five Year Plan, the governments started to consider the idea of building new towns to migrate those existing pressures on the formal city proper and seeking more expansive developing prospects (The People's Congress, 2000). Early forms of Chinese new town have mostly adopted the western practices. They were masterplanned using western modes, from layouts to architecture structures.

Frankly, even since the early 20th century, the new towns are actually built for the mid-classes rather than the poorest, which caused the informal city to be intimately connected to the development of the formal city (Alsayyad and Roy (Eds), 2003). The complete set of physical and social-economic facilities of newly designed towns are attractive to low-income migrate workers from other places. Therefore, "every formal city in the developing world organizes its informal counterpart" (Provoost (Eds.), 2010, p.13). These twin phenomena can be widely seen in Chinese new towns. The informal sectors are sprawling into and around the formal planned new towns for wider employment opportunities and better provision of public facilities. When the formal planned

new town cannot fulfill the rising demand for industry and residential requirements, development and urban activities can be redirected into those approximate unplanned settlements driven by market forces. Urban village is a typical outcome of this situation. However, according to China's planning regulation, unplanned development is officially not allowed, planners must prepare detailed local plans regarding to the intentions that are specified in higher-level plans and need assessment and approval from higher-tier associations. Therefore, in order to resolve problems of sub-standard living conditions and raising social problems in those unplanned settlements and neglected sub-urban areas, particularly in the last decade, a new wave of new town constructions has been widespread out in many cities in China. Unlike many other countries, having considered the scales of those planned developing sites and the enormous population they involve, planned new town developments in China exist in different types, including those shown on Table 4:

New Towns that created from urban regenerations and changes in land use plans within inner urban areas
New Towns that created from the change of urban fabric
New Towns that created from urban sprawl
New Towns that constructed from planning large infrastructure projects
New Towns that developed based on small traditional towns

Table 4 : Types of Chinese New Towns (Source: Zhang, 2003)

Case Study: Qianjiang CBD, Hangzhou

Ever since the economic reform, Hangzhou has always been witnessing high levels of economic growth and urbanization. Initially, the urban areas of Hangzhou expanded and distributed around the West Lake. This geographical situation seriously limits the availability of developable land which has restricted the city's further growth. According to the "Master Plan of Hangzhou City (2001-2020)", the city has implemented a new extended metropolitan urban structure. In March 2001, Hangzhou government developed a core strategic guidance for urban development called "protect the old city, build a new". Spatially, this would transform the city's urban structure from the original point-centred

pattern around the West Lake to a more scattered axis-centred pattern leading towards the Qiantang River area. The expansion would liberate a vast area of available land for urban development and this enormous change in urban structure would also bring unprecedented opportunities and challenges to the city.



Figure 1 : Proposed New Town Development along the New City Axis-Qiantang River (Source: Wang et al. 2009)

Qianjiang CBD is situated on the northern bank of Qiantang River, in the centre of the new city development axis. The entire project consists two phases and this paper will focus on the masterplan for the phase one, examining the design for connectivity and movement, within a total land area of 15.8 km². The CBD is planned to become the new political, economical, culture and technical centre of Hangzhou. It will not only be designed to represent the future image and style of Hangzhou as a metropolis in the whole Yangzi River Delta Region, but also to form a significant contrast yet complement the traditional cityscape of the West Lake. The overall layout according to the CBD Masterplan is defined as "One Centre, Two Communities and One Green Belt", forming the central CBD zone (service and financial orientated), the Canal community and Wangjiang Community (residential and service) and the riverside green scenery belt that links the three main areas alongside the Qiantang River.



Figure 2 : Location and Layout of the Qianjiang CBD Phase One (Source: Hangzhou Planning Bureau 2002b)

Connection and Movement Design in the CBD Masterplan

Connectivity and movement are always the essential themes in urban design and certainly the primary considerations when designing a masterplan. Efficient design will not only have positive influences on a wide range of urban elements such as uses, activities, density, security; it is also a key factor that impacts the achievement of more vibrant and healthier cities and neighbourhoods (Talen, 2009). The movement framework and strategies for increasing connectivity are based on neighbourhood-level social interaction that concerns the structural aspects of movement within the built environment (Gehl, 1987). In general, a successful framework focuses on the streets, pedestrian networks and social connections, with other components of movement structure such as cycling, public and private transport. It should:

- Provides the maximum choice for how people will make their journeys;
- Takes full account of the kinds of movement a development will generate;
- Make clear connections to existing routes and facilities (English Partnership, 2000, p.34).

The development site is located in the southeast part of the core urban area of Hangzhou, facing Qiantang River to the southeast, the Grand Jinghang Canal to the northeast and railways towards the east. There were always problems associated with transportation accessibility from the historic urban core to the new development area due to the low topography and its separation by the river and the railways. Nevertheless, the area always possessed great importance for transportation. The CBD has not only been

recognized as the eastern gateway for Hangzhou, its location and traffic structure connects five directions: the formal urban centre, Shanghai/Ningbo/Xiasha New Town, northern part of the city, the south bank of the river and Xiaoshan District, and the scenery area of Hangzhou.

CBD Street Network

The design of street network within the CBD is guided by three main concepts which are: easing, integration and construction. As being an important connection hub between the formal urban proper and the new, the masterplan has developed a new framework of streets including the main streets that formulates the whole traffic network, and streets that designed for the easement of the traffic within the site. Those key structural streets are: Xintang Road (north to south), Qianjiang Road (east to west across the site), Wangjiang Road (connects the western part of the site with Zhonghe urban high-speed trestle), and East Stadium Road (connects the northern part of the site with formal urban centre and Xiasha university new town). The main purpose of designing the streets for the easement of the traffic is to provide unobstructed flows for the traffic crossing through the CBD from outside, create communication nodes for both internal and external traffic, and enhance the accessibility for the whole city as well as promoting reachability within the CBD.

Street types

The design of streets has also been categorized into different types. The masterplan has defined four different categories of streets in the site. They are urban high-speed roads (Qiutao Road, Qingchun Road and Qianjiang Road, Genshan Road and Hangyong Highway), trunk roads (Qianjiang Road, Xintang Road, East Stadium Road and Wangjiang Road), secondary roads (Fengqi Road, Fuchunjiang Road, Lingjiang Road, Huijiang Road) and sightseeing scenery venue (Zhijiang Road). Their functions, scales and designs have been indicated in the figures 3 and 4.

Analysis

"A common strategy for promoting connectivity is to ensure that streets are well connected." (Talen, 2009, p. 29) However,

Qiutao Road	Responsible for the traffic passing through the site from south to north
Qingjiang Road	Connects the Qianjiang No.3 bridge and is designed to reduce the impact from the internal traffic on the traffic that crosses the River
East Qingchun Road	The main part of the road is the river tunnel which is designed to reduce the impact from the internal traffic on the traffic that crosses the River
Genshan Road	Responsible for diverting the east-to-west passing traffic from the northern boundary of the CBD
Hangyong Highway	Connects the Qianjiang No.2 Bridge and successfully distributes the heavy traffic between Ningbo and Shanghai away from the CBD

Table 5 : List of Streets that Provide Traffic Flows Crossing Through the CBD



Figure 3 : Movement and Connection Pattern within the CBD (Source: Hangzhou Planning Bureau 2002b)

under many circumstances, streets are more than just traffic channels for vehicles, they should provide safety and attractive environment for all people to experience (DETR, 2000). Newly designed routes should be connected into the existing movement networks providing maximum numbers of direct connections to main streets to strengthen the potential for mixed used and high-density developments within the site while providing the basis for the internal movement structure. The types of urban blocks and grid also have significant influences on the corresponding patterns of movement. Generally, based on analysis from Talen (2009) and Duany, Plater-Zyberk&Co (1998), large-scale blocks, cul-de-sac, and dendritic (tree-like) street and block systems are less likely to provide efficient connections. Theoretically, street is an important element in urban design. Not only as providing accesses and circulation within a place, streets also should be treated as important multi-functional public and social

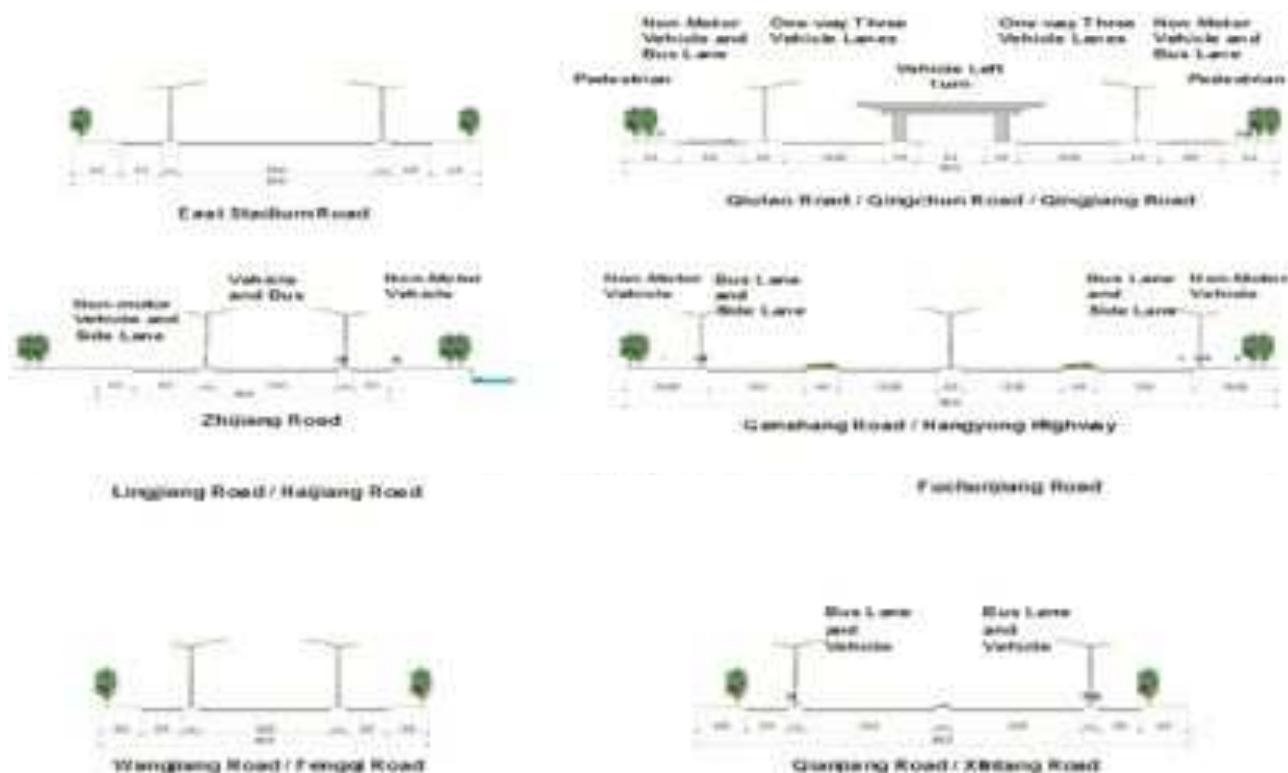


Figure 4 : Design of Key Roads within the CBD (Source: Hangzhou Planning Bureau 2002b)

spaces, serving a wide range of other activities such as walking, cycling, entertaining and meeting people.

Overall, the masterplan has developed a clear movement framework within and around the CBD. It has considered the connections to the existing road network, provided good easement for traffics running through site, and chosen good variation of street types based on its physical conditions (such as river tunnels, urban high-speed streets, trestles etc.).

Nevertheless, there are still some limitations. First of all, there are three main roads that planned initially to share the south-to-north traffic throughout the CBD, including Qiaotao Road (80m wide), Xintang Road (60m wide) and Zhijiang Road (36m wide); From my research, Qiaotao Road in particular, is taken the most responsibility for the south-to-north traffic which causes major congestions during rush hours. This is not only because it is designed as urban high-speed road that connects desirable destinations from every direction, it also provides the shortest distance when traveling across the CBD from south to north. In contrast, although Xintang Road is one of the main roads inside the CBD area, lots of construction works (such as the

Central Park and metro lines) have affect its quality and efficiency nowadays due to lots of road closures and diversions. On the other side, Zhijiang Road along the River is slightly isolated from the main movement framework which can hardly be connected with other main nodes. Secondly, along the central axis, the streets have created three relatively large blocks, which may affect the circulation around the central. As a result, many places and facilities cannot be directly connected and the pressure of traffic will be increased for the main roads around the central axis.

Pedestrian Movement Design

Main streets within the CBD have provided the key pedestrian structure throughout the whole site. The scenery avenue Zhijiang Road has provided an uninterrupted green pedestrian route alongside the river, which links the three zones together. From the north-to-south, main pedestrian routes are provided on Qianjiang Road, Xintang Road and Fuchunjiang Road. The first two streets efficiently connect the residential developments in Canal and Wangjiang Communities along with wide range of public facilities and urban parks within the three zones. Meanwhile, Fuchunjiang Road is designed mainly as a commercial pedestrian



Figure 6 : Indication of Large Urban Blocks along the Central Axis of the CBD (Source: www.hzcbd.com)

route, which connects the commercial centres among the three zones.

For the west-to-east pedestrian design, the masterplan has focused on the pedestrian movement within Central Zone. As we can see below, the primary pedestrian flow have been indicated alongside the central axis of the CBD, connecting the CBD's public service area and culture centre between the two newly proposed public open spaces. There are three secondary pedestrian axes, one on Zhijiang Road along the River, and the other two routes connect the other public spaces within the site. Furthermore, there are three commercial pedestrian routes running through the middle of the zone from south to north, designed to enhance the commercial activity within the

central zone and connect commercial centres of the other zones.

Analysis

It is often ignored in practice that streets are created as public spaces, and people are the important foundation of the social and economic processes that help to drive the urban system and sustain the urban fabric (CASA, 1999). Therefore, a well designed urban structure should be able to provide a network of sufficiently connected spaces and routes to encourage the movement of people for walking and cycling, rather than just for vehicles (DETR, 2000).

Most pedestrian activities can be considered to be the products of these two distinct components: the configuration of the street network and the location of particular attractions that people need to go to (such as shops, offices, public facilities etc) (CASA, 1999). As suggested in the Urban Design Compendium, good pedestrian design should consist the following 'Five C'.

The pedestrian framework within the CBD has provided convenient and directly connected routes for people to go to major public facilities, community centres, public open spaces and commercial centres. The design of leisure pedestrian priority routes has provided the maximum level of safety for people, as well as the potential for encouraging a wider range of commercial and leisure activities to take place. On some key roads, good width of the pedestrian has been designated, along with good quality landscaping to provide comfortable environment for people to walk. Especially on Zhijiang Road, the pedestrian route has been integrated into a riverside green scenery belt on elevated platforms,which successful turned a pedestrian route into a well-designed public space.

Nevertheless, the pedestrian design in the CBD still has some unsolved problems. First of all, although main pedestrian axes and routes are nicely proposed, the question still remains that what activities on those routes are attractive to pedestrians? And in reality, people near the riverside are hardly intended to walk through the Civic building to go to the Central Park on the other side. Secondly, on some secondary routes within the site, the non-motor vehicle routes and pedestrians (even bus lanes) are combined together. This can often cause interferences between different forms and have problems relate to safety in the streets. Thirdly, there is a shortage of



Figure 7 : Pedestrian Movement Pattern within the CBD Central Zone (Source: www.hzcbd.com)

convenient and safe pedestrian crossings in the CBD. The majority of pedestrian crossings in the CBD are designed at major road junctions and there are not enough crossings provided between each junction that people have to walk quite a long way to be able to cross the main roads (especially from west to east). Although there are limited numbers of designated crossing points, they do not have appropriate signs which can slow traffic down, in order for people to cross the roads safely. In addition, those planted green belts located in the middle of main roads have also become barriers for people to cross the roads easily. And finally, there is a lack of efficient instructional street signs which can indicate major attractions for pedestrians in the CBD, especially within the central zone.

Connection	Good pedestrian design should provide the routes that connect to the places that people want to go to, such as major public facilities, social and commercial centres, neighbourhood centres and so on.
Convenience	Pedestrian routes should be designed to maximise efficiency, making direct linkages between key urban areas to minimise walking distance. A fine-grained network of streets that connect to other routes can encourage movement and activity and short-linkage streets can improve the accessibility of these places to encourage walking and cycling (DTIE, 2008).
Conciseness	The shared surfaces of pedestrian routes should be well designed to promote maximum level of safety, and avoid potential movement interactions (easy to cross) while encouraging different activities to take place (English Partnership, 2008). Variation of materials (can be used where appropriate for different locations to enhance their distinctness).
Contextualism	From design perspective, the quality and width of the pedestrian routes must be well considered under different circumstances, for their use, location and scales. Building enclosure and density are effective townplan design elements to be considered. Good relationship between street and buildings is important for achieving a certain aesthetic; for the scale, context and character while street trees, drainage, widths and other external conditions (such as sun, ventilation and noise etc.) will determine the walkability of a pedestrian route in terms of its comfort and safety (Talen, 2008).
Conspicuousness	Pedestrian routes should be able to lead where people want to go with clear instructions of street signs. Particularly for new development, pedestrian routes should be positive, direct and barrier-free.

Table 6
'Five C' Principles of Good Pedestrian Design

Public Transports

Metro

It is widely recognized by many large cities in China, that the developing of urban high-speed rail transit is one of the necessary means for passenger transportation in high density urban areas. After many years' amendment, in 2003 the revised plan for Hangzhou metro construction had been finally proven by the central government and the construction of phase one metro development had already started in 2007. According to city's metro development plan, there will be three lines running across the CBD. Line 1 will enter the CBD from Xintang Road in the north, goes alongside Fuchunjiang Road and connect the Qiantang No.4 Bridge on the southern boundary of the site. Line 2 will come in from East Qingchun Road, runs along the central axis in the central zone and connects Xiaoshan District through a new tunnel on the south bank of the river. Line 3 will be constructed in the city's second phase of metro development, runs through Wangjiang community and connects the Qianjiang No.1 Bridge in the future.

Bus

As we can see from above, public bus service is designed in two different types in the CBD, which are the bus corridors plan and the conventional bus network. On the designated urban high-speed roads, the masterplan has indicated the bus priority lines to provide exclusive bus space for longer distance travel across the site from south to north. The



Figure 8
Public Transport Plan within the CBD (Source; Hangzhou Planning Bureau 2002b)

conventional bus network includes bus lines on the north and west boundaries of the site and provide shorter distance route from west to east part of the CBD.

Analysis

In order to achieve a low-carbon environment in the 21st century, public transportation is the preferred alternative to private vehicles when it comes to longer-distance travel. It is highly expected to play a crucial role in cutting inefficient energy use to reduce the negative effects from air pollution and global warming,

as well as controlling inefficient land development patterns. To meet those high expectations, public transport must become more productive, efficient and attractive (Nash, 2006). Therefore, new development should consider public transport as one of the key components within its movement framework, providing efficient and convenient public transportation routes by choosing the most appropriate means. The design of sufficient local public transport plan must focus on the following three elements, which are: local differences, safety and security, and connectivity.

The CBD masterplan has managed to link major public facilities within the site and provided a wide range of choices for people to make their journeys. The design of public transport has provided efficient connectivity for people, not only to get to the major active places, but also to other parts of the city. The provision of both bus and metro can create potential opportunities for public transport interchanges in the future and give people more choices and convenience to travel. The design of bus priority routes on major roads has guaranteed the efficiency of public transport even during rush hours which can encourage more people to use them.

Nevertheless, although bus routes and metro lines have already been planned within the framework, the appropriateness of them is a big question. Building underground transportation system is becoming a popular trend for Chinese cities nowadays as the

symbol of modernity and one of the representatives of local government's glorious achievements. However, the choice of public transportation means needs to be most appropriate regarding on its local physical and social-economic conditions. There are many reasons that the Central Government has not proven Hangzhou to build their metro lines for almost 20 years. First of all, as being a city with long history and rich heritage, metro construction near those heritage places and scenery areas may cause damages to them. Secondly, the geological condition in Hangzhou is very complex. Its urban area is very close to the Hangzhou Bay, and has abundant groundwater resources, which makes it very hard for underground metro construction because the majority of its soil is soft soil. Unfortunately, the major collapse in November 2008 on the construction site along Line 1 has delayed the construction period for metro. Until most recently, even most parts of Central Zone are open to the public, the metro lines are still not finished. This has strongly affected the popularity of certain commercial facilities within Central Zone, because in the masterplan, metro stations plays an crucial part in the pedestrian commercial system as they are used to bring people into those areas.

The provision of public bus services is also difficult. According to the survey done by Li Min (Li : 2012), there are 19 bus routes running through the CBD. However, according to the plan, the majority of them are provided on the west half of the CBD. There is no bus service

Local Differences	-Fundamental factors such as development size, density, urban structure and service demand can affect the overall transportation network design enormously (Nielsen and Lange, 2007) -Design should also be coordinated with those local stakeholders by using the right marketing strategies to ensure they are compatible with the whole system providing the right amount of service routes and frequency at the right places (DFT, 2010).
Safety and Security	-Successful design will provide clear and direct routes to the services with good passenger visibility and high level of personal security, such as well-planned junctions on major roads, providing enough lighting and open areas nearby the services (English Partnership, 2000)
Efficient Connectivity	-Design must ensure that service stops are nearby the major active places that people need to go to, such as the centre of a place or road junctions -Bus services in particular, they must be given priority at junctions and on major roads with designated bus lanes to ensure their efficient during heavy traffic. -Public transportation designs need to consider connections to other modes, such as park-and-ride designs as the transit accommodation linkages between buses and other types of mobility facilities (trams and trains) (GDOT, 2003)

Table 7
Key Elements of Successful Public Transport Design

on the southeast side of Fuchunjiang Road, which has caused lots of inconveniences from the raising numbers of office worker in that area. In addition, there is an extreme lack of bus stations throughout the whole area that people have to walk much longer to catch a bus. The designated CBD bus interchange is not completed yet, and the temporary interchange is being located on Qianjiang Road in Wangjiang Community by blocking off the entire road in the south. This has enormously affect the living environment conditions in Wangjiang Community has surely caused lots inconveniences for people who live or work in the other two zones.

Conclusion

Considering the plan-led urban development model is still widely used in China, the key to successful new town development depends on the quality and effectiveness of its masterplan. Successful urban design masterplan requires more intensions rather than being a simple regulatory tool used exclusively by "professionals". It needs more thoughtful preparations by considering the theory of "wholeness" and "identity" as the keynotes, in order to evaluate the most desirable criteria for the right amount of people in the right location. The quality of design should always been enhanced throughout the masterplanning process, any existing and potential informal settlements must also be taken great considerations of. Successful masterplanning therefore should be a time-consuming and revisable three-stage process that can efficiently deal with the relationship between people and spaces while accomplishing key aspects of development forms in urban design matters.

Through examining the Qianjiang CBD case, even by focusing particularly on the connectivity and movement aspect during the second stage of the masterplanning process, it can already help to reveal some common potentials and limitations that new town masterplans have in China nowadays. To summarize, first of all, streets are still mainly designed for the purpose of carrying out traffic rather than being public spaces that can encourage social interactions. Although China's large population can strongly affected the design of street types to meet the high demand for traffic, the design of pedestrian movement must also be integrated into the whole street and movement framework. Pedestrians do not

only exist within public open spaces, convenient and safe pedestrian routes with reasonable levels of street activities and social interactions must be considered throughout the whole site for promoting social vitality. Secondly, under standing local differences is another key to success. This applies to every stage during the masterplanning process. Taking the design of public transport as an example here, it is not necessary to construct underground metro development for all large cities and new towns in China. According to different demand and physical conditions, some other more achievable and effective public transport means can also be encouraged in China, such as light rails, trams and waterbuses. This can sufficiently reduce the construction time while still enhance the popularity of new towns by providing convenient public transport facticities in new towns. And last but not least, any masterplan can easily fail without considering the actual needs from the public. Planning and urban design shapes the places that people live and work. Although under regulation systems it is difficult for the general public to participate during the masterplanning process, their needs should not be ignored in masterplans. It is the same principle for designing public bus routes in the CBD case. Without premeditating the present and future needs from the public, masterplans can often eventually cause inappropriate developments and services that either nobody uses them or nothing has been provided for the real users.



Figure 9 : Temporary Bus Interchange in Wangjiang Community (Author's own)

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iPlanning: Urbanism and Big Data

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“Big data” is the new media of 2010s. Like previous waves of computer technologies, it changes what it means to know something and how we can generate this knowledge.”

Lev Manovic, 2012

Introduction

The growth and proliferation of Big Data (Manovich, 2012) is the one most relevant technological and cultural phenomena of the twenty-first century. Its impact goes well beyond mere technical issues to invest our cognitive models, how we make and consume things, as well as experience the built environment.

The urbanism of the twenty-first century demands tools able to merge the potential of Big Data onto the physical reality of cities. Such conflation has been broadly termed Internet of Things [IoT]; it is under this paradigm that the projects and installations illustrated in this research operate. Particularly, the paper analyses the role and potentials that digital technologies such as remote sensing and augmented reality [AR] can have to define and exemplify what IoT could mean within the realm of urbanism.

The reasons for considering real and virtual as a single, continuous and fluid entity are multiple: digital data allows us to monitor environmental performances, study and design our cities as dynamic systems evolving in time, as well as connect the general public and professionals constructing an open, cross-disciplinary practice of urbanism.

User-friendly, geo-located and connected to a potentially infinite archive, such digital tools are somehow the opposite of what planning has come to represent; a discipline whose internal mechanisms have alienated it from public debate.

In examining what opportunities the IoT can provide, the paper will discuss three experiments in which the design tools to plan and manage cities became hybrid [half-real, half-virtual]. In doing so a comparison between websites and traditional masterplan provides useful insights on how this transformation can take place. Websites archive, manage and visualise information; through hyperlinks, databases, open data, real-time data collection, dynamic visualisations, web pages are highly effective organisational systems to curate and access information. In this sense, they complement masterplans which are also complex documents organising information in space. Furthermore, masterplans are also woven in legal and disciplinary webs; a fact that often hinders accessibility and, consequently, the general public's ability to partake in the design process.

These points are further discussed by examining three recent projects in which remote sensing and augmented reality were employed to achieve this goal: Xiamen Interactive Model exhibited at the Xiamen Expo 2010 (Xiamen, China, 2010), Molecular City presented at the Future Places Festival in Porto in 2010, and 35 Degrees installation exhibited at the Site Unseen Festival in Chattanooga, USA in 2012.

Background

These projects are grounded in the long history of experiments applying electronic and digital technologies to planning. Cybernetics is an important field of study in this regard as it provides the most compelling practical and theoretical examples. Started in the 50's, a defining moment in the development of cybernetic urbanism was marked by Cybersyn - a technologically augmented series of control rooms designed by Stafford Beer in Chile between 1970 and 1973 [Medina, 2005; Medina, 2006] - which constituted the first coherent and partially implemented attempt to manage territories by using telecommunication and computers. Though the project lasted for only three years and had limited use, its influence is still palpable if we consider that today's global cities all have, or have plans for, fully-functioning data management rooms in which real-time maps of crime, traffic, pollution, weather, etc. can be simultaneously visualised and compared [differences between developed and developing countries in this field thins; Rio de Janeiro, for instance, has got state of the art facilities].

However, both tools and social context have dramatically changed since thus requiring different paradigms no longer relying on the 'control room' scenario. Control rooms still rely on central control, top-down decision-making process, and, conceptually, on the assumption that digital and real are connected in a linear, one-way fashion [from virtual to real].

This is the background against which, more open and playful planning tools have emerged. The gaming industry has specifically played an important role as videogames such as SimCity are not only some of the most accomplished applications of digital tools to planning but also attained a level of popularity and attention far greater than planning normally attracts. These phenomena help us understand why in many countries self-initiated web platforms discussing planning issues and, in some cases, even devising plans for action have emerged. In the UK alone there are about 2,000 initiatives of this kind. Though most of them can be best described as geo-located notice boards, vehicles for the local inhabitants to annotate their own environment or simply express their desires and frustrations; all together they reflect larger societal transformations that are radically changing both commercial and academic practices; the culture of crowd-sourcing, of user-generated content, sharing, etc. Even more institutionalised organisations such as

governments are no longer indifferent to all this; again in the UK the current coalition government drafted a green paper titled "Open Source Planning" which promised to translate the tenets of digital culture into a new planning system by embracing the open, bottom-up, dynamic world of open source software. (2010)

Beyond Modernist Planning

Where Modernist planning sought standardisation and simplification by decomposing the built environment into individual indexes, digital tools operate according to opposite paradigms. They relish complexity [due to computational power], volatility [because of their ability to sense and adapt], and dynamic information [as time-based media], as well as they can weave multiple scales together.

Conceived as such, masterplans resemble more websites than traditional blueprints. They aggregate and link data, tag it to physical locations as hyperlinks and social media do. What results is a dynamic planning tool, able to absorb ever-increasing data sets, a platform for experimentation [through simulation and scenario planning] and collaboration between diverse expertises.

Data must be understood no longer as just quantitative parameters but also as qualitative ones. The two terms are here understood as difference in number, the former, and difference in kind, the latter. This means that a qualitative parameters are actually connections; that is, link up data sets of different kind.

However, we should not understand this shift as a complete departure from traditional masterplans. In fact, dynamic and participatory techniques can and should still co-exist next to more established ones. The set of tools described here are thus to be understood as additional to the existing ones; the fundamental principles of access to direct light and air underpinning Modernist planning are not to be replaced but rather complemented by new ones.

The pressing issues we are facing require a radical re-thinking. On the one hand, the exponential growth of storage capacity, bandwidth, and accessibility provide a timely opportunity to allow citizens to tune into their cities; on the other, issues of rapid urbanisation, volatile economic and social balance, and limited resources are now global concerns, particularly relevant in China, requiring agile planning tools that the profession currently lacks.



Figure 1 : Xiamen Interactive Model: Metropolitan area, masterplan.

Xiamen Interactive Model

The Xiamen Interactive Model was designed by a team including Chora Architecture and Urbanism, and Nick Puckett in the spring of 2009. Subsequently it was exhibited at the Xiamen Technology Expo (2009), Post-Oil City exhibition at the ifa gallery in Stuttgart (2010) and the UIA congress in Tokyo (2011).

The model is perhaps the major and most sophisticated outcome of a larger commission from the city of Xiamen to an international and interdisciplinary team to design the first comprehensive masterplan for the city.

Xiamen's population has been growing at the staggering 6% rate for the past decade to reach the current count of 2.5-million inhabitants; however, like many other cities in China, Xiamen has plans to continue its growth and reach the 4-million mark by 2020.

The ecological and infrastructural scale of such dramatic and ongoing transformations led the team to believe that traditional tools to analyse and manage such magnitude of change would not be effective anymore. Instead of a standard masterplan, we proposed a dynamic planning document to be first introduced through an interactive physical model to be presented to the planning authorities and the general public. The model is a 4x4 metre rapid-prototyped representation of the entire metropolitan area of Xiamen. A set of LED lights wired to an interactive system – linked to the Internet via Arduino circuit boards – is positioned underneath it and animates the entire model. In fact, by utilising rapid-prototyping machines it was possible to maintain a 1mm thickness throughout the model, thus allowing lights to glow through the top surface and generate various effects. Made of a single, extremely thin material, the model immediately implies no differentiation between built and natural environment as well as poetically depicts Xiamen as a delicate and fragile artefact to curate.

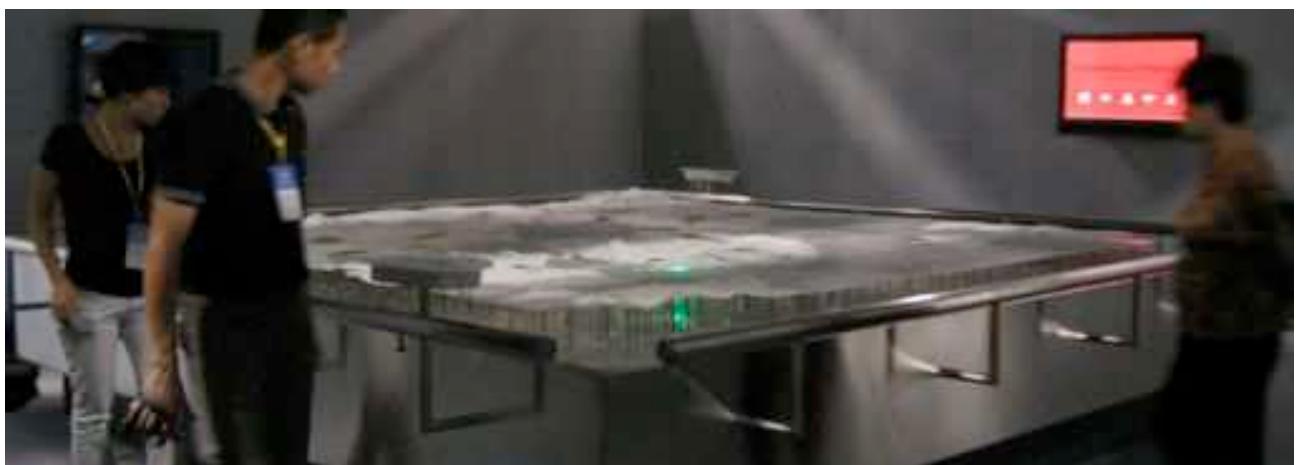


Figure 2 : Xiamen Interactive Model: image of the final installation.

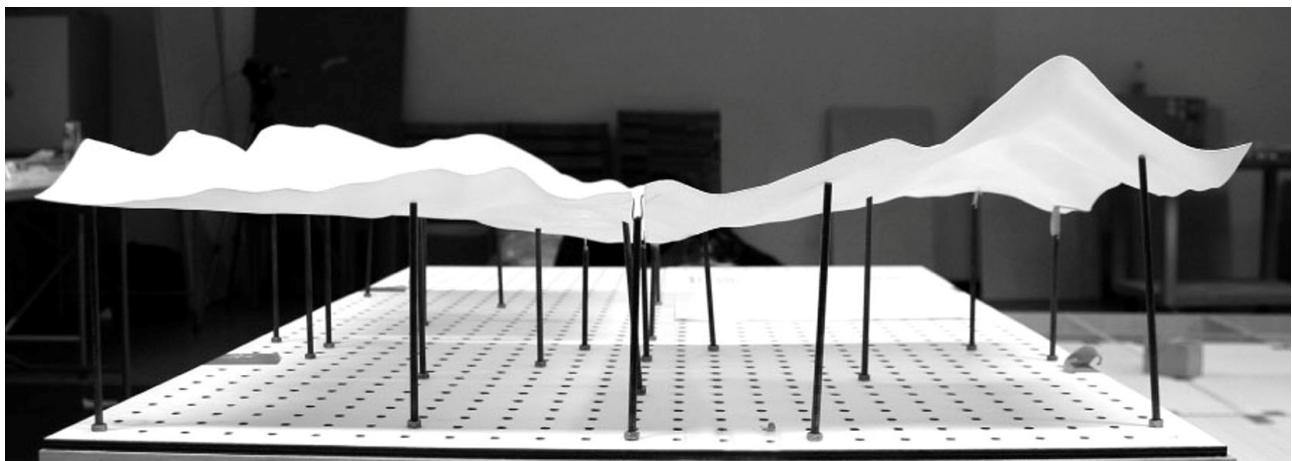


Figure 3 : Xiamen Interactive Model: detail of a single tile

Four consoles positioned along the edges of the model are provided with buttons to activate different sets of lights animating the masterplan. Each LED light represents either an existing, proposed, or simply speculative project to implement: the colour of the light identifies the type of project (typology, technology employed, etc.), whereas their field of influence is conveyed through the effect generated through the LED light (spot light for point projects, diffuse light for projects having a larger area of impact). The whole interactive system is also connected to the web which allows it to download data representing global factors affecting the Xiamen's environment such as oil price, energy consumption, etc. thus visualising the hidden but profound financial and political forces acting on the city itself.

data sets attached to the markers which would then be displayed on monitors and projection screens. The data sets consisted of digital architectural models matching the scale of map of Porto: some of these had been designed by us, whereas others were iconic structures or typologies that had been downloaded from the Internet. Finally, via a specifically designed phone app, the hybrid landscape constructed by users in the exhibition space could be saved online and retrieved by visitors on their mobile screen once they reached the corresponding physical location in Porto.



Figure 4 : Molecular City: diagram of the installation.

Molecular City

Molecular City is an installation conceived in collaboration with T.Klein utilising Augmented Reality (AR) to transform masterplans from closed, static documents into dynamic and participatory ones. Exhibited for the first time at the Future Places Festival in Porto (Portugal, 2010) Molecular City consisted of: one table displaying a map of Porto, video cameras, a projection screen, a mobile phone app, and the 'Periodic Table' – an open database of QR markers to position on the table and that formed the 'architectural substances' to make up this half fictional/half real landscape. Once the visitors chose one or more markers and freely position them on the map of the city, they pointed a video camera at them activating the



Figure 5 : Molecular City: mobile application.

By taking advantage of AR technology, Molecular City allows the public to create their collective hybrid city by superimposing virtual architectures onto the map of the existing city of Porto via computer projection. The physical space of Porto becomes an unfinished canvas constantly connected to the endless possibilities provided by virtual space. The role of the architect recedes to the background; the city transforms into a gameboard where cultural desires and needs can be seamlessly projected and negotiated. Confluences of place, scale, emotion and history overlay to give rise to a hybrid (half real, half virtual) urban condition.



Figure 6 : Molecular City: Augmented Reality projection

By adding AR technology an otherwise conventional map is transformed into a dynamic participatory tool to imagine a future image for Porto. The title of the installation captures the novelty of the proposal by drawing a comparison with biology. Similar to how simple molecules aggregate to form complex

compounds such as proteins, Molecular City imagines a condition in which the overall complexity and richness of the urban experience is the dynamic result of a multitude of diverse narratives and singular gestures. The construction of such environment emphasises contingency and discontinuity over exactness and stability.

Similar to social media and so-called web 2.0 culture, the logic of such planning tool is thus aggregational; it links and combines diverse elements in a dynamic fashion. The city's overall complexity and richness emerges out of the accumulation of diverse narratives and individual gestures showing the potential of an urbanism of Big Data.

The interactive model is an open system, in which distinctions between production (author) and consumption (audience) as well as representation and simulation are dissolved. Such are the potentials opened up by so-called convergent media (Jenkins, 2006); the binary language standardising all data also allows greater exchange and transformation from one media to the other: a masterplan can include a variety of media ranging from traditional – such as maps – to emergent ones characterised by their ephemeral qualities – projections and augmented reality – which enable a dynamic representation of the urban space by fluidly dissolving old divisions. Users' feedback hinted that much of the public's interest and potential development resides in the expansion of the database to include other media which have not traditionally included in planning but do constitute an important part of cities' life and can be easily added ; sound [whether in form of noise or designed compositions] could be an interesting inclusion. Such opportunities allow the masterplan to embrace and explore the logic of the hyperlink.

The QR markers could be thought of as spatial hyperlinks: the combination of the existing of Porto and proposed ones is no longer bound to follow functional logics but it can also operate according to more analogical and discontinuous or molecular narratives.

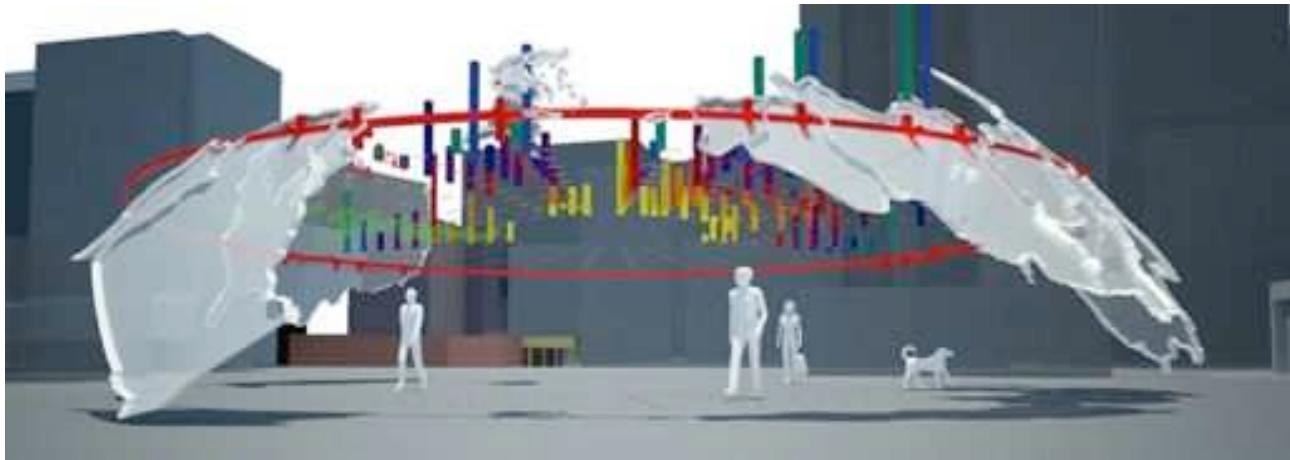


Figure 8 : 35 Degrees: Rendering of the AR projection.

35 Degrees

35 Degrees is an installation which has been exhibited at the Site Unseen Festival in Chattanooga, USA, the first Augmented Reality outdoor art festival. Such technology is as a means to envision a different kind of urbanism operating at multiple scales and fosters interdependency and exchange rather than insularity. Due to its accessibility, geo-located tagging, and connection to a potentially infinite archive, AR is here polemically utilised to dislodge the stale paradigms of traditional planning.



Figure 7 - 35 Degrees: Diagram showing the organisation of the data

What kind of urbanism can augmented Reality engender then? 35 Degrees imagines to cut a section through the earth exactly on the 35th parallel: the one running through Chattanooga. This straightforward geometrical operation forms a 30-metre diameter ring, only visible on your mobile's screen through the phone app Layar™, on which all the cities sharing the same latitude than Chattanooga are marked. This simple gesture creates an iconic space in

the form of a ring; a close, continuous curving shape connecting twenty-one cities around the world only by virtue of their geographical location and bringing them together regardless of their cultural, political, and economic differences.

Within the space formed by the ring, each of the countries represented is mapped against ten categories spanning from material needs [such as accessibility to water resources] to the immaterial world of digital technologies [number of cell phones per habitant].

These categories are taken from the authoritative CIA World Factbook and mapped against each other: Inflation rate, number of Internet users, oil production, number of airports, renewable water resources, number of cell phones, level of literacy, military expenditures, unemployment rate, and GDP/ per capita. Pakistan's connection to mobile communication dialogues with South Korea's extraordinary technological infrastructure, Afganistan's poor literacy is echoed by China's proportionally minimal access to aviation transport, and finally we can appreciate at a single glance the global distribution of renewable water across the 35th parallel.

35 Degrees: A Real Urbanism of Data

Like an iconic image, the ring of the 35th parallel displays geography and data both as experiential and interconnected constructs. Every single location on the planet could have its own ring; endlessly repeated, yet every time unique because of its coordinates. In the information age unity does not mean uniformity as the area enclosed by the ring becomes a space for dialogue and interdependency.



*Figure 9 - 35
Degrees: Image of the actual AR projection on site.*

The installation merges the micro scale of human economies to macro interactions of global geography through a continuum gradient reconciling previously fragmented scales; from the material to the intangible. The systemic performative nature of digital data meets the humanist, symbolic, and almost primitive figures of the ring; the digital world of data is in conversation with the domains of geography, politics, environment; the matter our environment is made of.

Data are part of the physical environment we daily inhabit; as such they are subjected to the same, cultural, economic, and political webs managing and affecting our own existence. Digital culture promises to be 'messy': open, dynamic, user-generated, diverse, it relinquishes central control to give voice to a plurality of expressions and needs. Authorship too moves away from a single individual to open up towards a multiplicity of actors; this installation begins to speculate what opportunities may emerge from it.

Users' Feedback and Research Evolution
Though the three projects all concentrate on a single, broad theme - the relation between virtual data and physical environments - each single installation represents an evolution, a different variation within this topic. This is because they capitalise on the knowledge gathered from users' interaction as well as from the different contextual conditions the installations had to confront.

In general some recurrent trends can be extracted from this experience:

- Regardless of context and local culture, users were never really put off by the technology applied. Though the public drawn to digital festivals is almost invariably already computer-literate, people engaged with

technology and quickly grasped how to interact with the installations and their deeper aims; a factor that allowed us to increase the technological complexity of the research without alienating the public. On the contrary, bureaucrats and politicians alternated between an equally casual and engaging behaviour and a more rigid one as they acted in their professional role. The prospect of substantial re-thinking of the planning procedures hindered the success of the projects, which remained more as demonstrative, 'futuristic' proposals.

- Although technology was never really an issue, abstraction was. The language of the Xiamen Interactive Model utilises a straightforward language based on light and colour, however they still stand for actual physical interventions. As digital technology developed to allow more freedom, a more direct language was adopted. In both Molecular City and 35 Degrees symbols were substituted by digital models of buildings - in the former - or direct data graphs in the latter. Following from Lev Manovich's experiments with Big Data, direct, non-abstracted representation not only gives way to more effective communication, but it also retains a whole series of nuances and details which previous technological limitations that had to be edited out of the final work. This widens the designer's palette to allow modes of receiving data that are spatial and experiential rather than simply analytical (Manovich, 2010). For instance, in Molecular City by having models of buildings rather than symbols such as coded lights, people could grasp and play with issues of scale, composition, style, etc.
- The receptivity of the general public towards these installations - 35 Degrees originally planned to be in use for a week ended up being on display for more than a month - pushed the work to embrace more and more the logic of geo-located and social media. Data can in fact now be tagged to a specific site allowing a direct connection between digital and real [these opportunities were exploited in 35 Degrees]. By comparing reactions between the three installations was also possible to notice a potential drawback in excessively fragmenting data across the territory. By providing a single, physical location from which to access and affect the dynamic masterplan, the Xiamen Model implicitly forces face-to-face debate and conversation. On the other, the dispersed

nature of 35 Degrees only allowed for remote conversations through social media. As data can be visualised anywhere at any time, possibilities for actual discussion could be dwarfed rather than enhanced; the presence of a model, a designated physical object synthesising the knowledge accumulated still maintains a value that should not be dismissed too quickly.

which divisions between programmes, zoning no longer hold.

In both Molecular City and 35 Degree these notions were explored by layering disparate kinds of data [which were both diachronic and taken from different disciplines] which were then geo-tagged. They both involved the creation of an open database allowing to link locations to each other emphasise interdependency and exchange.

Shifting Paradigms

The three projects here constitute a specific take within the ongoing debate on the Internet of Things. First of all, they apply IoT paradigms to urbanism and planning; most importantly, they not only embrace the technical evolution of web-based technologies, but also aim at moving the conversation beyond the pure technical aspect to include issues of culture and politics. As a result, three paradigms have emerged from this research:

Hybrid Compositions.

As Maurizio Lazzarato noticed: "The net is a net of nets; its heterogeneous nature is reluctant to unification, to homologation, to the melting of differences into a 'collective whole'... a flow of signs, sounds, images, information, that can either split (invention) or reproduce (repetition). Surfing the net means constantly experiencing conjunctions and disjunctions of flows" (Lazzarato, 2004). The possibility to conceive masterplans as dynamic and hybrid documents can have a huge impact in transforming the role of the urbanist. On the one hand, the proliferation of hybrids assimilates the work of the urbanist to that of an archivist or urban curator (Kwinter, 2000); the understanding of the built environment goes beyond its mere physical objects to involve making connections between places, programmes, and groups of users; essentially a curatorial practice. This fluid and complex activity relies on the construction of large databases of data which can only be effectively managed by employing digital tools.

The convergent nature of digital media also allows to move towards a performative understanding of urbanism. As all data must be expressed through metrics, the whole of the built environment can be studied and categorised according to its performances in terms of energy, use, social mix, etc. Again, a more fluid approach to planning follows; one in

Non-linearity.

Contrary to the 'control-room' paradigm of the cybernetic examples of the 1970's, control no longer needs to be centralised and can become more distributed as tools to produce as well as consume digital material become reach wider areas of society. Mario Carpo has been first within the architecture circles to notice the inherent contradiction between traditional modes of production in architecture and new ones characterising the so-called web 2.0 (Carpo : 2012). The bottom-up creative model proposed by the web not only questions the notion of authorship but also that of finished product as editing processes are no longer bound to time or limited to the initial authors only; a notion fundamentally at odds with practice of architecture and urbanism. Mash-ups, remixes, re-blogging are all practices that imply different modes of production and participation. Urbanism, fundamentally a public activity, is not only an ideal field to test some of the emerging notions, but can also be reformulated in the light of more open, participatory values.

Again, in Molecular City the masterplan was substituted with an open canvas on which local inhabitants could project their desires and needs. Such this was an open-ended process create a opportunity for experimentation and innovation. By concentrating on processes rather than products, people were encouraged to try out unconventional solutions which not only re-introduced a ludic element to planning but also triggered further discussions.

In projects such as the Xiamen Interactive Model and 35 Degrees the principle of non-linearity referred to the dynamic quality of the data informing coming from the databases and projects onto physical artefacts or spaces. As the data streamed in real-time to change the shape of the installations, so did the users' behaviour.

The uninterrupted feed of global data turned the installations into active event. Rather than blueprints to control the city, these are actually open systems enabling and nurturing emerging urban practices through digital platforms. Non-linearity is an essential quality in this transformation.

Scale.

The web breaks up traditional definitions of scale allowing us to search and organise data in ways that are displaced both in time and space. When applied to planning, this allows to design masterplans that break away from static blueprints to turn themselves into systems able to connect and react to inputs operating across different scales.

Beside the purely conceptual level, this has great practical advantages as it provides tools to understand and design urban schemes in a more ecological and integrated manner: a larger bandwidth of parameters that influence specific locations can be accounted for even if invisible. Environmental data are a particular good example of this as the consumption of material resources needs to be planned in a more comprehensive manner; environmental performances in one specific location can be compared and calibrated against other important and yet invisible global parameters, such raw materials' prices, etc.

These principles were specifically tested in the Xiamen Interactive Model, which connected the LED lights to the Internet to allow the public to visualise and interact with local and global energy patterns of energy consumptions. The planning policies to be drafted and implemented in Xiamen could take into account larger, ultimately global, variations, and do so in a dynamic manner, adapting to shifting conditions.

Conclusions

The three design experiments illustrated here show some of the potentials that the Internet of Things can unleash when applied to planning and cities. This is still a very fluid field in which transformations almost happen at a daily rate. However, the paradigms extracted from this ongoing research can be of help in understanding and managing the unavoidable urban turn that data will take over the next decade.

The need to implement time-based, scale-less tools to design urban environments will be

essential to absorb the data deluge that is about to invest our urban experiences.

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Spatial Aspects of the I Ching, The Book of Change

Case Study of "The Peak, Hong Kong" Competition

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Keywords: “Spaceprints”; design process, drawing

The I Ching, Gottfried Wilhelm Leibniz and the Spaceprints method

I Ching, iPhone, iPad – one is tempted to jokingly write the first title as: iChing. In the following line of thoughts, – hopefully – it will be shown, that this association is not at all too weird. Before, however, I entangle myself in the expected explanation, let me make a disclaimer. As much as I would like to be able to make an erudite philosophical or philological discourse, this text serves only as an introduction to a slide presentation. As for an architect, being involved in the research, teaching and design aspects of the profession for many years, thinking, learning and making happens through drawings. After making thousands of them, it became clear to me, that “I am not making the drawings, they are making me” (Magyar, 1999). This kind of exploration, the world, and one-self in it, led me to the discovery of the I Ching. Carl Gustav Jung writes in his introduction to the 1951 edition of the book (Wilhelm, 1951): “The I Ching does not offer itself with proofs and results; it does not vaunt itself, nor is it easy to approach. Like part of nature, it waits, until it is discovered. It offers neither facts nor power, but for lovers of self-knowledge, of wisdom – if there be such – it seems to be the right book.” We discovered it during our four years stay in Nigeria, during the late seventies, where, together with my wife, we were able to indulge in literature, which was forbidden in the then communist regime in Hungary. The duality of

Yin and Yang, these contrasting but complimentary notions fit very well to my research-through-design approach. The method of reduction, staple of all kinds of research, provided me insights and discoveries, which with I am able to operatively apply and expand since that time. The obvious, but thus far hidden fact, that spatial continuity is the product of surface continuity in a building, led me to the investigation of “spaceprints”, these imaginary constructs, which enable us to simultaneously investigate space and non-space, as contrasting, but complimentary aspects of our existence [1]. Very much, like the Yin and Yang of the I Ching! Between the birth of The Book of Change, some three thousand years ago, and the time of the late seventies of the last century, I am indebted, to mention another important date, when, in the seventeenth century, Gottfried Wilhelm Leibniz (re)discovered the binary numeral system. He sent it to a French missionary in China, who sent back to him the I Ching (Leibniz conducted a very extensive correspondence with around 1700 persons, way before the e-mail, one of the social applications of his discovery). He then made the obvious connection between the 0 and the 1 digits, these cornerstones of all computer systems, and the broken and continuous lines, with which the 64 hexagrams of I Ching are denoted.

Case Study of “The Peak, Hong Kong” Competition

Since the illustration of this competition happens with the drawings to be presented, let me make some general comments of my beliefs, in a slightly paraphrased form, as they were published (Magyar, 2010).

Architecture is about love, about giving, service and responsibility. It deals with different degrees of ritualization of the public and private domains. It explores, discovers, applies and celebrates the ideal and circumstantial conditions of sites, programs, cultures and technologies. Societal usefulness is its major ethical measure.

Dr. Thomas Kuhn, in his book *The Structure of Scientific Revolutions*, defines paradigms, as “some accepted examples of actual scientific practice, which includes laws, theory, application and instrumentalization. They should be sufficiently unprecedented and sufficiently open-ended”. Architecture, as a discipline seems to contain these two characteristics, since most of our buildings are supposed to be sufficiently unprecedented, and the design process sufficiently open-ended. Had he mentioned architecture among the sciences, he would have described our field as one in the pre-paradigm stage – like psychology, when Dr. Sigmund Freud and Dr. Carl Jung established their respective theories based on detailed analysis of self-observation. These observations were descriptive, interpretative, but not normative. This non-normative status of our discipline has to prevail, since the immeasurable aspects of our built environment elicit wonderment or awe!

Architects should aspire to reflect and invent the best of the present, and weigh its value in the future. The present, however, seems to be an extremely illusory concept – it transmutes itself, as we speak, into the past. Therefore, the comprehensive and operative application of the values of the past is called upon to assist in the invention of the future! So it can unite the spatial and temporal aspects of art, and affects one simultaneously in the visceral, cerebral and cosmic dimensions.

In the competition, I interpreted myth as context, myth as a narrative on the belief of a people, while context refers to the conditions, surrounding the events and actions. At the application of my method, the general spaceprint referred to the ontological layer, the particular spaceprint to the belief layer, and the spaceprint fragment to the cosmic layer .

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Architecture and Human Identity

The irrational in Architecture from the Modern Movement to the Contemporary Scenario

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Irrational Thought in Architecture

"If architecture, unlike art in general, cannot be a solipsist expression of the artist-architect, but due to its specific diversity of discipline even the construction technique must relate to the concept of functionality and territoriality, it cannot be separated from its relationship with humans; this is also why it is essential to understand the creative, and not only the technical and rational, process that leads to the creation of an architectural work. A creative process that is clearly different depending on the thought governing it and inextricably linked to the human identity and technique of the architect." [Fagioli. M]

Figure 1: Zaha Hadid, Guangzhou Opera House, Guangzhou, China

The topic of this research spans a century starting from the early twentieth century up to the present day to demonstrate, through images that illustrate examples of architectural works, how the architectural image has changed from the formative years of the Modern Movement, developed in connection with the research of the Avant-garde, up until the transformation taking place and seen in the results of the latest architectural works created in China, a place of large-scale architectural experimentation as a contemporary scenario.

Specific human identity, understood as a characteristic peculiar to each individual, as well as belonging to religious, national and cultural categories, is represented by irrational thought which in everyday language can be identified with the emotional aspects of human sensitivity. Our rational and irrational capacities, understood as thought, are closely linked to our biological and organic physicality and our species is most likely differentiated from other species precisely because of this



Figure 2: Wall Painting, Cave of Chauvet, France, as far back as 30,000 years; Picasso.P, Le Demoiselle D'Avignone, 1907; Hadid.Z, Hafenstrasse Office and Residential Development, Hamburg, 1989.

further psychological acquisition, namely the possession of irrational thought from birth. In speaking about Irrational Thought I am referring to the research and scientific discoveries of the Italian psychiatrist Massimo Fagioli. To expand on the discoveries of his Theory of Birth, which proposes a scientific basis for a new way of thinking about Human Identity, here I will limit myself to just introducing and mentioning some concepts useful for the discussion seen in the architectural images. In view of this clarification this short text aims to highlight how the architectural image has transformed from the Modern Movement to the present day taking as a point of reference the relationship between the design of architectural space and the Irrational Thought typical of human beings which can be easily identified in art, from wall paintings to many works in the history of architecture.

Architecture, as art and a place where humanity discovers and conducts life experiences and as a discipline of construction, must meet human requirements and cannot be a self-referential exercise for the artist.

Architecture cannot be a self-referential exercise because it is an art form that transforms the physical environment using irrational thought. In its real world application we should pay more attention to aspects linked to irrationality, naturally not tolerated by the logics of a dehumanized economy. Architecture is a place for meeting and for relations, it is a space of knowledge and a ground for activities, it approaches human complexity because in the creation of architecture, or at least certain

architecture, there is a struggle between immediate and creative primary aspects and subsequent processing, technological, construction and conclusive aspects.

Nevertheless the creation of architecture must involve more complex research even in the initial phases of the architectural process placing greater importance on the creativity of the architect together with rational and functional aspects. The architect's identity and his or her training plays a key role, and for this reason the research can be applied to urban and architectural design practices. For instance, Alvaro Siza states that in order to reach the resolution of a project the creative process also involves knowledge, experiences and human relations, namely it involves the human identity. The relationship between architecture and the image of the psychic movement, which the architect transfers to the design through marks made by his or her hand, is in my opinion essential to talk about architecture in the full sense.

This relationship between irrational and architecture is presented through images in order to explain the concepts of metamorphosis, manipulation, deconstruction and the transformation of the architectural image over the last one hundred years, attempting to create a formal and conceptual visual parallel between art as a direct expression of irrational thought which affects the subject and the way of thinking about architectural space.

Specifically, in this discussion we shall distinguish the concept of irrational thought from the common translation of the concept of irrational, understood as an animal instinct, unknowable atavistic memory, internal chaos, misfortune; while in reference to the aforementioned research irrational thought is

specifically human and instead differs from the instinct of animals.

Irrational thought is linked to the non-material internal memory and fantasy, namely to the distinct ability of human beings to create artistic images; we are referring to the ability to imagine, which can be seen in artistic outcomes and relationships between human beings.

We shall consider aspects of creating architecture that imply a connection between the first irrational thought and the need to construct; architecture's connection to art is sometimes thought of as incidental, but in fact what I wish to focus on instead is the common root of art and architecture insofar as both are expressions of a non-oneiric unconscious image; namely an image the artist creates during the waking state, starting with the memory of acquired experiences which are brought to the conscious, and that differs from the oneiric image of dreams and the conscious image of the perception of things that we can call figure.

This non-oneiric unconscious image is the expression of fantasy which is capable of drawing lines and imagining the qualities of architectural spaces, which defines the tangible space in artistic terms taking into account the fact that human beings have a psychic movement in relating to reality. In an attempt to find a connection with the contemporary situation in modern-day China, the loss of the relationship with the irrational in architectural design is one of the problems that, in some cases, has lead to the creation of an architecture that only partially satisfies the requirements for which it was built.

The creation of architecture is related to the complexity of human thought, insofar as it is admittedly an art form that must be used, experienced and even consumed: an art form that refers in the first instance to Human Identity, understood as a structure of original thinking for each individual human being. To respond to the questions that living raises not only in terms of needs, but also in relation to requirements, the creation of architecture cannot in my opinion disregard, in the design phases, the concepts of creativity and fantasy which are inherent in making art and which, in the case of architecture, are often regulated to second place in favour of practical and functional aspects, strictly rational, which unfortunately follow material and economic logics as well as pre-established ideas with regard to the concept of the irrational.

The Modern Movement came about somewhere between the two world wars, and developed in the Twenties when the Avant-garde was then a widespread phenomenon throughout Europe, and in the Thirties it was defined as the International Style. The first works of the Modern Movement were linked to the revolution of images proposed by the Avant-garde, which, based on the different theoretical and formal attitudes, had the insight to show, through the language of painting, sculpture, cinema and theatre, the language of the irrational as an expression of Human Identity in Art. Contrary to the history of thought of the previous centuries, for Avant-garde artists the topic of the irrational was explosive, sought after and a source of inspiration in most cases; it was thought of as something positive that could be represented on canvas. For example the works of Picasso, specifically *Les Demoiselle D'Avignone* of 1907, gave rise to a new way of representing Human Identity where form and colour, only lovers, could no longer describe human complexity in the artistic field, but had to conceive, through the imagination of the artist, of an image that left the observer to intuit and feel the existence of a complex human sensory world beyond conscious perception.

The transformational process from expressionism started in the nineteenth century with the work of Van Gogh and Cézanne up until Cubism, and the consequent development of Abstract Art contaminated architecture leading to a revolution in the way of conceiving of space, in search of the so-called fourth dimension linked to the development of scientific, and not only artistic, thought. The scientific discoveries and the intuition of the avant-garde artists on human irrational thought upset the traditional way of creating architecture, and it was architecture, out of all the arts, that transformed the work of the various avant-garde artists into a new concept of space even in the works of the Modern Movement. The perspective box was changed, interrupted, opened and excavated; in this opening of the architectural object the use of light took on a fundamental role in the relationship between the outside and the inside and construction technology became a poetic expression forming part of the result of architecture. The space opened up, volumes became essential and were measured against the outside in a mutual relationship. The frames of the viewpoints of the architectural box, just like in a cinematographic montage, no longer offered solid points of view integral to

the immediate perception, the curved line became marginalized by the orthogonality of the purism of the volumes related to the renewed use of the materials and the roof of the building was thought of as liveable and usable in the dynamic placement of the building, whether it was residential or used for public functions, in the urban context.

An example of this change in architecture in relation to the avant-garde of the twentieth century is the theme of the house, where the concept of living is open to new experiments and reinventions and among the many examples we refer to the Schröder House by Rietveld, the Tugendhat House by Mies Van Der Rohe or the experimentation of the Bauhaus School in the houses for teachers designed by Walter Gropius, and last but not least to the Maison La Roche by Le Corbusier. Another interesting parallel is the observation in the same period in the United States that Frank Lloyd Wright built the Prairie Houses, which right from their theorization recalled the dynamicity of the human body in an organic relationship with nature.

Let us take Maison La Roche as an example, today headquarters of the Le Corbusier Foundation in Paris. This work clearly shows the revolution that occurred in architecture in those years, where the organisation of the space led to a movement for the ongoing possibility of multiple points of view; in the case of the living room, designed by Le Corbusier as an art gallery, we seem to be immersed in a framework of many vistas and the red curve of the grand staircase confirms that those curves directly recall the avant-garde years and are a synthesis or better the start of a synthesis between form, colour and architecture which was poetically revived in many of Le Corbusier's works. The masterful use of the light leads us to feel surrounded by a constructed, diffused and sometimes filtered light, causing us to feel a strong contrast with the linear and pure outside.

The interior is a surprise for us and on reaching the roof garden we wonder why the client, faced with such a wealth of content, exacerbated relations with the architect, perhaps over and above the disagreements on the intended use of the double volume part of the gallery of paintings. We dare to speculate that it was the proposed image that destabilized the user because it was unconventional and new, and strongly linked to the human identity of the architect.

The relationship that Le Corbusier proposed and theorised with respect to the previous

cubist experiences and in general with respect to the creative experimentation of the irrational expressed in the Avant-garde is an ordering relationship that theorises the definition of form in relation to colour declaring that the creative process can be rationalised. In this relationship of a return to order from the irrational, thought of as uncontrollable and difficult to translate into architecture, the modern movement was founded.

"La machine à habiter", Le Corbusier's provocative expression, the first conceptual prototype of the modern movement arose from Le Corbusier's experiments. Following this argument the train of thought maintained by Le Corbusier in architecture with the concept of the irrational is found in many works from Maison La Roche to the fascinating villas of the Twenties, where purist geometric rationalism reveals a rendition of space as a synthesis of previous pictorial research, up to the works of the postwar period, for example L' Unité d'habitation in Marseille, where poetry manages to find expression in the organization of the accommodations and in the intensity of the use of light and colour. In the Ronchamp church reinforced concrete is modelled into a compositional design of curved lines that emphasise the sculptural appearance of the inside.

During the second world war the passage of the great masters of the Modern Movement from European architecture to American architecture marked a crisis in the relationship between architecture and the irrational. Nevertheless in this phase the theme of the house, with Farnsworth House by Mies Van der Rohe, experienced one of its most poetic moments insofar as the box-residence now stripped of the outer walls, delimited by glass façades to mark an apparent continuity with the outside, fitted perfectly into the surrounding nature as a diamond deposited to mark a fundamental passage in the history of architecture.

The Thirties were indeed the translation of the return to order theorized a few years before. The rationalism of the forms led to the structure of the interior being essential and the schematic nature of the right angle now defines the language of architecture. The Italian rationalism of Terragni, Moretti, Michelucci and later Savioli was noteworthy.

However it was during the Thirties that Frank Lloyd Wright designed many works of art. In many but not all cases the use of the materials and the reinventions inspired by Japanese architecture and Mesoamerican iconography

offer us a fascinating artistic reworking; from those same years the best-known Kaufmann house from 1937 where the relationship with the nature of the Prairie Houses is expressed in a dynamic and striking way bringing the movement of nature back to the space. In the following two decades it was the Johnson Wax Company Headquarters with research on the curved line and the Spiral of the exhibition space of the Guggenheim in New York that forcefully led architecture to rediscover its relationship with the irrational.

In 1939 Lucio Costa and Oscar Niemeyer, for the World Trade Fair in New York, proposed the Brazilian Pavilion where the strained volumes of the modern architectural box are interrupted by the use of the curved line of the ramp, the main feature of the scenographic development of the pavilion, here the synthesis of the form and function of the Modern and the

method without repeating the contents of its origins; the return to conscious representation in creating architecture was deafening and the non-oneiric unconscious image slipped into the background dominated by the achievements of expanding technology and the approach of the idea of the vertical city. The vertical city is the language proposed without the memory-figure adornment of a relationship with history, the cold purity of the volumes announced a total lack of the curved line, nevertheless works by architects such as Wright and Eero Saarinen maintain an expressionist poetry in the use of the curved line managing to give reinforced concrete an unprecedented plastic value. The architectural box, exasperated in its static nature, was aggregated with other elements and the design of the regulatory plans was imposed on the territory without a relationship with nature.



Figure 3 : Le Corbusier, Maison La Roche, Paris, 1924

theme of the exotic create a strange combination almost preluding the future changes of the Post-Modern period. The work of Oscar Niemeyer continued by bringing the curved sculptural line to reinforced concrete and, despite him defining himself as a rationalist, his non-oneiric unconscious images in architecture poetically tell of the relationship between men and women and the intensity of a personal quest lived to the full. After the second world war or thereabouts until the early Sixties the relationship with irrationality experienced a moment of great division and the connection between architecture and irrational thought was temporarily lost, and despite the examples of Eero Saarinen, Wright, Niemeyer and Alvar Aalto, the Modern Movement became a

The space was divided into absolute geometries, pure and minimal, where the structures of curtain walls were the movement of the out-of-scale such as the Seagram Building by Mies Van Der Rohe. Donald Judd, in sculpture, proposes geometric abstraction without objectification, but what may be absolute and perfect in art and sculpture may become out-of-scale and anti-human when applied to architecture. The Euclidean geometry of the solids regularly placed in the space minimizes the architectural box fascinating us with moments of poetry in declaring the structure as part of the form and in the final separation from the concept of ornament. The static nature reminds us of the idea of mental structure which does not involve the creativity of the irrational because it reproduces an existing figure albeit reinterpreted but no longer original.



Figure 4: Le Corbusier, Maison La Roche, Paris, 1924. Le Corbusier, pencil on paper, Museo Nazionale di Belos Artes, Rio De Janeiro. 1936

The post World War II period was an era of the brutalism of the reinforced concrete of the new metropolis, which at the same time contrasted with the work of sculptors who proposed an expansion of space, but in the gigantism of the folded and non-rational forms they foresaw the architecture that would become contemporary to us and in particular I am referring to the sculptural monuments of Alexander Calder. In painting, Mark Rothko and Jackson Pollock, through abstract expressionism, from the Forties to the Sixties, reached a level of abstraction that was, in human terms, difficult for them to support the weight of their achievements; both committed suicide. They managed to describe an irrational that was even deeper and closer to the first moments of human life, understood as the first psychic movement of a person. The soft and dramatic hues of Rothko and Pollock's action painting could not be transformed into architecture, at least not until today, not even when the architects of deconstruction attempted a further decomposition of the architectural box creating the fourth dimension in the translation and dislocation of a frozen moment. The American avantgarde of action painting and the avantgarde of Italian contemporary Spatialism and Informal Art used the architectural alphabet thereby reinventing the relationship between the painter and the canvas: leaving architects a new option of interpreting the space considered disturbing at that time, attempting to find the meaning or sense of the infinite, the Energy of movement, and the non-material human that has been referred to as irrational thought.

The transformational process, which from the avant-garde of the twentieth century up until contemporary architecture changed the concept of the architectural box, passed through the Post-Modern rejection of rationalism in architecture.

The works of Louis Kahn represent the intellectual shift from the Modern to the Post-Modern; the planimetric order and sculptural monumentality of the Salk Institute, which ended in 1965, declared a rationalism made up of material value and technological syntax and it is interesting that the architect ended the space on the Ocean after a meeting with Luis Barragan.

The transition to the Post-Modern is strictly linked to a loss of images of the irrational which gradually occurred in modern works from the second world war period. The Post-Modern is the period ranging from the early Seventies to the Nineties and it developed as a controversial reaction to the dictates of the Modern Movement with regard to the link between form and function. The Post-Modern, declaring itself to be opposed to the modern, freed formal research from the conversion of functional needs professing the need to regain greater expression in the formal area, even making reference to antiquity and everything that had been done away with in the Modern works such as ornament and citation.

Architecture became contaminated with procedures and techniques belonging to other art forms: assembly, the collage in an eclectic wish to provoke. The idea of adding, mixing and connecting the different elements was in some way opposed to the deconstruction processes, nevertheless the demolition of the Modern Box and the contamination of the pure and geometrically definable object was the shift to a just as rational process of decomposition

in an inadvertent attempt to describe the complexity of human thought. The forms of the Post-Modern are reworked, metamorphosed and redefined, but there is no creation of an original image. In particular I am referring to the works of James Stirling, Robert Venturi and Denise Scott Brown, because essentially the compositional process lacks the presence of a non-oneiric unconscious image, insofar as the procedure of definition and the conceptualization of the whole is rational and often the reference images are surreal or draw on Dadaist performances focusing on the superficiality of the exterior. Returning to the theme of the house, the Fisher house of 1967 by Louis Kahn anticipated the first houses by Gehry, such as the Winton guest house, by two decades; the play of volumes combined on non-parallel levels, which was taken up again by Gehry and combined with other elements inspired by Morandi in the Winton guest house, in the Fisher house are cut at an angle from glass windows that create movement between the outside and the inside.

The first works by F. O. Gehry explain the shift from the Post-Modern to deconstruction in the Layola Law School where the casual assembly of the volumes and the presence of different materials are combined with the dislocation of paths until reaching the house of the architect, where Gehry's relationship with artistic research contemporary to him is clear.

The originality of the Post-Modern is in the intense rejection of modernity, and here we can talk about the search for identity in the reworking of the superficial architectural image. I would like to connect this phase that spans from the Eighties to the Nineties to what is currently happening in China in search of an artistic and cultural identity related to history and tradition. For example, the works of the architect Wang Shu, which were awarded the Pritzker Prize this year.

In the context of architecture the new digital technologies have allowed the geometric and mathematical manipulation of the perspective box as far as the regeneration of continuous and unstable surfaces. The geometry of fractals and the complexity of new theories and scientific techniques have lead to further research and the undermining of the Euclidean space has descended again from the two-dimensionality of the canvas to inform the new architecture. New digital technologies are used as an expressive means to describe a new changeable and complex geometric model in an attempt to highlight as content not only the functional and rational qualities of architecture

but also the complexity linked to the relationship between the human capacity to experience space and built architecture.

Deconstructionism and blobs: the generic definition of deconstructionism brings together trends with different matrices that give rise to an architecture that is original for each and still undergoing transformation today.

Both trends go beyond the idea of static space in order to find a multitude of new formal and poetic-structural solutions for the deconstructionists and formal-sensory solutions for blob architecture.

In 1988 P. Johnson and M. Wigley organized an exhibition at Moma in New York on deconstructionism, which would make known the work of Hadid, Libeskind, Gehry, Eisenman, Tschumi, Coop Himmelb(l)au and Koolhaas.

Proceeding by synthesis, the concept of deconstruction would be implemented in deconstructivist architecture, therefore deconstruction as the rational rethinking of architecture as a text. Gehry's design method in the construction of models and in the use of the computer, in this case the Catia programme, made it possible to work in 3D and allowed the rapid shift from plastics to drawings and vice versa.

The art of the space by Zaha Hadid is characterized by the primacy of the form of the space inspired by Russian constructivists and suprematists creating a dynamic and open emotional dimension. Zaha Hadid's works contemporary to us have nevertheless lost the originality of the early works and have been subjected to the blobization of the design following a widespread trend today in design and architecture. Eisenmanian rationalism moves towards a post Euclidean space governed by a deafening process that destabilizes the recognized figure of the architectural image; his vision represents man as reason stratified and dislocated in conscious time, attempting to break down the relationship between experience and an understanding of the human-subject that moves into the object-architecture.

With deconstruction in architecture a violent gesture unhinges the box and lacerates the walls to then reconstruct them using the alphabet of dislocation. The cuts, wounds and tensions on the surface upset the territory of the orthogonal certainties.

This new rationality, because it is a pre-defined rational procedure, appropriates the apparent and recognized form of the irrational: chaos or

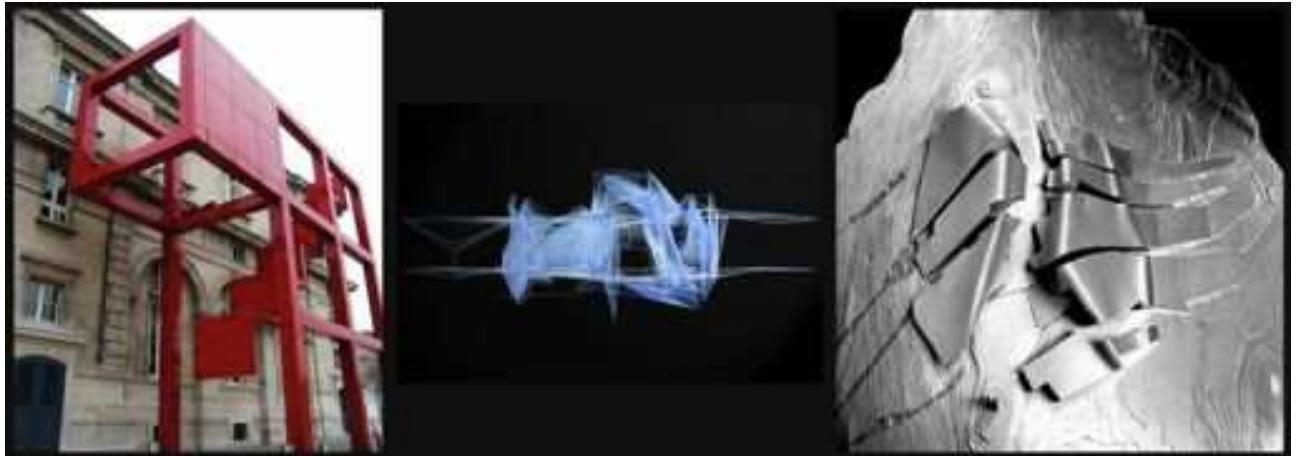


Figure 6 :Tschumi. B, Folie, Parc de la Villette, Paris, 1998; Eisenman.P, Competition for a Virtual House,1997; Eisenman Architects, City of Culture of Galicia, Santiago de Compostela, Spain.1999-ongoing

disorder frozen in an explosion of fragments and fixed in the form-structure. After the deconstruction of the box, a slow implosion and sudden transformation, architecture sews up the new fabrics, made of pliable material and continues towards a disturbing reinfection of the movement to then return inside the space in a flexible, unstable and fluctuating unique example but closed in a rational and organic vision of the whole. Thrusts and fusions, deflections and meshes, modelled surfaces come together to reassemble the whole through a combination of deformable surfaces, external physical forces, technological process and biological growth models; architects also investigate the

architectural space using animation techniques. The topological geometries are folded, twisted, deformed and differentiated maintaining the continuity of the object. The architectural images flatten out conforming to a unique matrix of thought reminiscent of cellular growth.

To view the key moments of this irreversible change the formal process from deconstructionism in architecture to the organic topological formal matrix of blobs has been described as the passage of a broad rationalist phase, where the architectural image passes from the dislocation and fragmentation of the spatial box to the reappropriation of the whole, in the reconstruction of the architectural box as the representation of a growth process and in the perception of the temporal sequence of cellular alteration, in other words in the reproposition of an already existing, but not recreated, image.

Design and architecture in these last five years, as already anticipated, have suffered



Figure 5: Pollock.J, Number 34, 1949, 1949; Rothko.M, Black on Dark Sienna on Purple, 1960

from the blobization of design and formal surrender and this final step includes the normalization of creativity, reassumed in the metamorphosis that occurred from Blob to the uniformity of the topological language. The new advanced computerized modelling is often used to provide architecture with a formal freedom that does not coincide with a valid identity in terms of contents, or rather the buildings conform to the language, because at the base there is no longer an image – which comes from the human identity of the architect, an image that does not exist in nature – or the image is altered in the process of modelling. The fluidity, in the architecture of the surfaces, which like a fabric moulds to complex shapes, smooths the design and like forced erosion removes the image and the whole sinks into the context proposing an organicist vision of humans.

The architecture of the icons evens out the various conceptual differences between form, icon and figure; icon is a conscious image that



Figure 7 : Zaha Hadid, Guangzhou Opera House, Guangzhou, China

can be found in an architectural result and therefore the icon with its symbolization is not the result of creativity that has its origins in the irrational. Gesture and sustainability seem to have become a dichotomy. Green sustainability in terms of technological applications highlight the physical well-being of humans in architecture in a renewed relationship with an idea of nature referred to the spiritual aspects of human beings, perhaps in some way still denying, as in the organicist view, the specific human nature of irrational thought.

Conclusions

Let us conclude by connecting this to the Chinese urban accelerated context insofar as it is an area of interest for my personal research in the field of architecture and because it is a scenario where the architecture of the last 15 years was built also following the tendencies that we have spoken about above. Here too, just like in the rest of the world, the normality of building speculation is accepted and does not

generate controversy, insofar as it must respond to the satisfaction of needs without the historical memory of what the Modern movement of the early years had, albeit unrealistically, provided.

Architecture in my research remains a non-linear bridge between the movement of the mark of the architect's pencil, a mark that in many cases comes from the artistic imagination, and the psychic movement of human beings who live in it and by using it make it a part of their life experience. The possibility of placing greater importance on research on the irrational in architecture would somehow allow us to give a possible response to the big issues that as architects we are called on to answer with regard to urban scenarios undergoing rapid development and transformation, like the Chinese context humanizing the urban and architectural results on all levels, even searching for artistic sustainability for the collective in the concepts of sustainability and common ground.



Figure 8 : Serri.F, Drawings. Architecture and Human Identity-China, 2008-2012

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Diagramming and the Evolution of Architecture and Urbanism

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The diagram...has been variously described as process, product, pattern, object, structure, visualisation, spatialisation, concept, idea, event, flow, detail, primary generator, recording, intuition, tool, trace, proposition, solution, conclusion, agent/agency, occasion, formula, heuristic, mnemonic, interface, vehicle, vessel, potential and force.

Metaphysically and ontologically it has been described as both real and ideal, objective and subjective, reductive and generative, type and token, emancipatory and oppressive, destructive and ameliorative, social and inhuman, personal and impersonal, material and immaterial, form and formless (Garcia : 2010).

Diagrams have been as essential in the development of architecture and urban design in the modern era as their definition has been puzzling to architects and theoreticians. Undoubtedly diagrams have been instrumental in propelling the design ideas of High Modernism (Vidler 2000) and have undergone a digital revival at the beginning of the twenty-first century. Yet understanding their conceptual constitution and functioning seems to challenge the traditional epistemology of architecture. On one hand, diagrammatic drawings appear explicitly rational because they tend to operate by abstracting design issues and information (Garcia 2010, p. 18) and have helped architects conceptualize and precisely analyse crowning examples of historical and contemporary buildings (Rowe 1976; Eisenman 1999). At the same time, however, many diagrams became famous not for their scientific precision but rather because they successfully advertised an attitude of their designers. Some of the best known urban diagrams, such as that which Oscar Niemeyer sketched for Brasilia, for example, have

projected not how the design for a new metropolis solves complex social and economic problems but rather a possibility of uninhibited control over a living city. In many recent cases, diagrammatic drawings have gained popularity when they promoted a particular theoretical narrative or ideology. The cartoonish images of a duck and a decorated shed drawn by Robert Venturi and his colleagues (1977), for instance, created a kind of intellectual branding—a logo sign—identifying a point of view that prompted the postmodern style in architecture. To untangle this seeming paradox, this paper will argue that diagrams have been crucial in the recent history of design because they provide a visual way to structure thought, a graphic method of determining what is perceived, what is considered relevant, and what sense is made of the revealed complexity of issues. Moreover, this argument will associate diagramming procedures with the emergence of technologies of thought (as discussed in more detail in *Architecture of Thought*, 2011). Approached in this way, diagramming can be seen as a symptom of a broad spectrum of visual practices that align design with political and economic forces. It is no accident that the popularity of diagrams has coincided with the rise of advertising and mass media, especially cinema, because they all provide modern tools for shaping thoughts and desires in the consumer society. An outline of how diagramming and its function have evolved will show here how designers have been implicated in the changes triggered by the modern era and capitalism.

High Modernism and Le Corbusier

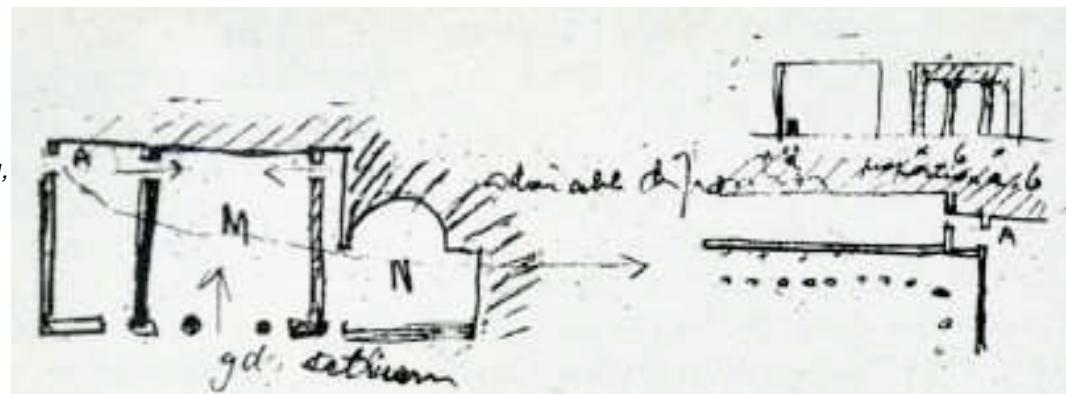
This process started during the Age of Reason, which developed various social mechanisms and procedures for disciplining society. It is telling that one of the first contemporary analyses of a diagram can be found in Michel Foucault's discussion of the Panopticon as a material representation of a social machine that was very real in operation but abstract in constitution (1980, p. 151). As Foucault points out, at the time when the French academy started to equate design education with hyper-rational control over a building's geometric hierarchy (later known as parti diagrams), such formal efforts paralleled Jeremy Bentham's efforts to design a scheme for controlling prisoners so clear that it would be applicable to hospitals, schools, poorhouses, day-care canters, and madhouses, a "diagram of a mechanism of power reduced to its ideal form" (Foucault 1979, p. 204). Panopticon's use of space and viewing was meant to result not in an unusual geometry in a building's form but instead in the redefinition of social relationships. This way of thinking was tacitly absorbed by the forces of capitalism that produced the culture of consumerism. During the nineteenth century, various material and immaterial means, including the restructuring of knowledge, the establishment of museums and exhibitions, and the ubiquitous presence of advertisements, taught people how to perceive the world and transformed them into consumers and members of a disciplined labour force (Bennett : 1988; Hooper-Greenhill :1992).

It was such an understanding of the nineteenth century world that Le Corbusier engaged when he initiated the High Modernism movement in architecture. His early drawings and photographs most clearly reveal how he merged commercial and conceptual ways of thinking, a synergy that he learned both to disguise and precisely exploit. He became the emblematic designer of High Modernism when he learned to design not only buildings but perceptions. As I discuss elsewhere (Piotrowski : 2011), the voyage d'orient that he undertook in 1910–1911—a trip to the Balkans and Turkey that started in Germany and ended in Italy—became a “refoundation of the discipline” of architecture (Le Corbusier : 2002a). The impact of the trip on his modality of conceptual thought can be observed in the evolution of his photographs and sketches from descriptive realism to diagrammatic exploration (as seen in Gresler 1984 and Le Corbusier 2002a, 2002b).

During his travel in Germany, Le Corbusier (then still known as Jeanneret) produced images that demonstrate that his early attitude towards representation was steeped in the assumptions characteristic of nineteenth-century cultural traditions, especially the belief that a correct system of narratives can organize artistic perception and the meanings of things seen. His depictions of architecture, as exemplified by photographs on pages 114-115 in Gresler's book (Gresler : 1984), focused on such conventional subjects as monuments, fountains, or towers—that is, on nominal figures operating as well-formed signs relying on fixed interpretations. He frequently foregrounded these subjects in compositions that emphasized symmetry or the geometric centre of a picture. Each photograph was conventionally illustrative: it left no doubt about the customary interpretation of the subject. Such an arrangement suggests that, in both physical reality and the picture, Jeanneret followed the implied rules of conventionally correct perception and interpretation, still functioning as a passive receiver of predetermined ideas and values.

During the course of the trip, however, Jeanneret gradually began to challenge these kinds of preconceptions. After an initial phase of almost uncritical replication of common representational practices, he began to register much more complex visual phenomena and to observe and enhance discernible yet non-verbal and symbolically unstable attributes of perceptual impressions. As a result, his photographs began to record various degrees of abstraction, forms that resist familiar naming and easy descriptions. His drawings gradually started to explore more abstract figures and patterns of built and natural environments. Images reproduced in on pages 141 to 163 in Gresler's book (Gresler : 1984), for example, show how distant views of old structures along the Danube River helped him sharpen his conceptual thinking. As he studied the Balkan landscape, for instance, his images explored not only physically existing forms, but also these features of material reality that were on the edge of discernibility. These kinds of sketches become diagrammatic in that they are drawn not to assign shapes to things one already knows but rather to help one register the actual complexity of the phenomena being observed. While exploring this new way of thinking, Jeanneret started to develop much more precise and discriminating modes of representation. No longer relying on pre-existing narratives in his form-making

Figure 1 : Le Corbusier, diagrammatic drawing of Hadrian's Villa, L'Esprit Nouveau, 15, 1922.



processes and disregarding conventional expectations concerning descriptive realism, he sought forms that escape verbal descriptions. One way in which he tested such a possibility was by photographing views abstracted by high contrast, strong aerial perspective, and even backlighting, as shown on pages 123, 124, 134, and 140 in Gresler's book (Gresler : 1984).

Figures 1 and 2, sketches of the Hadrian's Villa in Italy, show how Jeanneret's drawings explored the same possibility, selectively distilling this place's perceptual characteristics and increasing their conceptual accessibility. Such drawings tested how one's attention operates within the field of vision and how one chooses what to register. Consequently, the photographs and drawings he produced at the end of that voyage almost eliminated the distinction between an observational depiction and a conceptual diagram. It was this shift in his thinking that resulted in sketches that later propelled the design ideas of High Modernism. Thus, during the relatively short period of 1910 and 1911, Jeanneret's photographs and sketchbooks record a profound change in his attitude towards visual perception and conceptual thinking. His interest shifted from passively responding to an already conceptually ordered world of material objects to actively shaping his own sense of perceived reality. In contrast to the seemingly mechanical and indiscriminate record of appearances that a camera creates, any diagrammatic sketch presents an explicit trace of the mental choices made by its creator. This may explain why Jeanneret decided to stop taking photographs himself and from 1911 on used drawing as his conceptual medium of choice. Reflecting back on that decision later in life, he claimed that "the camera is a tool for idlers" (Le Corbusier 1960, p. 37). Idlers among designers, we can assume, are not those who are too lazy to



Figure 2 : Le Corbusier, diagrammatic drawing of Hadrian's Villa, L'Esprit Nouveau, 15, 1922.

draw and instead prefer to just push the shutter release of a camera but who mindlessly perceive things the way they have been conceptually ordered by others. For Jeanneret, designers of High Modernism should actively participate in that ordering; they should not only compose the material world but, and first of all, constantly organize thinking itself. When this professional attitude had matured, Le Corbusier produced two kinds of drawings: in Vidler's words, "those that reveal the underlying structure and organization of the project and those that dissimulate in order to seduce the lay client" (2000, p. 13). Thus he aligned his conceptual work with the free market economy not only by constructing new visions but also by directing viewers' interests and aesthetic preferences.

The reign of such a mode of operation would gradually lose its appeal as architectural theoreticians began to criticize it and draw attention to the fact that such procedures tended to create degrading and meaningless environments. Diagramming took centre stage in such criticism when Klaus Herdeg (1983) discussed the superficiality of modernist conceptual procedures or when Charles Jencks (Jencks : 1977) or Léon Krier (Krier :

1984) used cartoonish drawings to reveal the lack of meaning in the architecture of the International Style. Later, Peter Eisenman (Eisenman : 1999) used the theories of structuralism and sequences of diagrams to refocus attention on conceptual processes themselves.

Geographic diagramming

Postmodernism in architecture produced a short-lived spectrum of critical studies that redefined many aspects of the discipline of architecture and produced a superficial style that dominated the profession. The truly consequential change in the profession happened when the postmodern style went out of fashion and new kinds of mapping and diagramming permeated architectural production. The major shift was away from thinking about design as the production of metaphoric signs and towards the so-called research architecture—the creation of a material environment that results from precise studies of complex contemporary issues. David Gissen (2008) calls this change a geographic turn, which he defines as architects' absorbing geographic research methods and giving priority to statistical data management and the mapping of information. As early as 1997, John Rajchman (Rajchman : 1998) offered a comprehensive analysis of these epistemological changes, which he terms a "new pragmatism." The two primary operations of this pragmatism in architecture, according to Rajchman, are diagnosing and diagramming, the first exploring the complexity of relevant information and the second producing projective strategies and conceptual options. His understanding of diagramming is close to that of Foucault's studies of the Panopticon when he says that new research and mapping methods should be theoretically grounded in order to identify "forces that we can't predict," forces that produce unprecedented spatial and social conditions (*ibid.*). Yet from the perspective of designers from OMA, who have put this strategy into the most productive use, the most important aspect of this mode of designing is "blurring the border between analysis of the data and conception of the project" (Deen and Garitzmann : 1998). The geographic turn coincided with the emergence of new digital tools for not only mapping and diagramming traditional data but collecting unprecedented information about urban practices. Figure 3 shows, for example, a map of how frequently tourists and local



Figure 3 : Eric Fischer use of Flickr's geotags to create a city map of Manhattan that shows places of intense interest as measured by the number of photographs taken; image available at <<http://www.flickr.com/photos/walkingsf/4621770959/in/set-72157623971287575>>.

inhabitants photograph certain places in Manhattan. Similar maps based on geotagging have recorded the frequency of use of social media and even the speed of moving people while sightseeing. As Nadia Amoroso (Amoroso : 2010) discusses, similar diagrammatic maps reveal information not about the physically fixed reality of the city but rather about its dynamic aspects—how human activities are distributed in space. Many architectural offices have embraced this new focus and methodology, such as in a whole category of projects that reflect a merger of architectural and urban design. The speed of urban growth and the complexity of issues inherent in the processes of globalization have created new kinds of urban conditions and modes of living that have called for a new scope and focus of architectural expertise. Design commissions are not only frequently physically bigger than those of the past, but their complexity has also required

transdisciplinary knowledge and different kinds of analytical diagrams (Doucet and Janssens : 2011). The new methods imported from geography have been clearly indispensable in strategizing large-scale technical, ecological, urban, and architectural changes. A good example is provided by the Netherlands, where MVRDV and OMA/AMO, working on the PointCity/SouthCity project, have been testing the future of that country as a city-state, diagnosing and diagramming the need for change but also testing various conceptual strategies of density and growth management. This kind of work has produced Metacity-Datatown by MVRDV (Maas : 1999), a publication that introduced “datascaping,” a way of turning statistical information into digital diagrams for programming and the promotion of planning ideas, and such techniques have helped explore and conceptually engage the most complex issues of urban growth.

Kaleidoscopic diagramming

This trend has been accompanied, however, by another more commercially popular but less conceptually productive tendency. At the end of the twentieth century, the reaction against an increased awareness of the postmodern condition among architects and their clients was not intellectual but aesthetic—a way of redirecting critical attention. After years of critical questioning, they seemed to have longed for unquestionable and universal value systems or an unequivocal definition of progress uncritically inclusive of the culture of consumerism. That is to say, designers and their clients have unconsciously hoped to restore a nineteenth-century mindset. One response has been an entrepreneurial positivism shaping the vision of the future, which writers like Michael Speaks (Speaks : 2002a, 2002b) have provided. Another has been an aesthetic practice of denial that would prevent any critical introspection into such a strategy. And it was at this very time that architects discovered algorithmic architecture—a perfect medium for embracing a non-critical mode of thought. While, as Michael Meredith has observed, the parametric design in architecture “has been superficial and skin-deep...lacking of a larger framework of referents, narratives, history, and forces” (2008, p. 6), it is very popular because it channels a superficial creativity. The reductive methodology of algorithmic processes reflects assumptions similar to those behind Speaks’s “design intelligence”

argument (*ibid.*). Designers of parametric architecture assume, for example, that quantifiable parameters can take the place of complex conceptual issues, thus allowing architects to revel in formal exuberance. Consequently, this reductive aesthetic has become emblematic of the regressive tendencies in architecture, which can be shown best in architects’ use of what I call kaleidoscopic diagrams.

I refer to such superficial diagrams as kaleidoscopic because they represent a mode of thought that can be traced back to Victorian England as exemplified by the cultural functioning of the kaleidoscope, which was invented in that period. Physically, the kaleidoscope is a tube of mirrors with one end open for viewers to look inside and the other serving as a container for small loose objects such as coloured glass, tinsel, or beads. The images it creates are based on an optical replication of random shapes. As I discuss elsewhere (Piotrowski : 2011), two primary features made kaleidoscopes popular in Victorian England. First, the images they created revealed a paradoxical possibility of an easy complexity, a visually elaborate order made of the same elements; in this way, the “scientific toy” of the kaleidoscope promoted the visual appeal of self-referential relationships. Moreover, the aesthetic exercise was interactive; anybody could endlessly produce new highly structured arrangements by simply tapping on or turning the device. The second feature, essential for its cultural functioning in a world flooded by commodities, was that the pieces that created beautiful orders were completely random. In this nascent phase of consumerism, the realization that random and mass-produced things could form a new kind of order played a significant psychological function for viewers. When, as Thomas Richards (Richards: 1990) and Marshall Berman (Berman : 1982) discuss, old assumptions and value systems had to dissolve to support the development of the free-market economy, the world became symbolically fluid. This unstable and fragmented world, although necessary for the progress of capitalism, was difficult to accept for people used to living their lives according to stable value systems and symbolic orders. An aesthetic prosthesis such as the kaleidoscope could provide a place of refuge, however. Anybody playing with it could bring visual self-referential integrity to otherwise unrelated things. The device resonated with common concerns but used visual spectacle to

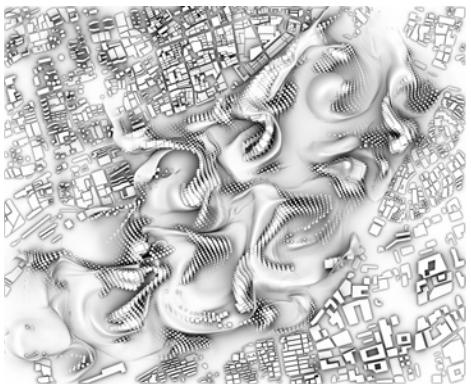


Figure 4 : Theoretical proposal for the EXPO 2010 in Shanghai (image courtesy of Ldvc - Ludovico Lombardi).

subconsciously disarm them, and for the same reason, those practices remain in operation at the beginning of the twenty-first century. Some of the most telling examples of what I am calling kaleidoscopic diagramming have been produced by the Architectural Association Design Research Laboratory as studies of what they call parametric urbanism. Figure 4, for example, shows how the cultural and social aspects of a city as complex as Shanghai have been turned into a self-referential composition. The project, developed by Ludovico Lombardi with Du Yu, Victoria Goldstein, and Xingzhu Hu working under the supervision of Patrik Schumacher, uses parametric urbanism to envision new structures spreading across the river to accommodate housing and exhibition spaces for EXPO 2010. The design acknowledges older fragments of the city, and the new intervention engages some of these pre-existing conditions, connecting to the system of roads and open spaces, for example, and even replicates the scale of the traditional blocks in its distribution of parametric folds. These relationships end, however, when one considers the scale of the smallest elements that make up the folds, which do not resemble buildings but look rather like free-floating, abstract rooms. No apparent effort has been made to relate them to the pre-existing typology of buildings or their material specificity. Instead, the implied connections between the old and new are achieved primarily by graphic means. All features related to the accumulated history of the city, its actual diversity of human identities, and how they may relate to forces of late capitalism (Jameson : 1991) are erased from the viewer's perception. Yet the overall composition produces a kaleidoscopic—i.e., diverse and

visually integrated—impression, making an aesthetic case that cities can be analysed and their future controlled within the reductive procedures of parametric design. And it is exactly this possibility that Schumacher promotes in the text accompanying the AADRL projects, in which he claims that “the mass society that was characterized by a single, nearly universal consumption standard has evolved into the heterogeneous society of the multitude,” manifesting the “increased complexity of post-fordist network[s]” (Schumacher : 2008a). Although he acknowledges the post-Fordist condition—that which escapes a uniform mechanism of control—he chooses to see people primarily as a new kind of consumers and equates the current complexity of social and cultural issues with the need for new forms of commercial connectivity. By reducing the understanding of living urban environments and their programs to the knowledge of systems or spatial patterns supporting the global market economy, he can argue that the task of a contemporary urban designer “is to develop an architectural and urban repertoire that is geared up to create complex, polycentric urban fields which are densely layered and continuously differentiated” to accommodate flows of shoppers and tourists. The algorithmic creation of such diagrammatic fields produces a new architectural aesthetic that Schumacher calls Parametricism and which he proclaims is “the great new style after modernism” (Schumacher : 2008a; see also Schumacher : 2009). And it is telling that in his view the novelty of the style is inseparable from parametric diagrams, which provide abstract flexibility of explorations (Schumacher : 2010). Thus, the very core of his argument and methodology rests on reductive assumptions very similar to those that made the kaleidoscope a place of mental refuge in Victorian England, as parametric urban diagrams such as that shown in Figure 4 hide and disarm real human concerns behind the kaleidoscopic effects of integrity. Indeed, Schumacher sounds much like a member of Victorian society talking about kaleidoscopic aesthetics and redirecting attention away from critical concerns when he says about the Fluid_space vision shown in Figure 4 that the “project’s most striking feature is the extraordinary degree to which it is able to combine complexity with coherence. This combination of complexity with coherence is the hallmark of elegance. Elegance in this

sense achieves the legible articulation of complexity" (Schumacher : 2008b).

Two epistemological models

Although the parametric style will most likely go out of fashion or change its characteristics following the newest advances in digital technology, what remains relevant to this discussion is how the geographic and kaleidoscopic assumptions may shape the future of architectural and urban planning expertise. Although the two trends definitely coexist and have been integrated into a wide spectrum of design efforts, they radically differ in their implications for professional attitudes and aspirations. First, the kaleidoscopic approach promotes the architectural profession as an unself-conscious craft that involves the management of information but ultimately depends on intuitive creativity. The French exhibition titled "Metropolis?" at the 2010 Architectural Biennale in Venice, Italy, provides a crowning example of such an epistemological attitude. The exhibit was curated by a leading architect and town planner, Dominique Perrault, who had invited representatives from five largest cities in France "to propose a reading that founds, articulates, and nourishes the genesis of the Twenty-first-century metropolis" (International : 2010).

The whole French pavilion was turned into a multimedia installation in which the viewers' attention was drawn primarily to sequences of back-projected still images related to a particular city or its issues. These pictures, ranging from photographs of people, buildings, and urban spaces to measured drawings, sketches, and diagrams, appeared at pre-planned intervals and were accompanied by sounds of the city and enhanced by kaleidoscopic means. As Figure 5 shows, the back-projected pictures were accompanied by equally large mirrors, each at the edge of and perpendicular to the screen. In this way, even diagrammatic plans were duplicated, causing a confusing effect. All the analytical drawings thereby appeared as conventional diagrams of information and as semi-organic and evocative forms, silencing viewers' need to decode difficult issues they might have represented. Thus, Perrault and his colleagues produced the kaleidoscopic spectacle par excellence—a seductive and self-referential experience in place of substantive insight into contemporary urban conditions.

This mode of knowledge and model of professional attitude reflect a desire to find



Figure 5 : French exhibition at the 2010 Architectural Biennale.

comfort in denial of the actual complexity of issues designers face. By redirecting viewers' attention away from difficult questions and towards superficial effects of complexity, the show created the impression that at their most creative moment, architects can operate intuitively, without critical and precise awareness of the challenges that late capitalism engenders.

In contrast, another approach to knowing architecture and shaping professional attitudes that does include contemporary theories and critical thinking counteracts these practices of denial. While kaleidoscopic practices help to cover up the commercial disintegration of reality, other architects show that it is possible to heighten the awareness of challenging facts and their dynamic relationships. A good example of such an approach can be seen in the books that Winy Maas (Maas : 1999) and Rem Koolhaas (Koolhaas : 2001, 2004) have published with their colleagues and students, which since the late 1990s have established a unique genre. Saturated with information, these books do not merely strive to illustrate their authors' research conclusions but to promote critical curiosity. Frequently they resemble advertisements by combining provocative content with graphic precision. They are usually big, printed in full colour on glossy paper, often using full spreads to immerse readers in the poster-like environments of their messages, which include diagrams and photographs, but such visual information is used only as raw material for creating engaging mental environments. Figure 6 illustrates how recent history can be related to architecture when such information is arranged in a diagrammatic composition. This full spread shows a timeline marked by dates and respective changes in the Dow Jones



Figure 6 : Pages 250 and 251 from Content by Rem Koolhaas (Copyright: OMA).

Industrial Average indexed against certain events and buildings constructed at that time. The collage includes references to what one would expect a viewer to know—the 9/11 attack, for example—as well as seemingly trivial pieces of information—for instance, the fact that “ten former employees of the disgraced energy behemoth pose[d] for Playboy in the June 2002 ‘Women of Enron’ edition.” Although the composition is not geometrically replicated, it is similar to kaleidoscopic arrangements in that it prompts a need to search for order among explicitly random facts and pictures. This is not, however, an attempt to visually imply connections where none exist. To the contrary, this mental diagram projects the possibility of connections where they are difficult to find. The primary difference between the show created by Perrault in Venice and the diagrammatic collage presented by Koolhaas in Content—the difference between the kaleidoscopic and critical attitudes in general—is in the way they define architects’ need for a critical awareness of the diverse and rapidly changing aspects of the world. Koolhaas keeps such difficult issues alive, almost inescapable, even when they are disturbing, while Perrault uses a spectacle of replication to prevent critical curiosity about them and instead offers the instant gratification of kaleidoscopic sensations.

Conclusion

Diagramming is nowadays both popular and puzzling because it is instrumental in two opposite trends—the kaleidoscopic, which supports practices of denial, and the geographic, which engenders the need for transdisciplinary knowledge and critical thinking. These tendencies are real and consequential, and the differences between

them reveal that how deeply designers are implicated in the logic of late capitalism will determine the future of the architectural profession. The world will need people who can understand and map unprecedented issues and can diagram and strategize those emerging trends that are reshaping our globalized reality. Designers who can distinguish between self-referential and conceptual diagramming, who are well-informed and possess critical curiosity, who can link material construction to long-term social and cultural changes, and who can distil relevant issues to the point of a precise material intervention are those who will have the biggest impact on the future of architecture and urbanism.

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Eco-Urban Planning & Design for a futuristic vision of Shanghai

Sustainable strategies enable a much cleaner & efficient Neighbourhood

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*Keywords: Sustainable Planning;
Infrastructure Design; Bio-Responsive Built environment.*

Overview

The research project delineates the present urban settings of Shanghai with respect to the major ecological factors. The paper investigates the problems related to changing environmental conditions in rapidly urbanizing Shanghai, and how these conditions might pose certain major problems in urban living conditions of the City. According to the United Nations (UN), between now and 2025, the world population will increase by 20 % to reach 8 billion inhabitants (6.5 today). 97 % of the growth will occur in the developing nations (of Asia and Africa). The cities in developing countries will account for 95 % of urban growth in the next twenty years and will shelter almost 4 billion inhabitants in 2025(Baer 2009). With the increasing industrialization and prosperity of Asia, Shanghai will function as a major metropolitan and economic Capital, with rising energy demands. The issues that directly relates to the urban energy use would largely include transportation, building and housing, public health and safety and increasing living standards of people inhabiting. Thus, the research addresses these issues in brief and tries to substantiate the alternate technological innovations that would aim to provide a sustainable solution to the increasing urban sprawl of Shanghai. The proposal for urban design focuses on the factors that would fundamentally make use of urban wastes that would otherwise pollute the ecology in both micro and macro level. Consequently this new proposed development would intend to curtail the carbon footprint of the city and in turn reuses, reclaims and reduces existing resource consumption.

Introduction

From late 1970 China has been undergoing a major economic reform, accompanied by rapid and extensive Urbanization. However Urbanization in China led to significant environmental and ecological problems esp. in mega cities such as Shanghai. The issues principally include increased air and water pollution, local climate alteration and major reduction in natural vegetation cover and production. The City has been experiencing huge urban sprawl, with 23million residents and 14.2 permanent million residents living in the urban area. Some of the major impact and ecological concern of Shanghai Due to the increased urban sprawl has been described as follows:

Urban Heat Island (UHI): The urban heat Island (characterized by increased temperature in urban area compared to surrounding suburban areas) has direct correlation with the population density. UHI results in the increasing demand for cooling leading to an increased demand for electricity and thus leads to amplified production Greenhouse gases such as carbon dioxide and other pollutants produced due to the usage of fossil fuels(Tan 2009). Analyzing the meteorological Data in Shanghai and its surrounding suburban area it has been found the difference in mean annual temperature (MAT) increased from 0.1° C in late 1970 to 0.7° C between (2000 -2004), with a growth rate of about 0.26 ° C in each decade(Zhao 2006).

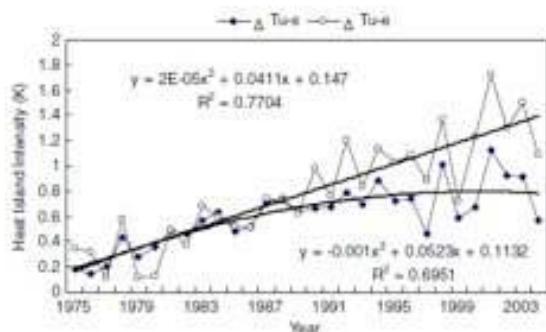


Figure 1 : The variation of urban heat island intensity [in terms of the difference of daily maximum temperature between the urban centre and suburban sites ($\Delta Tu-s$), and that between urban and exurban ($\Delta Tu-e$) sites] from 1975 to 2004

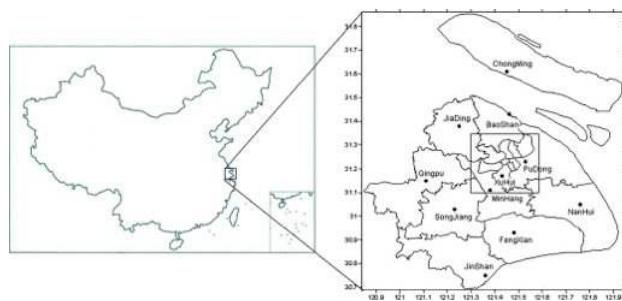


Figure 2 : Shanghai within China and the spatial distribution of 11 weather stations across the city.

Air and water Quality

Urbanization also can be associated as a heavy encumbrance on local air and water quality of Shanghai. Air quality monitoring data observed from various sources showed that concentration of Sulphur dioxide (SO₂), Nitrogen Dioxide (NO₂)/ Nitrous Oxide ,Carbon Dioxide (CO₂) and total suspended particles in air has subsequently increased since 1983 and varied considerably . The air pollutants highest in the central urban areas compared to the suburban areas. The sources of such pollution are urban transport, generation of electricity, heat from non-renewable energy sources (such as coal) and various industrial actions. In Shanghai, fuel structure is heavily dependent on coal. Water pollution pattern also show similar pattern with increasing severity in the central area though certain variation in pattern has been observed from 1990 to 2001 , that shows that the water pollution concentration decreased in urban areas where as deteriorated in the suburban and rural areas due to transfer in the factories from the city to the suburban areas. (Zhao 2006)

Changes in Biodiversity: Shanghai is rich in biodiversity. However due to urban expansion and related human actions taken, there is considerable and continuous loss in the biodiversity. The number of native plant species had fallen rapidly. At the same time studies, reflect that the native crops were increasingly replaced by non- native species of greatly due to introduction of managed parks and green spaces in contrary to the natural

vegetation and landform. "About 300 alien plant species have been planted in Shanghai from 1980 – 2005". The Yanzhong Greenland consists of 26 native woody plants out of 142. (Zhao 2006)

The major environmental concern that are studied above and associated with increased urban sprawl in Shanghai could be an index to propose further ecological reform in urban design and policymaking. As stated by EeroPaleheimo "the first eco- city will not change the world, but it would provide a seed of change. This is why we need one eco-city radically different from the already existing ones. It would demonstrate that environmental problems could be solved with the help of modern technology"(Kinnunmen 2008). The investigation of the paper would further lead us to the modern technological interventions that could possibly reduce the environmental impact of urban sprawl in Shanghai and it would further function as a design prototype and inspiration for further green design and sustainable development in the city.

Site & Existing Conditions

The site selected for the model ecological development is located beside the Suzhou Creek, Shanghai. Suzhou Creek also known as Wusong River in China flows through the City Centre with a total stretch of 125 Km. The creek was functioning as the city's trade route since 1930, and facilitated transportation of the goods. There were plenty of warehouses and factories located alongside the creek consequently polluting it with industrial wastes as well as domestic wastewater and most polluted river in Shanghai. Since 1998 with the launch of Suzhou Creek Rehabilitation Project, a 12 year redevelopment program to improve the water quality, flood mitigation, wastewater management and a drive for urban



Figure 3 : Showing the existing urban neighbourhood of the selected site. The top panoramic view shows the interconnected bridge over the narrow river. The bottom panoramic view highlights the overall site density & skyline.

revitalization along the river led to the Clean and revitalized Suzhou creek. The warehouses and factories are relocated. The factories and warehouses in the site are conserved following adaptive reuse strategies to develop as a Art centre as well as substantial mixed use development.

The specific location of the site selected is between the subway stop of Qufu Road and Tiantong Road, line 10 along the Suzhou creek. The site is at the both end of the river and spans 385 000 sq.m.in area (approx.). The design problem is visualized more as an urban Neighbourhood remodelling, which would impact Shanghai and act as a paradigm for eco-city due to the embedded green strategies employed and projected to be developed in future. The site taken is a conglomeration of 10-12 blocks of urban space in the Suzhou Creek belt. The Site currently is in development phase, and some mild demolition of small-scale buildings is going on, for large scale mixed use, residential projects.

In-depth survey of the site revealed the following urban micro and macro scale problems:

1. No organised green space or scattered incoherent landscaping, lacking continuity.
2. In efficient usage of water front, no planned urban space near the river.
3. Extremely close spacing of building blocks at low scale, thereby disabling possibility of adequate ventilation and delighting.
4. In organized block sizes which is inefficient to enable proper value to the properties.
5. Proper bus routes are missing. Small unorganized shuttle services available, but they are highly unorganized and create urban chaos.
6. Unorganized scattered retail units, which is uneconomical to generate enough revenue from the projects.

Green Strategy

After Studying the Urban Scenario in Shanghai and the various ecological problems associated with its fast growth, the methods to deal with the issues of ecological stress were identified. The paper investigates the futuristic technology. The strategies chosen through the process of technology research would help battle the problem of exhausting abundant natural resource and emission of Greenhouse Gases. The industrialized world is constrained by interests that are short-sighted and rigidity of the existing infrastructure. The idea of an

GREEN RE-construction

Sustainable Strategy Diagram

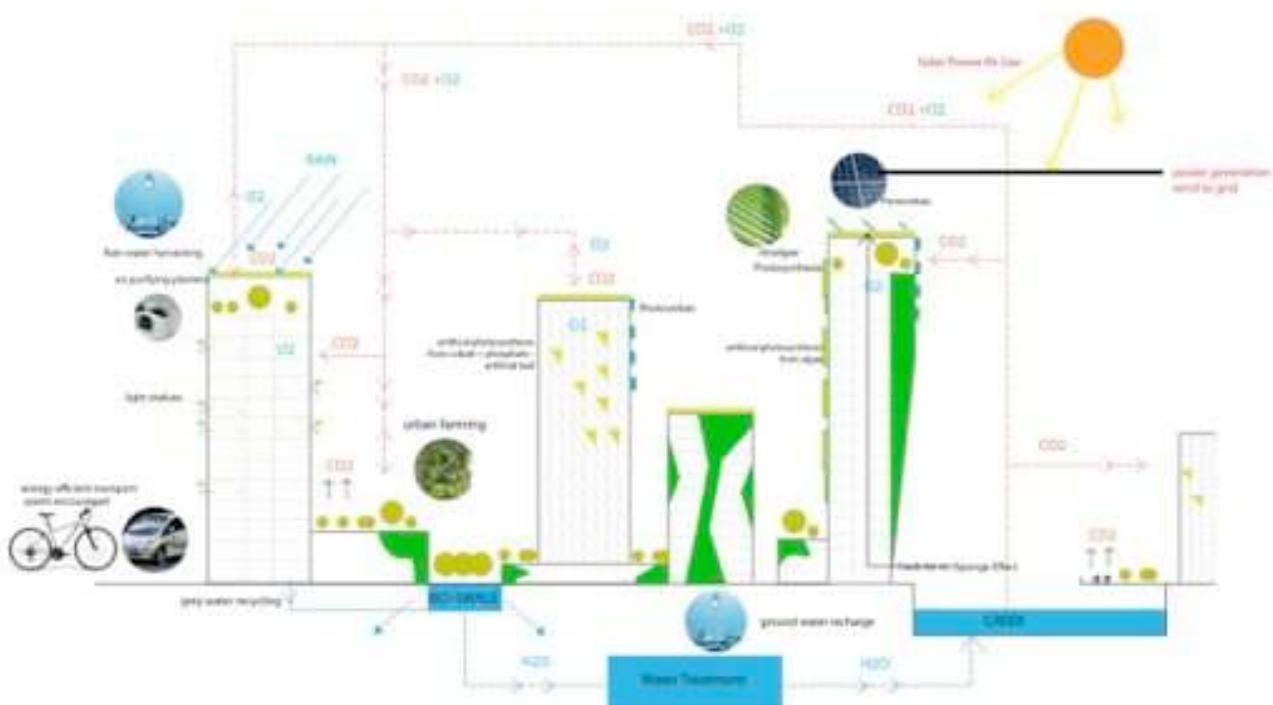


Figure 4 : Visual flow diagram showing the envisaged eco city model adapted for the neighbourhood, which successfully re channelizes, green patches & oxygen network in the environment. In the process it enables fast depletion of environmental carbon footprint of Shanghai.

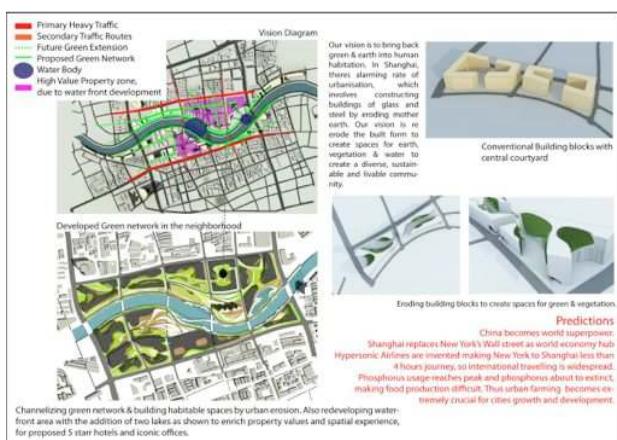


Figure 5 : It shows the transformation of current conditions to proposed visionary green networks. Showing the vision of the project, highlighting the key concept of urban erosion adapted in the neighbourhood.

Eco city prototype established shall not pollute the surroundings and minimize the use of non-renewable natural resources. The residents will be able to produce their own requirement of food and energy as well as a closed water circulation system with means water is supplied from neither outside the city or wastewater exported out. Since we cannot stop construction, as shelter is one of the primitive needs of humankind, and with the growing need of industrialization, we can always try to reduce or optimize it. More importantly, we can pledge to give back to the mother earth from whom we have always been taking resources to live, sustain and flourish. The idea expressed in this paper of a Green Conclave is to "Re-Erode" the built form created by Man and adds the mother earth back into the site in form of Water feature, Green vegetation and urban farming to maintain the indigenous qualities of landform that existed before extensive mega scale construction. Alongside the unique design initiative, the built form is also projected to be integrated with features that would help to utilize the wasted resources (like wastewater or greenhouse gas emitted)

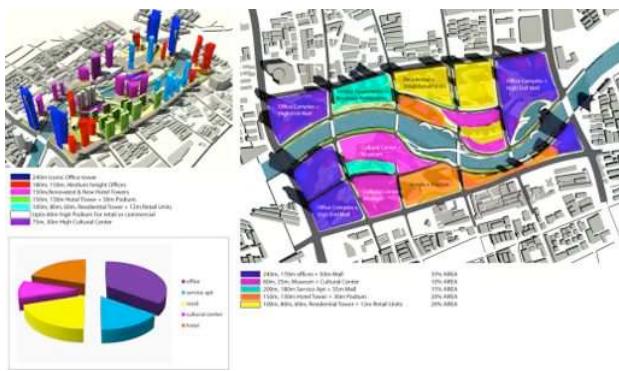


Figure 6 : Area diagram of the proposed urban intervention, also highlighting building use &

Technological Research

To achieve the major research goals, some of the technological research undertaken includes:

1. Studying the principles of Artificial Photosynthesis, and techniques to incorporate it in the built form as a fundamental green strategy.
2. The functioning and working principle of Algae to produce Bio-fuels
3. Integration of additional vegetative green spaces that could be used to revitalize, once lost urban green land and urban farming principles.

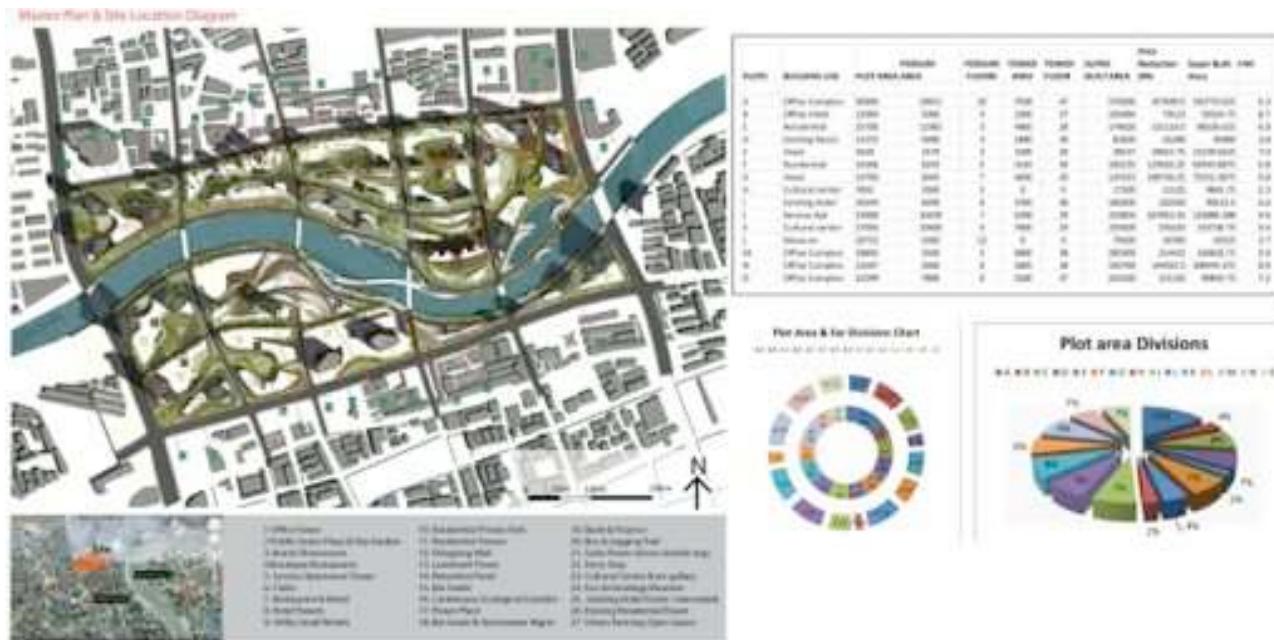


Figure 7 : Master plan showing the building types & uses. Overall it includes office spaces, luxury hotels & service apartments, residential towers, commercial shopping mall & small retails etc. Table showing the plot area & FAR divisions for different plots in the neighbourhood. The pie chart explains the proportion of plot area divisions.

and produce useful fuel resources that could replace the use of conventional fossil fuel, in the end saving them from fast depletion. Fundamentally, the paper investigates the possibilities incorporating technologies associated with revitalizing vegetative surface within built form as well as production of alternate fuel sources that would “de-pollute” the environment unlike conventional fuel sources that supplements greenhouse gases.

Artificial Photosynthesis

In the present times, fossil fuel (coal, petroleum) is considered as the principal source of energy supply. Due to the ever-increasing demands of fossil fuels, they are depleted each day making their sources limited and unavailable. With the present pace of urbanization, it is obvious that we need alternative energy sources that would supplement the requirement of fossil fuels. Artificial photosynthesis involves Hydrogen and bio fuel production strategies where sunlight is harnessed for the production of Hydrogen and bio-fuels from water in the presence of a suitable catalyst, to be used as

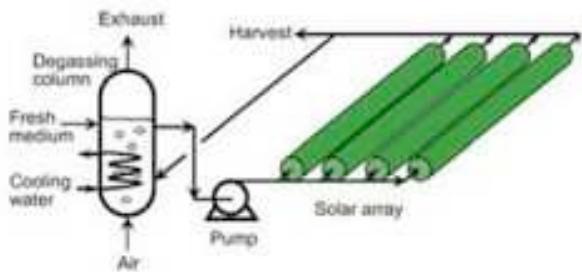


Figure 8 :Top left diagram explaining the tubular design of the algae photo-bio reactor. Top right image shows an exemplary algae photo-bio reactors used over the building facade



Figure 9 : Schematic image of flat panel algae photo bio reactors.

alternate source of energy. Artificial Photosynthesis is a way to mimic the photosynthesis of Plants in artificial environment. The energy derived from the process would be used to create fuel source such as hydrogen. It could use plain water and captured sunlight as its raw material. This technique of artificial photosynthesis could be used integrating it with the built environment. However, the Process could be a complicated one but with the advent of new innovations such as the "Artificial leaf"(Nocera April 4, 2012)by It is a cobalt- and phosphate-coated silicon device. These devices can be embedded in the façade or roof top to instantiate artificial photosynthesis successfully to produce Hydrogen as an alternative fuel source at substantially cost effective way.(Science Daily 2012)

Algae as a source of Bio fuel production

Micro Algae are microscopic biological organisms grows in aquatic environments uses lights and Carbon Dioxide to create algal biomass that is rich in three main components , carbohydrates proteins and lipid oils. The natural oil made by micro-algae is in the form of tricetylglycerol, which can be employed for the production of bio-diesel(Wen 2012). Some species of Algae are also capable of producing hydrogen gas under specialized condition. The biomass from algae can be burned to produce methane biogas useful for generating electricity. Micro – algae are strictly photosynthetic. They need light, carbon dioxide as its energy and carbon source respectively. They are also known as photoautotrophic capable of producing its own food from inorganic substances using light energy. The micro algae require light Carbon Dioxide, water and inorganic salts to grow. The temperature of the growing medium should be between 20°C

and 30°C . The growth medium shall contain inorganic elements such as nitrogen, phosphorus, iron and silicon(Grobbelaar 2004). As such algae live in high concentration of Green House Gas such as carbon dioxide and Nitrogen dioxide abundant from car exhaust and industrial waste . Open Ponds or Enclosed Photo bioreactors are the two principal ways to grow algae, this system faces major disadvantage, which includes contamination of the produced biomass, productivity affected by the lighting conditions as optimal lighting requirement is difficult to maintain for an open pond. Enclosed Photo bioreactors could be Flat plate or tubular reactors(Norsker 2011). These systems are made of transparent materials generally placed outdoor for illumination by natural lights having large surface to volume ratio. The advantages of using enclosed Photo-bioreactors are manifold with reduced risk of contamination, greater productivity which can be higher (13times) than that obtained from open ponds. For the enclosed photo bio-reactor that yield can be close to 2- 3 grams /Lperday .(Dasgupta Nag 2010)

Urban Agriculture (UA)

The widely used definition of Urban Agriculture come from Mougeot (2000). It states that urban agriculture is an industry located within a city or metropolis, which grows raises, process and distributes a diversity of food and non-food products, reusing human and material resources products and services found in and around the urban area and in turn supplying human and material resources, products and services largely to that urban area(Redwood 2009). With the rising urbanization food, supply to the urban population with an optimized budget becomes an important issue regarding sustainable urban development and Daniel Nocerawe may actually see widespread deployment of the technique in near future. The artificial leaf has a sunlight collector sandwiched between two films that generate oxygen and hydrogen gas.when dropped into a jar of water in the sunlight; it bubbles away, releasing hydrogenthat can be used in fuel cells to make electricity. Nocera replaced the platinum catalyst that produces hydrogen gas with a less-expensive nickel-molybdenum-zinc compound. On the other side of the leaf, a cobalt film generates oxygen gas. The metals used are cheap and easily obtainable in abundance, which earlier was only possible through platinum catalyst.

This replacement of the catalyst material makes it possible for extensive use. management. A sustainable city should be able to be self-sufficient both in terms of energy and food supplies. Shanghai can be cited as an example of how mega cities can be organized in terms of food production, due to the production, distribution and marketing of food from many diverse operating units to the Shanghai municipal government and by increased mechanization, electrification and water conservation system. However, with the growth in migrations and increased demand of food and considering the positive ecological significance of urban agriculture/ farming a unique model of the same is being researched. The prototype for the proposed urban farming would give rise to a model that would not only increase the food supply to the urban population but also function in favor of bio-diversity management, providing pleasurable urban environment. It might not be directly related to energy production but it could definitely play an active role in the air pollution, Green House gas emission, reduction in urban heat island through photosynthesis and providing increased green shield over steel and concrete built form.

Applications of Technological Interventions in Future Planning

The vision of the planning reform was to utilize the primary site resource that is the Suzhou creek water feature. The design takes into account the existing site condition as explained above and proposes an optimised mixed-use development in the site yet taking care of the ecological notions. The river belt is redesigned with a copious green belt extension that would not only solve the purpose of a green recreation belt for the residents and workers but also reclaim the lost biodiversity of Shanghai. This would also help in the reduction of urban heat Island effect by minimizing the hard cover in the site.

Besides the shape of the built form, our strategy is to craft conditions for artificial photosynthesis. The “artificial leaf” devices for photosynthesis can be embedded in the building façade and rooftop attachments at an optimised angle to trap the solar energy as well as CO₂ supply to these artificial photosynthetic devices. Carbon dioxide could be supplemented from the high percentage of airborne CO₂ entrapped from the surroundings

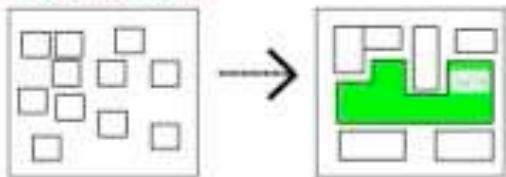


Figure 10 : Section through the main cross section, showing the building use and density. In the top of the image different building design typologies and grammars are explained which aids in sustainable neighbourhood design plummeting carbon production.

thus converting environmental carbon into storage fuel with the help of solar power. Another plausible method to initiate artificial photosynthesis is by cultivating algae in photo bioreactors panels especially flat plate reactors. The algae when cultivated on the facade in manifold ways such as shading devices, or attached building ribs, in places where there is optimised lighting conditions available starts to initiate photosynthesis. They provide certain aesthetic quality to the building façade. As such the entire façade of the buildings acts as an interface to absorb the greenhouse gases through artificial photosynthesis as well as in the production of algal biomass and effectively creates an alternate source of energy that would substitute the quantity of fossil fuel consumption.

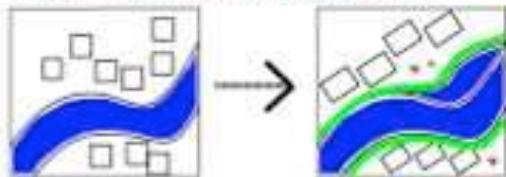
The idea to re-erode built form and adding mother earth back into the site in the form of water bodies, green vegetation, and urban farmlands for food productions or natural

1. Organized Green



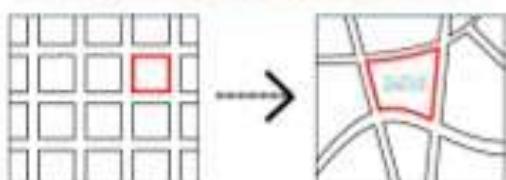
The built forms are re-organized to create organized green networks, as opposed to non green neighborhoods.

2. Organized waterfront development



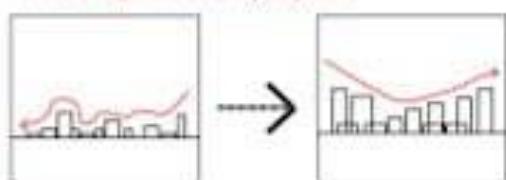
Planned waterfront development creates interesting public spaces in front of the river.

3. Re-Organized plot sizes and orientation



Small grid shape regular plots are re-oriented aligning with the landscape and waterbody, with optimized shapes and sizes to create valueable built forms.

4. Re designed eco city skyline



Existing haphazard random skyline is redesigned with proper aesthetics, rhythm and balance to create wholesome builtforms and urban space.

Figure 11 : Diagram showing the change proposed and the summarized account of the benefits confirmed from the designed urban intervention in the neighbourhood.

sanctuary, creates sustainable mini ecosystems like natural vegetation as in forests or grasslands or farmlands. Thus, buildings are eroded or scooped out in three dimensions to create 3D networks of green vegetation. This added green flora can be in the form of roof terracing or soft semi porous covering, not only significantly plummet urban heat island effects, but also substantially reduce carbon footprint of

the eco-town by photosynthesis. At the same time, employed green concepts like bio swales & algae cultivation shall purify air and water drastically. This paradigm of ecological intervention at the city scale shall be a seamless synthesis of built form & green ecosystem

The above are functional strategies of green urban design. We aspired to create an exemplary project for Shanghai symbolically flaunting the new green image of the skyline by showcasing vertical vegetation on the built form.

Pros and Cons of Futuristic Ecological Planning Proposals

Based on our research proposal and current exploration the possibilities of changes and urban reform presented could create a desirable urban reform based on the extent of ecological impacts produced. The design principle is to avoid wasting energy while at the same time minimizing waste generation as a target. At the same time, pioneering design ideas of using the waste and otherwise detrimental by-products of Urbanization, such as greenhouse gas emission, production strategies of alternate fuel sources have been examined. Although the research elucidates the requirement and importance of using such methods, the technologies described have not still been developed as fully functioning working prototypes. Some of the processes such as production of alternate Fuel sources could still be deemed expensive and challenging when considered in the scale of an Eco-city. However technological innovation had always been an optimistic solution yet with time and advancement of knowhow of a process, the goals could be achieved as projected in past.

Conclusions

The project proposal is to create a sustainable neighbourhood in the site under consideration (developed as a phased construction), which currently is in extremely under developed and grimy condition. The project envisaged a mini eco-city model, exemplifying optimized usage of existing resources to accommodate the growing need of urban residents in the city in the wake of rapid economization and urbanization of Shanghai. It is aspired to drastically reduce travel times for the future residents to economize fuel costs and thus a

mixed-use urban model was formed which comprised of office, hotels, commercials, residential & mixed-use spaces. Such kind of program would encourage people to live work & play at the same location plummeting the energy needs. The basic design concept while incepting such a model was urban erosion, wherein the idea was to re erode built spaces, just as built spaces when raised erodes mother earth. Idea was to add vegetation and green cover over these eroded built forms to diminish net carbon footprint of the city.

As a new city hub, major eco adaptable architectural interventions were instantiated, some of them largely based on the principles minimising surrounding pollution, and redefining methods to minimize the use of non-renewable natural resource.

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Modernity and the Public Park in 20th Century China

*Navigating fragmented terrain: a
preliminary study*

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Keywords: *criticism, design history, 20th century Modern China; landscape architecture; urbanism in China*

Overview

Scholarly work that examines the design history of the public park over the course of China's 20th century has yet to be written. This paper represents preliminary research that offers revelations on the development of this universal urban and landscape architecture prototype within the context of navigating the multi-dimensional and fragmented terrain of China's 20th century modernity. It posits the nexus between the 20th century development of designed landscapes in China's urban public realm and China's nation-building (modernization) efforts. This paper is essentially a qualitative research project in theory- building, history and design inquiry; it is 'located' within an intellectual, critical and interpretative approach employed by Meyer (1991), Treib (1993), Hayden (1994), Jackson (1994) and others. The physical form of design is emphasized but interprets it in wider historical, social, cultural, economic and political contexts (Hayden 1994). In navigating China's modern 20th century, I build a discursive narrative around four critical, discrete and sometimes overlapping strands of transformation referred to as "moments of modernity". These represent processes of modernization, derived out of China's 20th century revolutionary praxis and the interplay of shifting socio-political strife, foreign influence, cultural identity and nationalism. The paper concludes with a discussion of ongoing and future research and speculates on the role and meaning of the public park for 21st century China, particularly with central government's policy for ongoing urbanization and expectations for an additional 400 cities by 2020 (Liauw 2008). As the first historical

documentation and critical analysis of the public park in modern China, this work is preliminary, yet breaks new ground. It initiates a bridge between the literature in China and the West and sets the foundation for future research. It contributes to closing the gap in the literature on 20th century modernity, landscape architecture and urbanism in China.

Introduction

This paper is based on prior research that focused on designed landscapes in China's post-Mao secondary cities and building a theory called hybrid modernity (Padua 2007, 2010). To give rigor to that work, China's post-Mao period was 'situated' within 20th century modernization processes. An interpretation of China's 20th century modernity, the "pre-Mao" context, was synthesized for understanding public parks in the post-Mao situation, a period defined by the revised 1982 Constitution of the People's Republic of China (PRC); it laid out Deng Xiaoping's modernization policies. The post-Mao study on hybrid modern parks brought to light that little had been written on the evolution of the public park over the course of China's 20th century history. This paper aims to present preliminary research for understanding the public park through the course of the 20th century. Given the word count limitations for the conference papers, the work presented is somewhat summative in nature.

This paper derives a narrative around 20th century modernity in China as a methodology for understanding the evolution of the public

park. These four strands of transformation are temporally and generally framed below with further discussion provided in the body of the paper and also expressed in a graphic timeline (Figure 1).

1. Colonial modernity (1842 – 1937): operated in parallel with Republican modernity.
 2. Republican modernity (1912 – 49): establishment of the Republic of China, western-style government and China's self-made modernity 1919 May 4th New Culture Movement
 3. Mao's modernity (1949-1976) in tripartite: a. Soviet influence; b. agricultural collectivization; and c. disrupted (anti-urbanism) modernity
 4. (post-Mao) Hybrid modernity (1982 to 2000)
- Navigating these multi-faceted temporal strands in China's complex 20th century milieu created a multi-dimensional context for synthesizing a preliminary interpretative narrative for the evolution of the public park. Park ideology, typology and morphology are touched on. It also touches on influences of both the 'local', Chinese private scholar and imperial gardens, I refer to as Chinese Picturesque (Figure 2), and global design

paradigms. Design vocabulary, grammar (principles and strategies), language (genre and style) and design trends are raised. Emerging literature indirectly discusses the public park or functional green spaces as part of city-making and urbanism in discrete periods of the 20th century, e.g. Republican, Mao and post-Mao. But little work was found on the examination of the public park throughout China's 20th century. This necessitated expansion of the literature review on 20th century China into other areas like the arts and architecture, urban studies, history and socio-cultural theory. Primary research tasks involved archival work, field research and interviews. Transformation, institutional shifts and the impact of overseas foreign education are included in the discussion. Variables in the preliminary synthesis consider content analysis of personal informal interviews with senior scholars and educators in China helped to verify and clarify the meaning of modernity, the pattern of design influences and foreign education over the course of the 20th century; and the conclusion speculates on China's urban future.

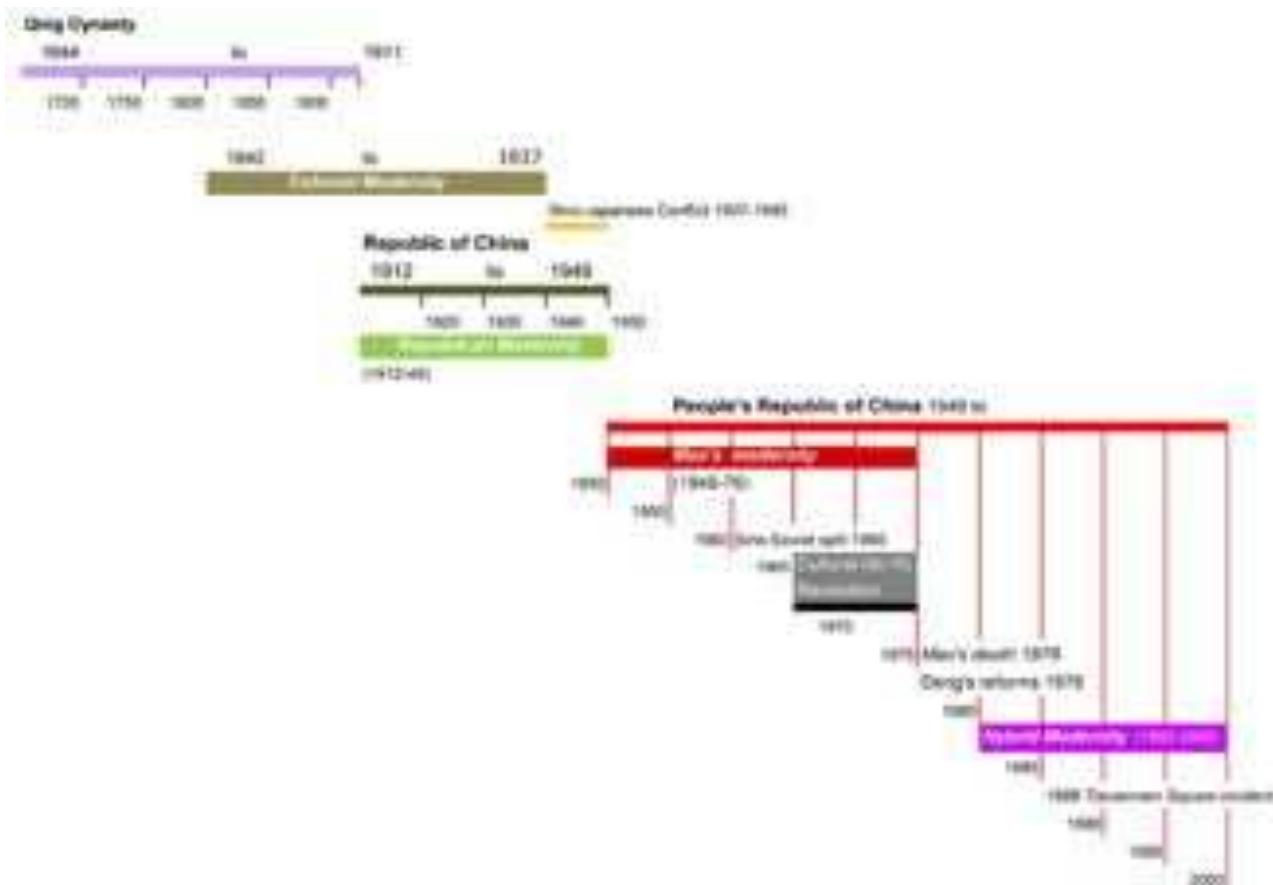


Figure 1 : Temporal terrain for 20th century modernity

Design vocabulary	Symbolism:
rockery	mountains
water	lake
plants	seasons, folklore and mythology, attributes of a scholar's life (longevity, resilience, etc)
islands	folklore and mythology, fairyland for the immortals
architecture	temple or boat

Design Grammar
Scene composition and asymmetrical design
Scenery manipulation
Contrast and foil
Topography and elevation change
Sensory experience
Temporality
Path system: twisting and turning, links the scenes

Design paradigm
Yi Jing 象 理 An approach used in the classical arts that deals with harmony and the Taoist-based notion of essence and includes yin-yang dualism principles

Figure 2 : Chinese Picturesque design language

Terminology: 'locating' the Public Park and China's Modernity

To help orient the reader, the paper's key terms are reviewed: 1) public; 2) public park; and 3) China's modernity. The notion of "public" as in "public space" – a place where the general populace assembled for leisure purposes in China's long civilization is a subject onto itself; it can be readily convoluted in the 20th century with its shifting government praxis, varying societal contexts (feudal, capitalist, socialist), land tenure and property rights.

The public park is defined as a basic land use component employed in western modern city planning. It's generally accepted that the western public park was largely in response to the 19th century Public Sanitation Movement and the urban squalor of the western industrial revolution (Melosi : 2000). As will soon be revealed in the paper, the concept of the public park in China first emerged through an alternative path and as a symbol of modernity. In this study, the notion of the public park is limited to the green tradition (vs. the public square) and considered part of the urban fabric of the modern city. The study demonstrates that the typology of the public park varied over the course of China's 20th century.

Modernity in China is highly complex and its own topic of study in the arts and literature, cultural theory, history and social sciences. Some have argued that modernity was a form of westernization when imperial China was first exposed to foreign influences from the west, e.g. the Jesuit missionaries influence on the early Qing dynasty court; western science and math, perspective drawings and the

construction of the European garden folie known as the Chinese Versailles in the Beijing Summer Palace Garden (Wong : 2001). However, for purposes of this research, China's modernity (distinctive from modernism as style or the modernist movement in the West) emerges from political movements within the late Qing dynasty, circa 1860-1911, as the imperial court reacts to the colonial powers. Ti-yong (essence-practical use) was a key concept of the Qing reformers -- to retain Chinese essence or Confucian ideals, while learning and applying western principles (Spence : 1991; Rowe and Kuan : 2002). The concept influenced China's intelligentsia throughout the 20th century and is contested among China's contemporary cultural theorists and social scientists (Zhang : 1997; Wang : 2003). In this late Qing dynasty period, students and court scholar-officials were sent abroad to France, UK, Germany, the USA, other western European nations and Japan to learn western ways in the sciences, mathematics and engineering. Generally, in the arts, architecture and horticulture, students were sent to France, as well as the USA, Japan and other western European nations (Steinhardt : 2002; Xing : 2002; Lin : 2005; Xiaodong : 2003). These students would return to practice and/or establish schools and departments in the arts, architecture and horticulture. The process of China's modernity and the various transformations throughout the 20th century creates a lens for understanding the evolution of the public park, a cultural by-product of modern society. Modernity is interpreted by China's intelligentsia as anti-Confucian, anti-imperial – divorced from the backward thinking of thousands of years of feudalistic imperial governance.

Colonial Modernity (1842-1937)

Colonial modernity is marked by the 1842 Treaty of Nanking when China settled the Opium War with the British. It forced the opening of five coastal ports, the so-called treaty port cities, along China's eastern seaboard to British foreign trade. Areas, known as foreign concessions, were set aside in these cities for foreigners to conduct business and reside. The French and Americans would join the British in the treaty ports and later other western European countries, Japan and Russia. Colonial modernity would occur in parallel with the Republican era, primarily due to the short-lived government and political

instability. Colonial commerce thrived and continued to operate until the Japanese aggression in 1937 or so-called 'War of Resistance against Japan' (Spence : 1991; Esherick : 2000). The foreigners brought with them their engineers and architects to design and build their commercial and residential districts. China's first railroads were privately constructed by colonial powers to distribute goods from the treaty ports (Esherick : 2000). Shanghai and Canton (Guangzhou) were major urban hubs with Shanghai emerging as a major cosmopolitan centre with its own unique cultural identity. Shanghai's Bund, the 'art deco' skyline along the Huangpu River as well as the French Concession and International Concession, contained works by western architects. Along with railroad construction, public works' like street improvements and lighting were commercially financed by the colonialists. The public park (for use by Chinese) had not yet been introduced but "public gardens" or "reserve gardens" were found in the concession areas for use by foreigners only. See Figures. 3 and 3. The style of these gardens was western European: lawn, trees (ordered in allées, bosques, or naturalistic groupings), pavilion or band shell, formal seating areas. Historians have indicated that local Chinese were banned from the gardens.



Figure 3 : Huangpu Park, Shanghai c. 1900

Republican modernity (1912-49)

Republican modernity is marked by Sun Yat-sen's (Cantonese, Putonghua translation: Sun Zhongshan) revolution against the Qing Dynasty court and the establishment of the Republic of China. Sun is considered the father

of modern China and key figure in China's revolutionary history. Large scale transformation would occur as the modern "nationalist" government attempted to eliminate the Confucian ways of the imperial court and modernize feudal society. This included the shift from the Chinese calendar to the western (Gregorian) calendar and establishment of western-style municipal local government planning; and Confucian classical learning was replaced with American and European models (Esherick : 2000; Wang : 1999).

Beijing's Central Park (now called Zhongshan Park) is claimed to be the first designated public park in China (Shi : 1998, Padua : 2007; Gao & Woudstra : 2011). Shi (Shi : 1998) carefully chronicles how the idea of the public park emerged from Beijing's short-lived municipal government run by Qing reformers circa 1908. The idea was imported from the west via Ueno Park, Tokyo Japan; an early public park established in the 1870's during the Meiji Period when Japan was shifting from a feudal to a modern society by appropriating western practices. Ueno Park was located on the grounds of an existing temple. Soon after the Republic of China was established, Beijing's new municipal government returned to their plan and transformed the sacred site, the Altar of Earth and Grain in the southwest corner of the Forbidden City into China's first public park known as Central Park; it formally opened to



Figure 4 : Public Garden, Shamian Island, Guangzhou c. 1900

the public in 1914 with a blend of Chinese Picturesque and western design elements: rockery, artificial hills, paths and roads, playgrounds, ball fields, archery courts, new buildings to house a restaurant, teahouse, greenhouse, exhibition space.

Central Park carried with it multiple meanings for Beijing leaders. The transformation of existing land in one of the nation's ancient

capital cities was seen as a way to eliminate the imperial past. At the same time, Beijing leaders believed that Central Park signified to the world that it was a modern city on par with London, Paris and New York. Beijing's Central Park had nothing to do with public health or pollution from an industrial revolution. Central Park was considered an international symbol of modernity and part of China's nation-building efforts.

In other cities in China, ancient perimeter walls were being destroyed as an act against the Confucian imperial feudal system, as well as for purposes of modernization. In some ways, this reflects past practices of *tabula rasa* in China; when dynasties changed, imperial capital cities would be relocated or remade. Modern city planning principles were imported from the US and the western gridiron plan was adopted. Hangzhou, Zhejiang, the capital city during the Song dynasty, serves as an interesting case study for the public park and the city. The city engineer, educated in Japan, destroyed Hangzhou's ancient city walls, creating the first physical link between the city and West Lake, one of China's iconic cultural landscapes and the archetype for the *shanshui* (mountain water) classical garden tradition (Wang : 1999). A series of lakefront public parks along with the western grid form were implemented in the former walled city. Hangzhou was in the process of remaking their identity into a modern city (Wang 1999).

A significant movement, the May 4th dealt with China's self-made modernity and is important to note. Though not directly related to public parks, it brings to light issues about a new sense of local identity and a sense of nationalism. While Sun Yat-sen remains highly revered as a revolutionary hero and the father of modern China, Sun's form of modernity was viewed as "culturally inauthentic" by the Chinese intelligentsia (Wang : 2003; Zhang : 1997). He was educated abroad, in Hawaii and Hong Kong, baptized a Christian and was westernized, not authentically part of the Chinese community. The New Culture Movement is seen as a historic moment when a more populist- based and self-made modernity emerged from China's youth-- a cultural renaissance and intellectual engagement toward western ideas and China's birth of modern nationalism. It grew out of discontent with the Treaty of Versailles and the handover of Shandong from the Germans to the Japanese (Spence : 1991). The movement included an effort to reintroduce vernacular Chinese language in order to make political

and scientific materials accessible to common people (Zhang : 1997). The New Culture Movement represented an important departure from the long-standing notion of a Han nation united by Confucian culture and the Mandarin language.

Prevailing notions of Chinese identity had been defined in terms of traditions that ostensibly went back two millennia to the Qin Dynasty. This idea of Chinese identity was closed (if not hostile) to the influence of science and politics outside China. The New Culture movement was simultaneously a strongly nationalistic and populist movement and a modernizing movement that sought to introduce contemporary science and democratic political ideals to China. It asserted that real Chinese identities existed that did not require isolation from the world or ritual adherence to a set of traditions that claimed authority from their antiquity.

The members of the movement saw China as a society that could incorporate science and technology without loss of local identity (Zhang : 1997; Wang : 2003). In their view, the only way China could progress was by reclaiming an authentic popular identity from an elitist constructed identity. It acknowledged the existence of the various ethnic tribes and local identities, and their respective languages; the movement attempted to build a concept of identity on the concrete social and political reality of China rather than a synthesized identity based on idealization of Chinese culture.

China looked to the west to modernize sending their students abroad to learn western thought across all disciplines. Foreign educated students returned from schools in Japan, movement circa 1919, or New Culture Movement, France, other countries in western Europe, and the USA to practice, and/or teach. Shanghai's Tongji University School of Architecture, for example, claims the Bauhaus influence through its former Chair, Prof. Feng Jizhong who was educated at Vienna University of Technology in 1936-41 (Liu, B., pers. comm. 1 Dec 2011). Nanjing's Southeast University School of Architecture was influenced by the Beaux Arts tradition via the University of Pennsylvania (Xing : 2002). Prof. Fan Xiaoyan studied in France and founded the Horticulture Department at Zhejiang University, Hangzhou in 1927 (Lin : 2005). Unfortunately, poor Republican leadership and internal strife among the warlords made for a short-lived Republican government. The warlords had amassed power as go-betweens

for the colonists in the treaty port cities who were not allowed to deal directly with the imperial court. Hence, colonial modernity operated in parallel with the Republican modernity and eventually on its own trajectory until it was disrupted by the so-called War of Resistance Against Japan circa 1937-45. The latter period of the Japanese conflict became part of WWII (Spence : 1991). The Kuomintang (KMT, Nationalist Army) and the Chinese Communist Party's (CCP) Red Army entered into a major civil war after Japan surrendered in World War II circa 1945. The well-disciplined Red Army defeated the KMT in 1949. It was seen as Mao's peasant-based communist revolution. On the 1st of October Mao declared the founding of the People's Republic of China (PRC) in Tiananmen Square in Beijing.

Republican modernity, essentially, was a period when the public park and modern city planning principles emerged for a brief moment in the more established commercial cities in China. For example Shanghai and Guangzhou were treaty port cities; and Hangzhou, the terminus city of the Grand Canal, was an ancient capital city, historical commercial hub, and a rival of Shanghai. Simultaneously, foreign influences from colonial nations were sustained as the Republican government period deteriorated. On the whole, the public park and the city within the context of Republican modernity, was largely mimetic of western practices. The reserve gardens in the international concession areas became publicly accessible to the Chinese. The public park, while a western archetype, was largely viewed as a symbol of international modernity. It was a cultural agent for nation-building as well as the development of an anti-Confucian modern society. Unfortunately, the Japanese occupation and civil strife did not allow the public park to evolve from either the Chinese Picturesque or mimetic western traditions.

Mao's Modernity (1949-76)

The Mao era is another complex period of modernity often interpreted in three stanzas: 1) rebuilding and Soviet-influence; 2) Industrialization, the Great Leap Forward, the agricultural collective; and 3) anti-urbanism and the Cultural Revolution and isolationism. Mao saw himself as the Father of the nation who would reunify the nation through socialist government. Mao's modernity emphasized industrialization and the collectivization of the

economy and nation-building. It's important to note that the nation was a shambles from the civil war and conflict with Japan. And the notion of modernity that breaks with tradition, in this case the Confucian-dominated dynastic era, did not take hold in the Republican era. While Mao's early years involved interventions in the city, primarily remaking Beijing, the Mao era was viewed as a rural-based society. The author recognizes that Mao's leadership was froth with political tug of war and the struggle to maintain power. The research attempts here to understand the public park or outdoor green leisure space and its shifting role.

To finance Mao's modernization of "New China", Mao sought and received foreign aid from the USSR as the nation began to recover from nearly 21 years of internal strife. Hundreds of Soviet experts arrived in Beijing as advisers and PRC's major institutions were transformed and adapted to mimic the Soviet model for constructing a socialist society. The short-lived western republican style government was replaced with a central government. Educational institutions would also shift into the Soviet model.

Mao's early years circa 1949-52 were focused on recovery from years of internal strife. A key shift that affects the notion of the meaning of "public" for a western-style public park was Mao's shifting land reform policies. Under the PRC central government all urban land was rightfully government-owned but theoretically for use by the people. Mao also arranged to confiscate the land from wealthy landlords and distributed the properties among the farming households giving them the right of full ownership (Li 2003). Although park construction was minimal, Mao did embark on "greening" and forestation efforts as part of a program of production-oriented landscape development (Wang W., pers. comm. 10 June 2009). Design activities related to urban public parks dealt with renovating existing parks from the Republican period (Samuels 1989). Park development also involved the conversion of existing imperial gardens into public parks. Design vocabulary varied and included the Chinese Picturesque, Beaux Arts axial design, and Soviet design influence.

There was a building boom in the four to five years after the PRC government stabilized the nation (Visser 2004). A nationalist style of architecture was in debate as the Soviet Classical style of monumental buildings in Beijing were erected in the 1950's, a major effort as the PRC prepared to celebrate its 10-year anniversary. The 'Big Roof' controversy

ensued as the classical buildings would be capped with Chinese roofs (Rowe & Kuan : 2002). As the political climate shifted, expenditures on these types of buildings were seen as extravagant; city life was seen as decadent and bourgeois. Mao moved into an anti-urban mode and utilitarian mode with his Soviet technical advisors introducing a socialist-oriented standardization of architecture that was reflected in factories and housing (Rowe & Kuan : 2002).

The Soviet had some influence on China's park design with the importation of their park prototype called "Parks of Culture and Rest." These parks came into being in Russia in the 1920's with a park program that was intended for education, entertainment, organized sports, and children's play areas (Hayden : 2005). Often, design elements in these parks would include boating facilities, a sports stadium, cultural exhibition areas, children's play areas and sculptures of heroes. Few large scale urban parks were built, and any existing parkland often doubled as a base for agricultural production.

Since the construction of public parks was tied to urban development and Mao's focus was not on cities or urbanization, I argue that the public park's evolution in the Mao period was not rigorous. However, Lu (Lu : 2006) carefully reveals the socialist urban forms experimented with in the Mao period and illustrates Mao's attempts to transform society through collectives. Open space in these socialist developments served Mao's principle that leisure must serve to promote political harmony. Min (Min : 1987) carefully examines the function and program of modern parks; but a critique of design style or evolution is not offered. However, one so-called modern park, Fishviewing Harbour Park (Huaggang Gongyuan) was built in West Lake, Hangzhou, Zhejiang, circa 1954 and worthy of mention. Professor Sun Xiaoxiang, Beijing Forestry University claims that it is the first park in China to incorporate an open lawn area, a spatial form that he appropriated from the English Picturesque Garden design vocabulary; he described his design approach in this park as "modern" (X. Sun : 2008, pers. comm.). In this case, Sun's definition of modern is based on an earlier ideology from the Republican era that equates modern with western or foreign ideas. Sun's design was composed of five garden scenes. See (Figure 3) Three of the garden scenes are based on foreign ideas: one Japanese, and two from the English garden tradition. The remaining two garden scenes

were inspired by Chinese Classical gardens with references to the Summer Palace in Beijing.

Sun's park evokes the Chinese Picturesque design genre, but with the magnolia woodland and an open lawn. In some ways, Sun's park is an unusual project to have been carried out under Mao. It reveals the deep attachment to the garden design tradition as an element of Chinese identity that survived even the Maoist period. During a personal interview on 18 June 2008, Sun disclosed he was never a Communist Party member; and he believed that his gardens should go beyond political context. He saw Suzhou garden styles as a good reference point but not something to be directly copied; his park was intended to educate Communist party officials about ways western garden aesthetics could be merged with Chinese design ideas. Sun describes the main principle of his garden composition as 'variety in unity and contrast in harmony' (X. Sun : 2008, pers. comm., 18 June). The use of the classical Chinese garden tradition undoubtedly helped to make the park more legitimate in the eyes of the Beijing government, despite Communist ideology. As Mao shifted into a period of agricultural collectivization and the introduction of the factory commune, the mode was anti-aesthetic and utilitarian. The design of any new open spaces in this period took place for strictly utilitarian purposes. Prof. Galen Cranz, UC Berkeley, visited China in the 1970's and described park design in the communist era as having six major goals: 1) to contribute to economic productivity; 2) to provide a place for workers to rest; 3) to raise political consciousness; 4) to popularize science; 5) to show special exhibits, and 6) to beautify China (Cranz : 1979). Anything that appeared to have any hint of aesthetics was considered bourgeois and against the grain of Mao's proletariat society.

His efforts to collectivize and industrialize rural areas, the so-called Great Leap Forward failed; it caused imbalances in food production and created instability (Elvin : 2004). Natural disasters, famine, high rates of mortality and poverty created political instability. To avert any power grab, Mao launched the Cultural Revolution in 1966 when destruction of the "Four Olds" (old customs, culture, habits and ideas) occurred; city dwellers were sent to the country-side to reform. Schools and universities closed for ten years until they slowly re- opened in 1976. China's economic isolation, loss of cultural heritage in the form of

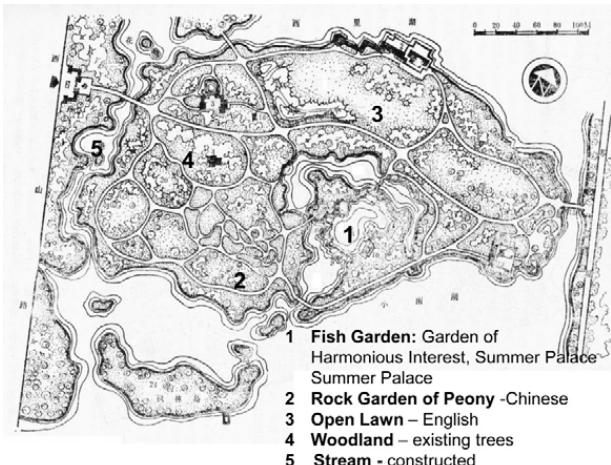


Figure 5 : Flower Harbour Park Huaggang Gongyuan Master Plan, by Xiaoxiang Sun, published with permission

ancient architecture, gardens, classical gardens, literature and paintings, and the ten-year gap loss in learning reversed any forward movement throughout society, let alone development of the public park.

In summary, Mao's modernity was a period of social experimentation whose nation-building dream was focused on bettering the peasant society, initially with Soviet aid and influence, and eventually through rural development vis a vis the agricultural collective. Failed policies, political instability, isolation and cultural destruction disrupted Mao's moment of modernity.

(post-Mao) Hybrid modernity (1982-2000)

The public park emerges as part of China's New Era and modernization experiment. Following Mao's death in 1976, the nation was in mourning and central government was re-organizing its leadership. The post-Mao era and hybrid modernity commences in 1982 when the PRC Constitution was launched. Deng Xiaoping's principles for the Four Modernizations and China's opening to the world were imbedded in the revised constitution. With the universities slowly returning to operation, students were sent overseas. A cultural renaissance similar to the New Culture Movement in the Republican era emerged (Gao : 1999) and in architecture new buildings reflected the neo-classical Greco-Roman Style. Urban parks would follow the Chinese Picturesque tradition or fused with the Beaux Arts axial garden, or English Picturesque until the late 1990's (Yu& Padua : 2007).

Art historians (Gao : 1998; Wu :1998; Lee : 1998) have mapped the post-Mao period with two general movements: 1) the New Enlightenment movement, xin qi meng yun dong, and the 2) 1985 movement, Bawu meishu yundong. Additionally, it has been broken down into four parts: 1) 1979 – 1984; 2) 1985 – 1989; 3) 1989 – 1994; and 4) 1995 to the current time. Central government policy throughout this time influenced the ups and downs of cultural development and artists' movements. The New Enlightenment movement was essentially a replay of ideology reflected in the New Cultural Enlightenment movement in the Republican era. Cultural trends included "cultural fever" (wenhua re); "searching for cultural roots", (wenhua xungen); and "cultural reflection" (wenhuan fansi) (Gao : 1999; Barrie : 1999; Dirlik : 2002). The period of cultural reflection was marked by nostalgia for China's Mao era (Clarke : 2000; Wu : 2000). Essentially, the arts community was liberated from years of Mao's propaganda art: first reflecting on the destruction of the Cultural Revolution; excited with cultural fever and filled with hope and experimentation; and searching for their identity as China opened to the world, corrupted by capitalism. After the 1989 Tiananmen Square incident, many of the artists went into exile and 1995 marked a new generation of artists (Gao 1999). Cultural identity would come into play later in public park design, as well as in architecture. Some parallels could be drawn with China's rapid-urbanization, the rise of the city and the public park. However, one point that relates to the public park is a key law; it was enacted soon after the 1982 PRC Constitution -- the 1982 Cultural Relics Law. It included language that protected a range of cultural artefacts including ancient building, sites with historic significance from socialist, imperial and ancient past. In the same year the State Council announced an official list of 44 national-level Scenic Parks, mostly located in natural areas. However, the loosely defined notion of cultural relics soon became an umbrella for the development of public parks and restoration of the scholar gardens. The new designed landscapes built in the 1980's involved pedestrian path improvements in some of the forty- four scenic areas, restoration of classical scholar gardens, and a few new urban parks (Zhu : 1997). 'Urban fever' or China's rapid urbanization accelerated with the 1989 PRC City Planning Law when the mechanisms and parameters for comprehensive city planning

and development controls were established. Yu & Padua (Yu & Padua : 2007) discuss the superficiality of the cities and the socio-political context as China made its transition to a market economy.

Hybrid modernity builds from Appadurai's (Appadurai : 1990) notion on alternative modernity; it positions China in the worldview as a long-standing civilization and nation that is socio- culturally distinctive; China should be interpreted on its own and not within the "advanced/advancing" or "first world/ third world" dichotomous narrative for nations. In public park design terms, by the mid-1990's, the fusion of the Chinese Picturesque and international design trends created a place-based hybrid modern form. In the global/local dichotomy, the local is dominant in the hybrid modern park. The public park in smaller secondary cities became sites for city-branding. Cities sought foreign investors, as well as national tourists; mayors wanted new innovative park design to attract foreign capital, tourists and increase real estate values (Yu & Padua : 2007).

In the last decade of the 20th century, the public park design typology was expanded. Damon's Living Water Garden, China's first ecological park was built in central Chengdu, Sichuan circa 1998. It was a collaboration between the Funan Rivers Revitalization Bureau, Betsy Damon, American artist; Margie Ruddick, American landscape architect; and the Chengdu Design Institute. The park was designed around cleansing water through a series of natural processes. See Figure 4. It also commemorated the city's modernization project and environmental clean-up of the river. See Padua (2004) for a detailed discussion. The park's design vocabulary combined contemporary landscape design and the Chinese Picturesque; it

functioned as a community park, and part of a green open space recreational system along the waterfront.

Turenscape, China's first private landscape architecture firm was established in the 1990's by Kongjian Yu, former student of Beijing Forestry Professor Sun, Harvard GSD graduate, and Professor and Peking University's Dean of the newly established, College of Architecture and Landscape Architecture. Turenscape's Zhongshan Shipyard Park located in Guangdong Province and designed in the late 1990's celebrates Mao's industrial heritage and commemorates the Cultural Revolution. While the overall design vocabulary is contemporary, the design team employed scenery manipulation principles in the park, as well as introducing traditional plantings like bamboo. See Padua (2003) for a detailed discussion. EDAW (now AECOM) started work in 1997 on a landscape master plan for Jinji Lake's waterfront; it acts as the recreational infrastructure and community identity for the New Suzhou community. EDAW's designers appropriated from the Chinese Picturesque design vocabulary of the nearby Suzhou gardens and created contemporary hybrid modern forms. See Padua (2004) for a detailed discussion. China's hybrid modern period experienced rapid urbanization. Cities emerged in short periods of time. Urban form, architecture and public parks were part of a massive urban experiment. Public parks in China's cities would immediately be utilized given the expanding urban population. The 1980's public park designs were culture-based and represented the Chinese Picturesque and Beaux Arts axial design, individually or sometimes fused. By the late-1990's, China became aware of the environmental destruction created by rapid urbanization and



Figure 6 : Flowforms & microbe pond



Figure 7 : Scenery manipulation: framing the view

<u>Parks of Culture and Rest</u> (imported from the Soviet Union)	<i>wen hua xiu qi gongyuan</i>	文化休憩公园
gardens	<i>hua yuan</i>	花园
canoeing/ boating facilities	<i>hua chuan you le she shi</i>	划船游乐设施
stadium	<i>ti yu chang</i>	体育场
theatre	<i>ju yuan</i>	剧院
fine art market	<i>yi shu pin shi chang</i>	艺术品市场
heroes sculpture	<i>ying xiong ren wu de diao su</i>	英雄人物的雕塑
<u>Comprehensive Park</u>	<i>zonghe gongyuan</i>	综合公园
Park classification/hierarchy imported from the Soviet Union from large to small		
Municipal park	<i>shi ji gongyuan</i>	市级公园
Community park	<i>she qu gongyuan</i>	社区公园
Residential park	<i>qu ji gongyuan</i>	区级公园
<u>Specialty Parks:</u> Public open spaces designed for a specific use	<i>zhuan lei gongyuan</i>	专类公园
Theme park	<i>zhu ti gongyuan</i>	主题公园
Zoos	<i>dong wu yuan</i>	动物园
Botanical garden	<i>zhi wu yuan</i>	植物园
Cemetery	<i>ling yuan</i>	陵园
Children's park	<i>er tong gongyuan</i>	儿童公园
Cultural park	<i>wen hua gongyuan</i>	文化公园
Sports park	<i>ti yu gong yuan</i>	体育公园
Memorial park	<i>ji nian gongyuan</i>	纪念公园
Ecological park (newest park type)	<i>sheng tai gongyuan</i>	生态公园
<u>City Square:</u>	<i>cheng shi guang chang</i>	城市广场
public square	<i>shi min guang chang</i>	市民广场
memorial plaza	<i>ji nian xing guang chang</i>	纪念性广场
cultural plaza	<i>wen hua guang chang</i>	文化广场
sitting/rest square	<i>you qi guang chang</i>	游憩广场
commercial square	<i>shang ye guang chang</i>	商业广场

Figure 8 : Urban Open Space Typology in China

ecological design thinking emerged in public parks. Contemporary design approaches utilized by international landscape architects dominated the public park with hints of the Chinese Picturesque in the last decade of the 20th century. Hybrid modern parks in China could be interpreted as places for

experimentation. One can argue in the shift from the “collective” to the “individual” in the post-Mao era, a social experiment was also occurring; the public park was a place where individuals in China’s new society spent their newly found leisure time. See (Figure 8) to gain a sense of China’s urban open space typology.

Fragmented modernity: preliminary findings and gazing towards the future

China's 20th century strands of modernity provided a highly complex backdrop for the public park's evolution. Perhaps, the popular post World War II coin-operated pinball machine might serve as a light-handed metaphor for understanding China's 20th century modernity – dynamic, hopeful and exciting as the pinball's action is sustained across the game's table with the rapid action of the bumpers generating more and more points; or discouraging and hopeless when a listless ball misses every point-making device; or lastly, frustrating when the sudden dimming of the table's illumination signals a disruption of the game's action as the 'tilt' light starts flashing. In a more staid interpretation, China's 20th century experience reflected filaments of modernity with mosaic qualities and the public park's evolution was fragmented – visible during periods of openness and economic booms, and invisible or sites of destruction during China's dark periods of civil strife, failed economic policies, famine and poverty. In examining China 20th century comprehensively, the notion of fragmented modernity emerges. What is the utility for deriving a narrative around the public park throughout the 20th century given its fragmented characteristics? Patterns or new avenues of research could be drawn from the research to date. The Chinese Picturesque style while originally, an elitist notion, appears to continue to inform and inspire current design thinking; it also appears to remain tied to cultural identity. The notion of cross-cultural design, influences of the west and globalization raise important questions about the recreational and leisure needs for China's society in the 21st century. The public parks and squares in China's cosmetic cities (Yu & Padua : 2007) are now in need of retrofit. In addition to further design analysis, social needs and critique of the public park throughout the 20th century, the study points to an exploration of landscape education; it could focus on spatial and historical. For example, were there schools of certain design thinking? Where were they located? How and when did the notion of modernity emerge in landscape architecture education? Who were the master educators?

In the first decade of the 21st century, China and the world continued to experience its rapid urbanization. An urban forest scientist, who

studies pollution in the mountain ranges of California, was able to identify China as the origin for polluting agents found in the trees. Building materials were consumed at a high rate in China to the point where significant quantities were imported from other parts of the world. Cities would emerge out of greenfields or rural areas would be acquired for new urban expansion areas. Public parks and the cities continued to be sites for design experimentation by professionals from China and international designers – parks for design consumption. Attempts have been made in the direction of landscape urbanism as landscape architects are able to convince mayors that the public park could be viewed as part of a regional system of ecosystem services or landscape infrastructure to serve their cities. Sustainability and the ecological city have emerged as important city-making strategies. It would seem that the boundaries have blurred and the public park, while important for community use and well-being, has become a critical green component that could serve multiple purposes, as well as operate at multiple scales.

With China's ongoing urbanization and population expansion and aging, China's citizenry will most likely change their leisure and recreational needs, particularly given the march of capitalism and the aggressive retail marketing campaigns. I expect the design typology of the public park in China to evolve and possibly innovate. How will China develop and expand the idea of the public park as new urban forms are developed? How significant will the role of the public park be for China's local society in the next fifty years? What spatial forms will they take? Will designers and landscape architects be equipped to deal with these challenges?

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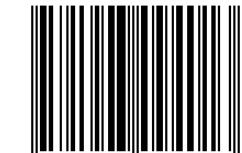
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