A Comparison of "Third Place" High-Density Residential Environments

In conjunction with Oldenberg's concept of "third place," this essay focuses on rapid urbanization as witnessed today in East Asian cities. The pace of development leading to ultra high-density projects enables new ways to participate in public and open spaces. This paper tracks Third Place theory in dense urban spaces by comparing an Asian model with its Western counterpart.

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Figure 1. Chicken Lady, photo by authors.

CONTEMPORARY ARCHITECTURE AND URBANISM ADVANCING

A study of life in developed and developing urban centers within the first decade of the new millennium demonstrates the speed with which urban environments undergo rapid and constant rebuilding. Today's urban projects recall the rapid clearing of the modern city for new, higher density structures similar to post-World War II rebuilding. Once dense, suddenly-empty blocks fill with construction activities and the trueing of steel frames. Though urban destruction from military campaigns is limited to areas of conflict, aggressive forces characterized by rolling forms of capitalism push new urban patterns and densities across cities as second-order building occurs in modern metropolis. Cities such as Beijing and Shanghai, Abu Dhabi and New Delhi are witnessing this type of economic clearing of sites for new residential and commercial replacements.

This paper seeks to sort and understand such processes as they influence the changing role of public space and the kinds of life and circumstances that arise in new developing contexts.

THE PRACTICE OF THIRD PLACE LIVING

The city is increasingly becoming difficult for us to understand and to use with a sense of purpose. We no longer know about the origins of our environments, we know very little about the surrounding materials and products from which things originate. Who owns them? Who is behind their manipulation? What is their purpose? We live in cities with a lack of participation or an ability to engage effectively and with meaning. For most people, this is an alien world. It is no wonder that many people avoid community participation, and retreat to the privacy of their own, limited world.

Michel de Certeau calls for a return to "practices" in the city. The urban spectator must transition from mere observer to participant in order to carry out

this practice. ¹ He refers to walking in the city as one way of moving through the urban environment, helping others to act in response to his wandering and fortuitous interactions.

"Third Place" space is a discourse that attempts to understand the importance of the social impact of physical places. As defined, it is a social environment that complements first place - homes and private residences - and second place work environments. The idea of third place is outlined for us by Ray Oldenburg in his text, The Great Good Place. Third places are establishments that include beer gardens, main streets, bars, coffee houses, community centers, post offices, and other spaces beneficial to the vitality of the community. In appearance, third places are not necessarily special or attractive; rather they are places for people to make connections and engage with each other leading to personal ties and other relationships. Third place is an anchor for community life and is able to nurture and promote broad and creative social interactions. These places help to foster social capital, harness good social traits, provide a nurturing and caring atmosphere, allow assistance from others when needed, encourage tolerance and trust, and allow dedication to civic virtues. Third places are "bottomup" offering grassroots social/political environments that promote social equity. Similar to de Certeau's critique of the city, third place interaction between city dwellers is significant in allowing public participation in the construction of democracy and civil exchange.

In Western countries, third place theory thrives under the mechanisms of consumer-oriented societies, those that place importance on new public domains in businesses and retail environments. The opportunity to gather in non-traditional public places (the normative ones being the public square or grand promenade) is an observable condition of consumer life in the city. Third places allow for a merging of leisure and work environments with the added benefit that people are gathering for work but that tasks can be interrupted or diverted for more casual encounters that involve commerce, services, and leisure activities.³

In third place environments, participants choose to control the environment they select to work in, and this work may or may not be authentic depending on the fancy of the individuals and their response to the workplace. For third place participants, the control is afforded by the informal way they chose to inhabit public places and the freedom to participate (or not) in the ebb and flow between conscious work and moments of distraction or diversionary private practice. These places are dynamic since the degree of regard or disregard toward the public allows spontaneous and chance social occurrences.

What we would like to understand is how third place environments support (or do not support) public life in contemporary architectural environments. In addition, we also ask how Western architectural theories are adapted to Chinese social conditions and evaluate whether or not these condition might be used in a reflexive way to better understand U.S. design conditions.

A TALE OF TWO CITIES

We have chosen a comparative method in order to understand two urban situations relative to the problem of city life and the quality of urban space. Our first example is the Vanke City Garden in Shanghai, China; the second is Atlantic Station, built on reclaimed industrial lands in Atlanta, Georgia. We chose these two cases in order to study the differences and similarities that arise from forms

The Characteristics of Third Place Environments

- **1. Neutral Ground**: no obligations to the space, free access, diverse.
- **2. Leveling Space**: social and economic status is inconsequential, no prerequisites for the use of space.
- **3. Conversation is Primary Activity**: open, free conversation without large stakes, light-minded, but valued.
- **4. Accessibility and Accommodation**: open and readily accessible to those who occupy the space.
- **5. Regulars**: frequented by regulars who help give the space its tone.
- **6. Low Profile**: physical place without extravagance or grandiosity.
- **7. A Sense of Home**: a feeling of belonging as they would in their own homes.

Figure 2. Third Place Elements.





of architecture and urbanism that succeeded orthodox practices of the early 20th century (e.g., Le Corbusier's 1943 *Athens Charter*). The two projects move away from modern planning in favor of new discourses advancing the notions of public space, walkable communities, and mixed-use programs. These ideas are seen in contemporary planning models (Jacobs, Duany/Plater-Zyberk, and others) that place community first rather than using only formal models to solve problems of hygiene and infrastructure.

Planning and urbanism in China was selected for its unprecedented rates of growth and change. It presents a challenge to us due to its fast building cycles and dense, large-scale development. It also provides an interesting social perspective given its migratory population, with different groups coming to the city from other regions of the country. Along with this growth comes new but familiar instances of population displacement, changing lifestyles created by rural peoples moving to urban centers. With China's draw to free market economics, the city of Shanghai is both a manufacturing and production region but also a metropolis aiming for world financial status, creating a challenging need to plan for a productive labor force while satisfying corporate interests.

In 1977, Deng Xiaoping helped move China from social and economic stagnation to a position of global importance. His ideology questioned the dogma of Chinese politics by asking Communist Party members to consider "[w]hat is the judgment of truth?" His rhetorical question led to the slogan, "[p]ractice is the sole arbiter of truth," altering the dogmas and apparent truths of the former political regime. Tao Zhu, in his essay "Cross the River by Touching the Stones" provides an account of how China moved slowly in this direction, wading through desperate politics and entangled leadership. 4 Zhu outlines the history of China's struggle to leave behind political reforms by embracing economic futures. Deng Xiaoping's walk into the river is portrayed by taking steps on stones that reveal a safe path to the opposite shore. With this metaphor Zhu portrays how Chinese economic development in the first decade of the new millennium (also known as "national capitalism") is now at a crossroads, finding itself in the middle of the river uncertain about which way to move. He believes there is a potential crisis with fewer stones presenting themselves as the water rushes past. The question remains as to whether China can pick her way through to the opposite bank.

Chinese architects, however, are not crossing the river alone. Architecture and urban projects in China today involve a great many talents from abroad, particularly for high profile projects that are either government supported or designed for the needs and interests of multi-national corporations. Hence the need to build and plan specifically for Chinese citizens is increasingly served by designers that are less familiar with the subtlety of Chinese issues and concerns. The Westernization of Chinese architecture, for example, is part of the global spirit of economic reforms and development. Some are troubled by the fast adoption of Western brands and styles in Chinese cities, fearing that national identity still needs to be reckoned with. At the same time designers and professionals are happy to be liberated from the "National Form" for architecture of late 1950s which created an image for the first ten years of the Chinese Communist control. That architecture was developed in response to International Style architecture's openness and forward modern presence. Maoist architecture was monumental but strove to leave behind the Imperial character of the past while retaining some sort of "roof," pagoda-style or otherwise. The move away from Communist architectural expression to one that accepted tight vitrine wrappings and sheer

Figure 3. Vanke City Garden Public Green, photo by authors.

Figure 4. Atlantic Station, Central Quadrangle Park, photo by authors.

skins, marks the sentiments behind Deng Xiaoping's idea of "practice" as China builds with Western models and methods.

On the Western front urbanization has taken new life in cities. The past 15 years in American urban planning has witnessed a return to city life. The rehabilitation of fragile neighborhoods, reclamation of abandoned industrial sites, and slimming of government owned lands and underutilized infrastructural landscapes is bringing new development and living opportunities back to U.S. cities. A campaign for New Urbanism and an embracing of traditional town planning in the 1990s was a large contributor in creating city density. This movement helped establish stronger city planning regulations and zoning that encouraged developer models based on mixed use, medium density, pedestrian-oriented environments. Developers embraced the idea of "main street" (provided that new parking structures can be hidden from view) with movie theatres and grocery stories serving as civic anchors.

The development and planning of Atlantic Station follows contemporary smart growth planning models introduced in the last 20 years. Many of the strategies follow New Urbanist planning strategies of: 1) a pedestrian-oriented environment, 2) a mixture of residential, commercial and retail uses, 3) access to public transportation, 4) contextual response to existing city street patterns to provide district continuity rather than exclusivity, and 5) environmentally responsive planning. These criteria are now common in the United States, where shopping centers of the 50s and 60s are now replaced by the "town-center" model of development. Often dressed up to reflect nostalgia for the architecture of small American towns, New Urbanist developments have prevailed in the 1990s and 2000s.

Given the lessons and successes of New Urbanism in the U.S. we are also seeing it's impact at a global scale. Perhaps understood more as an economic model than an urban one, small-town urbanism represents the new rising middle class in China. Shanghai is a case in point with its "One City, Nine Towns" urban master plan. Based on New Urbanist planning principles the development of the nine towns movement around Shanghai was adopted to appeal to international business interests and attract offshore development. In the past seven years these new towns have functioned as urban theme centers with kitsch trappings of stylistic architecture that aim to represent building traditions of various countries. These architectural themes include Anting (German Town), Thames Town (British Town), and Pujiang (Italian Town). With a Chinese appreciation of all things fake, these developments parallel the country's interest in imitation, false, and "copycat" products, on par with the pirate DVD industry or the imitation mobile phone market. 6 What happens to architecture in this foreign context? What started as a way to repair failing American urbanism has lead to unintended fictional environments. But they are also towns that are self-proclaimed symbols of a Chinese desire to enter global cultural status, a type of transferable internationalism that is part of the scenographic urban landscape surrounding Shanghai.

CASE COMPARITIVES

Vanke City Garden (1993)

Vanke City Garden was built in the mid-1990s. The project was designed as a medium-dense community development to attract tenants by providing open space and gardens as well as public facilities, businesses, and educational opportunities for families. Fudan University is a major Shanghai secondary education venue and Vanke City Garden was erected, in part, to help support the need for





Figure 5. Vanke City Garden Aerial, image from Google Earth, Bluesky.

Figure 6. Vanke City Garden Activity Map.

housing. With approximately 16,000 residents the community has grown over the last 20 years by attracting a large number of families with diverse professional interests and economic levels. The population is approximate 30 percent elderly.

The project was designed with street-level commercial businesses, including apparel stores, dry cleaners, restaurants, barber shops, supermarkets, fruit shops, beauty shops, pet shops, banks and other commercial facilities. In addition it is well supported with educational facilities (Fudan Primary Experimental School), medical facilities, post offices and other public supporting programs. There is a large retail complex at the north end of the block as well as to the southeast side. Though Vanke is far from the city center (30 minutes by metro), transportation and other infrastructure uses are accessible and in place. The neighborhood is on the flight path of Hongqiao International Airport and therefore is subject to consistent aircraft takeoff and landing noise.

The housing comprises four to six story walk-up units mixed with residential highrise towers. There are recreational facilities and outdoor fields on site. The layout and morphology of the arrangement of buildings are linear with the long axes stretching across the site from west to east to take advantage of sunlight utilizing the general principles of Feng Shui (wind-water) planning. Cultural traditions and national holidays make up a large part of the public activities for the City Garden block. These include: Mid-Autumn Festival (September), National Day of the People's Republic of China (October 1), Lantern Festival (November), Winter Festival (December), Chinese New Year and Spring Festival (February), and the Dragon Boat Festival (June). The homeowner's association offers infant care, film screenings, swimming pool access, basketball, tennis and other family oriented amenities.

The everyday use of public space in the walking areas and open plazas varies from group and individual exercising to casual encounters, Chinese chess playing, and children's play. Spaces most frequented are at the southeast corner of the site where the block is anchored by retail and a small public park at the west border that connects via a bridge to another neighboring residential block. A generational mix of elderly, middle age and children reside in Vanke. The Fudan School allows for a mixing of these age groups playing out Oldenburg's observation that young people demand open space for unplanned meetings, play, and spontaneous family activities. Basketball and tennis areas help facilitate this interaction at Vanke, but youth groups also use more private spaces, for activities that are sometimes mischievous, testing social boundaries and familial values. There are instances of boys and girls who gather in groups, forming small discussion bands that can involve subjects like schoolwork but also become spaces for sharing stories about the opposite sex. These spaces are charged and become defensible to opposing groups in ways that create a shell surrounding the intimacy of these conversations.

The elderly are the primary users of open public space at Vanke, enjoying exercise, sitting, sunning, gossiping and other types of activity. Routine and regular use of space is typical of this age group. However many tell us that they are not satisfied with the level of social contact in the community. There is evidence that people isolate themselves by not participating in outdoor activities, that the aircraft noise from Hongqiao International Airport is a large deterrent to using outdoor space.

Outside informal gaming and exercise is a popular way to pass time for the older Chinese. A high level of public participation surrounds those games that involve wagering or gambling. Chinese chess and *Mahjong* are popular for drawing

crowds, particular older men, and can be a way to enliven exterior places. As the social critic Walter Benjamin has noted, activities motivated by good fortune, and sometimes by greed, are public experiences inspiring especially dynamic and high stakes social participation. Public activities such as these in Vanke City Garden are part of the experience, and hence are a part of third place experience.

Atlantic Station (2005)

The U.S. segment of the study looks at the 1998-2007 project for the reuse and rehabilitation of a former steel mill in Atlanta, Georgia. The 138-acre site lies to the northwest of Atlanta's downtown core and is situated in close proximity to the Georgia Institute of Technology (Georgia Tech). This site is archetypal within the context of other post-industrial cities that aim to replace old intercity manufacturing sites with new urban fabric that accommodates mixed-use retail and commercial as well as residential building uses. In the past 20 years this type of development has spurred a return to the city life that was lost to post-WW II sub-urbanization of American cities.

The first phase of Atlantic Station has resulted in 6 million square feet of commercial office space, 5,000 units of rental or owned residential units, 1,000 hotel room units (from 5 new hotels of varying levels of comfort), and 2 million square feet of retail and entertainment services. At 40 percent complete, the development is home to 3,000 residents, 6,000 employees, and hosts 100,000 visitors weekly. The development anticipates to generate a total of \$30 million in property taxes for city and county purposes and \$10 to \$20 million a year in local sales taxes. Total salaries for employees of the development are estimated in the hundreds of millions of dollars annually.

Following New Urbanist planning principles, Atlantic Station is motivated by market economics and speculative futures. Built just before the economic downturn of 2007, the project has still yet to be fully realized. In addition to the residential units, retail stores such as H&M, Dillards, Target, Ikea, and Publix are major anchors that draw non-residents to the area for shopping. The heart of the development is Central Quadrangle Park, a plaza created around retail establishments at the core of the project. The other public space (besides the street layout) is Ellipse Park, a landscaped plot of land in a residential section of the project that is bordered by roadways that move east-west through the project.

We conducted on-site interviews with residents and visitors about their activities and use of public spaces and retail establishments in and around the neighborhood. Annual events are sponsored by the business and residential associations of the neighborhood. These feature music concerts, tennis competitions, and outdoor films festivals. We noted that the age of the residential population was less diverse than the Vanke City Garden project, most of the residents where between the ages of 25-35 years and single. Many of them noted they probably would move to other neighborhood within 2-3 years of owning or leasing their units. Many of these individuals are students at Georgia Tech, which is less than a mile south of Atlantic Station. Some of the residents had friends who lived in Atlantic Station; others had few friends in the area. At least half of the people surveyed admitted that Atlantic Station was a temporary home in their search for more permanent and family-oriented housing.

The resident of Atlantic Station are culturally diverse, including groups representing white, African-American, Asian (Chinese, Vietnamese, Indian, and others), and





Figure 7. *Atlantic Station Aerial,* image from Google Earth, Bluesky.

Figure 8. Atlantic Station Site Plan.





Hispanic or Latino origins. African-Americans are well represented in the retail and commercial parts of the project (Atlanta's black population is more than 54 percent). We spoke to one young African-American family with a one-year old child at the playground in Ellipse Park (they were from Philadelphia and visiting family in Atlanta). They made note of the fact that the area seemed diverse, with the wife commenting that "she really liked the feel of that."

More contemporary public places and services of note include a "dog run" where pet owners may allow their pets roam freely, an electric car charging station, as well as a historical park that features the relics of the old steel mill that once occupied the site from 1901 to the late-1990s. Festivals and entertainment in the public areas are not based as much on national holidays or seasonal rituals as in the Vanke case, rather a management corporation arranges sporting and entertainment events.

CONCLUSIONS AND FURTHER INQUIRY

These two projects are examples of how multi-use living and work settlements may provide a supportive atmosphere to study the social/cultural uses of public space, and the types of human interactions that take place according to the changing needs of contemporary urban life. At the same time such developments are useful in understanding the historical events concerning how places in the city change by virtue of shifting needs, population densification as well as the changing nature of what it means to live in a health and socially productive environment in dense urban places. Cities in America since the early 20th century have witnessed a shift from manufacturing to service-oriented industries. China, though currently a strong global producer of manufactured goods, is also looking to shift its manufacturing markets to more high-tech and service oriented urban development. The "new town" and "industrial park" planning scenarios that are widespread in Chinese urban growth are signs that the reuse of lands must be more programmatically diverse, architecturally intelligent, and livable in order for its population to enjoy a wide range of life experiences. Hence it is important for us to learn from the lessons of American urbanism of the 1950s and 60s, a period that witnessed home to work distances as a leading factor in low levels of public interaction outside of the workplace. Chinese urban planners and architects might take clues from these historical conditions as their country sees similar expansion in the first part of the new millennium.

Ray Oldenburg's theories of third place supports both Chinese and American need for community. Oldenburg argues for neutral ground and conversation as the main activity to support life in these public spaces. He also requires that there be regular participants for successful place making, hence Atlantic Station may learn from Vanke City Garden in this regard – i.e., how to make a more enduring and valued place where people would be more likely to stay permanently. On the other hand, in the Chinese case, upward mobility may not be an option for everyone due to economic reasons. Third place environments do not value one individual's participation over another, hence it is an environment where leveling occurs allowing for neutral, equal, and democratic access. Ownership occurs at the level of social agreement and therefore is not about boundaries or individual areas to claim.

Above all, third places are characteristically low profile, sometime invisible. This may align more effectively with Chinese than American norms, since traditional Chinese spaces once were based on non-material needs, cultural customs that

Figure 9. *Gambling Group at Vanke City Gardens,* photo by authors.

Figure 10. *Three Card Monty Game at Atlantic Station*, photo by authors.

do not always manifest themselves visually into architectural or urban form. This attitude about place defines another segment of our study as we attempt to overcome the stylistic trends of excessive design solutions in both the Chinese and American contexts. With the potential for modesty and a low profile, Chinese culture seems well prepared to resist the vulgar and immodest expressions of late-capitalism. With this reading it is difficult to understand why current architecture and urban practice in China is filled with loud and noisy places.

Francois Jullien has written about the sentiment of the Chinese to resist fanciful aesthetic trends in the arts as well as in the practice of life and the appreciation of nature. His interpretation of Chinese culture's desire for "blandness" or flavorless realms is a desire for the simple and plain as oppose to the flashy or ostentatious. He tells us that:

When we begin to apprehend the stirring – beyond our ideological reflexes and cultural conditions – or the possibility of a positive notion of the bland, we have entered China: not into the flashiness or most sophisticated realms, but into what is most simple and essential.¹⁰

As we continue to define and search for this modesty in our architectural and urban places, either via third place design interventions or merely as keen observers of social places, we may be more informed about the potential slowness of urban life and how to make better "great good places."

ENDNOTES

- Michel de Certeau, The Practice of Everyday Life (Berkeley: University of California Press, 1984), 95-98.
- Ray Oldenburg, The Great Good Place: Cafés, Coffee Shops, Bookstores, Bars, Hair Salons and Other Hangouts at the Heart of a Community (New York: Marlowe & Company, 1999).
- de Certeau, op. cit., 24-26. The author uses the term la perruque
 (in French the word means "wig") to explain a condition where
 diversionary practice benefits employees who act in creative
 ways to pass off personal activities as legitimate work. The
 concept of mixing work and personal matters, though not in
 resistance to authority, is part of Third Place theory.
- Tao Zhu, "Cross the River by Touching the Stones: Chinese Architecture and Political Economy in the Reform Era: 1979-2008," Architectural Design, Vol. 79, Issue No. 1, January/ February 2009, 88-93.
- Charlie Q.L. Xue and Minghao Zhou, "Importation and adaption: building 'one city and nine towns' in Shanghai: a case study of Vittorio Gregotti's plan of Pujian Town," *Urban Design International*. December 2007. 21-40.
- For a fuller explanation of the tradition of Chinese "copycat" practice see Yu Hua's, China in Ten Words (New York: Pantheon, 2011), 181-202.
- 7. Oldenburg, op. cit., 262.
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PARAMETRICS + PLANNING: NEW HYBRIDS + LANDSCAPE INFRASTRUCTURE

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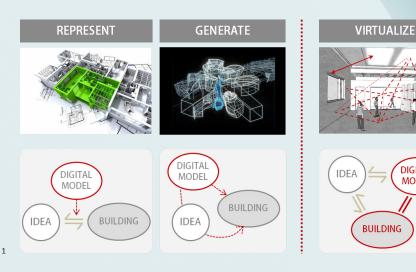
Traditionally, architects have used models to externalize abstract design ideas or as a mean to analyze and evaluate the refined design solutions. Models are also used for more tangible communication between architects and clients or collaborating engineers, as in the case where the architect often uses the model to convince or share design problems and propose solutions. The digital model, in particular, represents the logics, process, and intended result of the design in the form of digital information and media. Therefore, the role of digital models may be simplified as a digital representation of physical buildings to be realized in the long run, or a digital representation of a mental image transforming incessantly in the designer's mind. That is, the digital model represents something. With the advances in computer technologies, digital models have evolved into essential tools, expanding the horizon of design languages. Experimental and complex geometries became universal vocabularies in architectural design thanks to the generative nature of parametric design models. That is, the digital model is able to generate the design or the building. Furthermore, VR technologies facilitate full sensory experiences from the design artifacts of a cyber space, by adding more interactive features to the digital model. Fully fledgling smart technologies now enable the various levels of interactions and experience with the space that were possible only in cyber space in the condition that an user limits him/herself as a virtual being. This level of digital model virtualizes the design and the building. (Figure 1)

Not being far different from traditional physical equivalents such as wood model, digital models like 3D geometric model have been extensively used for form-making process. This process involves iterative creating and modifying operations that require manual craft of the designer as a computer operator. Most of digital modeling works are still conducted at this level. This form-making process becomes faster than ever, due to the development of computation design methods such as generative parametric design and digital fabrication. These methodologies are also even better supported by the powerful simulation and optimization tools in combination with accelerating BIM (Building Information Modeling) technology. The paradigm of digital modeling is changing from form-making to form-finding as the designers can enjoy the selection of optimum design solutions from myriads of possible alternatives.

The 'Parametrics + Planning' session of the Open Cities Conference was subtitled as "New Hybrids + Landscape Infrastructure". Three papers were presented in this session.

"A Parametric Vernacular: Genetic Algorithms in Urban Formations.", presented by Lee Su Huang, showed a state-of-the-art method for generating urban landscape through the algorithmic solutions. He tried to examine the issue of modernizing rapidly growing old cities through one case study on the building scale, and two case studies on the urban formation scale. His paper, in these examples, proposed parametrically optimized alternatives with the application of evolutionary algorithmic design strategies.

"From Metaphor to Model: Expanding Ecologically-Informed Urban Design.", presented by Daniel Malka and Maya Przybylski, further showed that the notion of



parametricism goes beyond the geometric exploration. This type of urban model incorporates various data sources and algorithms to analyze and simulate the urban ecology as a potential design tool. As they explained, "an appropriation of ecological modeling into design practice offers a parametric and relational framework for advancing ecologicallyinformed design as a process of formation, which affords both generative and exploratory opportunities to the development of landscape infrastructure."

DIGITAL

MODEL

"Dubai [Metro]polis: Landscape Infrastructure and Urban Utopia.", presented by Nadia Mounajjed and Paolo Caratelli, tried to explore Dubai's urban utopia and landscape infrastructure through the perspective of its Metro System. The design of existing metrostations exhibit parametric generative formal strategies, as they appear identical repetitive curvilinear blobs distributed within the space of the city. Their presentation also argued that the Dubai Metro acts as a modern tool to explore the built environment, providing a visual experience and an unprecedented perception of moving in space and time at the edge between the imaginary and the real.

In conclusion, all three papers presented experimental yet promising approaches where the notion of parametricism and hybrid design strategies plays a significant role for representing, generating, and finally virtualizing the city as both living reality and operable model. They examined the impact of new and emerging technologies in urban design from unique perspectives. It is clear that the session, with these three presentations, successfully addressed the issue of parametric and hybrid approaches in urban design.

