

## preface

The thesis is about the scale of public space. The scale of architecture and city has been enlarged in the past decades, and has deeply impacted urban public space. However, public space is not a kind of space, but a condition of space, which cannot be calculated by numbers. The enlargement of space has not created more public space, but has eliminated a lot, which also brings inequality both socially and economically.

From the perspective of architecture, this thesis will illustrate the huge potential of architecture and urban on how scale alone embodies an ideological program and how it can impact the social relationship and economic development.

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Undoubtedly, the process to complete a satisfying and convincing thesis is the most challenging task that I have ever had in my life. It completely changed my understanding of architecture and urban More importantly, it has changed my way of thinking, which will benefit for all my life. I appreciate a lot here that I have the chance to express my sincerest and deepest thanks to everyone who have helped and supported me.

Ms. Juan DU, my thesis supervisor, and my friend, is the first one that I want to thank, with no doubt. She is also the first one who has made me crazy about myself. She has taught me for different courses, since I came to HKU. During the past two years, she keeps teaching me how to change the way of thinking and working, which seems quite hard for both her and me. For several times, think she already felt disappointed about me and my work. However, she still kept inspiring me and pushing me.

To be honest, she is really a great educator. I feel quite happy for being her student. However, the most important thing that she has taught me is not about architecture, but how to be a person with independent and critical thinking. She knows well about my shortcomings, from my personality which I also realized before but did not know how to change. Here, she helped me with that, which would fundamentally change my life.

Stories like quarrels and blames happened frequently. However, I always think it is lucky to have someone around warning me about my fault as well as my shortcomings. I cannot get any progress if everyone is always praising me. In this sense, she is more like a guider of my life, rather than an educator.

Ms.Nasrine Seraji, also a great educator, I really appreciate her distinctive way of teaching. I think the dialogue between she and I has gone far more beyond "architecture". She has in spired me a lot, about what architecture is, what the role of architect is, and what I can do as an architect in the future. When all the teachers are teaching students how to design spaces, she, together with Juan, are teaching me how to think about the role of architecture, and how to realize the potential of architecture and being an architect. This has helped me become special when compared with my peers, which also instigates my huge desire of being a meaningful person to the society through being an architect.

I am quite sure that her ambition is also far more beyond "architecture" itself, which is just the tool that she uses. And I appreciate a lot that she has passed on this ambition to me, which I will try to realize in the future.

Mr. WANG Zhendong, my external "supervisor" from Tongji University, has also helped me a lot. It is he who broadened my vision and knowledge on architecture, and encouraged me to come to HKU. Without his help and understanding, I could hardly complete the precious learning experience in Hong Kong. He is really a nice and kind teacher, who will always be the best friend of students. And he is also always the best encourager who will help to rebuild the courage to move forward.

My appreciation also goes to my friends and classmates who have helped and encouraged me a lot during the suffering but meaningful thesis process: Bob Cheng (The University of Hong Kong), CHEN Lingrong (Tongji University), CHEN Xingfeng (University of Pennsylvania), Eric Yuen (The University of Hong Kong), FU Na (Shenzhen Design Center), GONG Yinjia (GSD Harvard University), HU Xiaoshan (China Development Bank), HUANG Weiwen (Shenzhen Design Center), HUANG Xiaofeng (The University of Hong Kong), Kelvin Tang (The University of Hong Kong), Mary Ann (Shenzhen Design Center), SHEN Luni (Tongji University), WANG Pinghua (AFGMAC), WAN Yan (Shenzhen Design Center), XIAO Xiao (Shanghai Renii Hospital), XU Nuo (The University of Hong Kong), XU Jian (Tongji University), YANG Xiaochun (Shenzhen University). Thank you all a lot!

Finally, I dedicate this thesis to my beloved parents who gave me courage and expressed their confidence and proud on me all the time. I cannot express more gratitude for their endless and selfless love.

I feel so blessed to have all the caring and supporting in this period of my life and I would never take these for granted.


## WEN Fan

Knowles building, The University of Hong Kong
June. 2015


## the definition of public space

Public space has always been a hot topic among architecture students. It is, however, being misunderstood or underestimated sometimes. We have to firstly understand what public space is before we discuss and design it. Here, in order to have a meaningful discussion, a brief introduction will be offered as the common ground for the thesis.

It is in the book of Human Condition by Arendt that public space is traced back to the polis in ancient Greece. In that book, according to Arendt, the life of ancient Greeks was divided between two realms that of the public, in which political activity was performed and democracy could be realized, and that of the private, site of property and family life where the father ruled like an absolute monarch[1]. For the private realm, all the activities concerning the subsistence of human lives are operated here, including production, reproduction, economy, etc. While the public sphere, in contrast, starts where necessity ends and this is why the citizens of city-states would try to alleviate themselves from it as much as possible (often using slaves) in order to enter it. Once there, these citizens would debate on issues above and beyond everyday sustenance and bereft of personal or private interests. Topics would include the public affairs which concerned everyone such as education, war and law. Violence is totally excluded from this sphere where glory comes from one's successful persuasion of others with one's own reason and rhetorical power[2].

Therefore, it is Arendt's concept of the public space as a forum for political discussion and action, and particularly, it is a place for the exchange of political ideas and actions, is exactly what is eliminated by Totalitarian regimes. From the perspective of architecture, it is the Agora in Athens that offered the space for the public realm: it was not only a market, but also a place where free debates would happen and public notices would be announced.

Another scholar Habermas also discussed about Public Realm in 1960s. He defines the public sphere as a "society engaged in critical public debate". In his definition, public space is a place where:
a. Public opinions are formed;
b. All citizens have access to;
c. Conference is in unrestricted fashion about matters of general interest, which implies freedom from economic and political control;
d. And people can debate over the general rules governing relations.

In his view, spaces in the history, such as Britain's coffee houses, France's salons and Germany's Tischgesellschaften "may have differed in the size and compositions of their publics, the style of their proceedings, the climate of their debates, and their topical orientations", but "they all organized discussion among people that tended to be ongoing; hence they had a number of institutional criteria in common"[3]. The criteria that he pointed to are "disregard of status, domain of common concern, and inclusivity" [4].

Therefore, even though these scholars mainly discussed about public realm from the perspective of philosophy rather than architecture, it is still important to understand this layer of meaning of public space. Scholars from urban and architecture, such as Nadai, M.Carmona, A.Loukaitou-Sideris, T.Banerje as well as Jane Jacobs, have already developed these theories into the field of urban public space. It is widely accepted that, urban public space is a neutral space where social interaction, information exchange, political participation can happen, and public decisions can be made through these interactions, exchanges or debates. Urban public space is therefore not only an open space, but also a democratic space.


A family built a 10 -story building on their own land, and constantly extended it for a long time: such as the roof garden, the extended room between it and its neighbor, a small temporary restaurant in front of it, as well as some lofts inside it. They extended the building for the sake of money, however, this have unintentionally, created a lot of "open spaces" where social interactions can happen.

Then, the other villagers who owned their buildings started to follow his idea of extension, even though it is not granted by the authority.

## Story 3:

Wang, a shop owner, occupied a small shared open space in front of his shop, as the Dragon Boat Festival is coming. He set up several stands there in order to sell more food. On the other day, Zhang, the neighbor shop owner found this and moved part of Wang's stands, put his own stands there instead, as he also wanted to make more money from the space.

They quarreled with each other for a long time, and finally came to a compromise that they would use the space together for the festival promotion. After the festival, they did not talk with each other for months but became friends again with time going on.

From the three stories above, people can easily find the differences between the urban village and the other parts of Shenzhen, in the sense of public space: equality, autonomy as well as democracy. The village as a whole was not suppressed to fight for their interests, the owners were able to argue for the right of creating spaces, and the shop owners resolved their contradictions with democracy.

When compared to the other parts of Shenzhen, the urban village is usually seen as a space of chaos, illegality, as well as low quality of living, which makes the government and public consider demolish and redevelop it

However, according to Michel Foucault, Heterotopia are places and spaces that function in nonhegemonic conditions. These are spaces of otherness. It is also a physical representation or approximation of a utopia, or a parallel space (such as a prison) that contains undesirable bodies to make a real utopian space possible[5]. Then, is urban village a Heterotopia? As it exists physically in the city, it represents the otherness, and it realizes something that only exists in the utopia of the city, such as democracy. In this sense, urban village is an extraordinary example of urban public space in Shenzhen.

Due to the limited space, some general background information about urban villages in Shenzhen will not be offered here. It will specifically discuss how an urban village in Shenzhen can be seen as an extraordinary urban public space.

Three short stories will be illustrated here

Story 1:
In 1998, the local government started to consider the redevelopment of a village, which is located in the center of city. Different institutions are invited to join the design and planning competition of the redevelopment.

The process of redevelopment was far more complex than the governors had imagined. At least six parties were involved in the process: the local villagers, the villagers who had properties in the village but did not live here any longer, the village joint company, the developer, the district government, the city government. Different party fought for its own interest

After 10 years of negotiation, with 10 different versions of designing and planning, the village was eventually pulled down in 2008. However, this kind of redevelopment will usually just take one or two years to finish in other cities in China.



Gangxia village is located in the center of Shenzhen, within the Central Business District area as planned by the government. It was famous for its high density as well as complexity in the process of redevelopment.

It is the only urban village in the area of Shenzhen CBD, and is separated into two parts by Caitian Road: Gangxia Louyuan to the east, and Gangxia Heyuan to the west. In Gangxia Heyuan, there is a land area of 151600 square meters with a population of nearly 70,000 , which is included in the area of CBD and was the target of the Gangxia redevelopment project.

Redevelopment was initially proposed in 1998 by the municipal government and launched by the Futian Urban Renewal Bureau around 2002. After preparations and negotiations for more than a decade, in April 2009 the final redevelopment agreements were signed and demolition began[6].

During the redevelopment process, six parties were involved in: the local villagers, the villagers who had properties there but no longer lived there (the overseas villagers), the village joint company, the district government, the city government, the developer. Each of these parties had its own interest in the redevelopment project, which made it difficult to negotiate: the city government needed an "international image" of city, the district government demanded a higher tax revenue from the project, the overseas villagers asked for a higher compensation, the local villagers wanted a higher compensation and a rapid redevelopment progress, while the developer, undoubtedly required a higher profit.

However, the 70,000 residents who lived there were excluded from the whole negotiation and redevelopment process.

International competition and consultation were held, to offer designs and plans for the redevelopment. The first one was initiated in the year of 1998, when a German company proposed a master plan for the whole CBD area. Following that, Song Zhaoqing, CAUPD, KPF as well as other institutes or companies joined the consultation and raised up different versions of plan. With time going on, the proposed F.A.R climbed from 3.5 to around 7 , in order to create more sellable area to cover the compensation for the villagers.

Therefore, taking the complexity of the redevelopment into consideration, it's obvious that it is not easy for anyone to propose a new design/plan as a replacement. Modification on the current proposal becomes the only option to alleviate the problems.
the complexity

the 10-years demolition

2008.0



Gangxia Village map | before demolition


Gangxia Village map |after redevelopment



public life around a table © WEN Fan




Huge transformation happened between the two situations, before demolishment and after redevelopment, on the city scale. Before demolishment, 68,000 people used to live here, while there will be only 4,000 people after redevelopment; the population density also drops down from 290,000 pp. /sqkm, to $17,000 \mathrm{pp} . / \mathrm{sqkm}$; the GFA doubles from 500,000 to 1 million[7].

Interestingly, it is clearly stated in the redevelopment plan that, there will be $23,000 \mathrm{sqm}$ of public space in the future[8]. This kind of figure concerning public space appears in every project. However when people tried to define how much public space were there in the previous Gangxia village, it seemed every space could be public at certain moments: people watched TV in the lobby of a private clinic, sat in front of restaurants, and circled around a tricycle on the road, playing cards. Then it is questioned that, could public space be calculated by numbers? Could we really find the boundary between public and private? Is there any permanent public space?

Apparently, public space is not a kind of space, but a condition of space. Under certain conditions, every space can be a public space if it is physically and socially accessible to all citizens. A toilet can be a public space if people gathered there for smoking, a classroom can be a public space when it is open to the citizens and they come for a party, and a left-over space under an escalator can be a public space when people gather around and play cards there. Therefore, it is impossible to find a number to figure out how much public space were there

Hence, public space cannot be calculated by numbers. The seeming increase in area of public space in the redevelopment proposal, does not necessarily mean more public spaces.

Moreover, accessibility shall be the only criteria of public space. Whenever a space is accessible, not only physically accessible, but also socially accessible (no group of citizens is excluded), it has the opportunity to become a public space


Here, scale will be used as a methodology to examine how this huge change has impacted urban public space. Particularly, Nolli map as well as sectional Nolli map will be applied as the main analytical drawing methodology.


On the $1 / 1000$ scale, the continuous public ground is divided into pieces by the new road system, which makes it difficult for people to get, use, and explore public spaces.



modification:
On the $1 / 1000$ scale, the discontinuous ground will be re-connected on different levels. Residential houses will be built as connections between podiums, over roads, or on the empty "public spaces". This will make it easy for people to explore the entire multi-public ground and form a connected community.


1:1000

On the $1 / 500$ scale, the intimate interfaces between private and public have disappeared a lot, which on one hand, means less interface to go through from private to public, and on the other hand, means a longer distance to walk from private to public.

Before the demolishment, people can access public space easily, within 5 or 20 meters. However, these opportunities have been eliminated after the redevelopment. This would undoubtedly encourage people to stay in private spaces rather than to participate in public spaces, which will form isolated communities

distant interface
| after redevelopment


 |  | $1: 500$ |
| ---: | :--- |
| fhis image is scated down for printing |  |
| $0 \mathrm{~m} \sqrt{10 \mathrm{~m}}$ | 25 m |




On the $1 / 500$ scale, the distant interface will be intensified. By splitting the current proposed podiums and towers into small "pieces", and inserting small "towers", more intimate interfaces will be created, which will encourage people walk out of their houses and participate in the public spaces.


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modification model
1:500

On the $1 / 100$ scale, the dynamic boundary between public and private has been replaced by a solid, fixed façade, which means less chance to extend public spaces.

Before the demolishment, the boundary between public and private is quite dynamic and blurred A space can be private at most of the time, but can turn out to be a public space under certain conditions. People also extended their private space into the public sometimes. This offered a great deal of possibilities of creating different public spaces in different time.

However, after the redevelopment, this boundary has been replaced by a solid, fixed glass façade where people cannot have activities along the boundary. This will unavoidably aggravate the separation between private and public.


< On the $1 / 100$ scale, the solid fixed boundary will be thickened by changing the facade into spaces. Small shops will be attached to the current façade, transforming the single façade into a façade with spaces, where public activities could happen.

modification model
1:100

The last but not least, on the $1 / 50$ scale, a lot of spontaneous spaces have been merged, such as the space between buildings, the space under stairs, as well as the space at the corners. This means not only spaces of this scale, but also activities attached to these spaces become missing in the new development

A lot of small business attached to these spaces. Most of the spaces in this scale were not designed by architects, but created with the wisdom of people. On one hand, people made use of these leftover spaces, and therefore increase the efficiency of land use and space; on the other hand people created and used these spaces themselves, which offered a lot of opportunities to those migrants for their living and working.

While after the redevelopment, these spaces have been merged. Only big shops are offered, which suggestively created opportunities for big companies but removed that for small individuals
spontaneous insertion | before demolishment


NO
insertion
Jafter redevelopment



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< On the $1 / 50$ scale, new insertions will be designed. Spaces under escalators, between double facades, or between columns will be carefully designed as convenient shops, barber shops, small workshops, temporary housing, or small hotels. With this implemented, other possible insertions will also be created in the long run. This will instigate the regime of autonomous creation/occupation, which will eventually create public spaces.

modification model
1:50

Therefore, from the comparisons above, it is obvious that, the spatial structure has been drastically changed during the redevelopment. More importantly, the social features attached to different scales have been changed or eliminated. This kind of change and elimination would undoubtedly have impacts on social and economic aspects, such as social and economic inequality, as well as a delay for a new model of economy, which will be discussed below.

So, the scale of public space not only relates to our perception of the urban environment, but also relates to a lot of important issues: who can occupy the space, what you can do in the space, and eventually, the democracy of space, which is the nature of public space.

With the proposed modification, the public spaces can hopefully be enhanced on different levels of scale. More importantly, it is not designing "public spaces" to create public spaces, but designing surrounding private spaces to help generate public spaces.




Besides the four physical scales，there is a new scale that appeared in the current city．That is the mobile device scale．On this scale，an App named Spacehunter has been developed to help better the＂supermicro city＂．

Nowadays，Internet has changed our life drastically．Thousands of APPs are appearing everyday which help break the information asymmetry，connecting whatever kind of resources．Several famous APPs will be examined here．

The first one is Uber，which helps to connect individual taxi／private drivers with passengers．Its imitator Didi Taxi is quite successful in China，which has even pushed forward the revolution of government regulations on taxis．The second one is Airbnb，which helps visitors find a bed／sofa／ ho iday village when they are travelling．This will help to alleviate the shortage of hotels，save money and offer personalized travelling experience．Also，it will encourage social interactions between the visitors and local families．

Apparently，all of Taobao，Google，and Tencent are doing the same thing that connecting everyone， and connecting every piece of information and resource．

All of these APPs demonstrate the fact that，people are never lack of resources，but do not know how to use them．So，these APPs have expectedly created a new model of economy from the perspective of economics．However，they will also help create a new model of city，from the perspective of space， architecture and urban．


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$\triangle \operatorname{cosig}_{8}$
4. guide you to the space


The Spacehunter is developed to help people share and find these underused spaces. The underused spaces are constituted by two parts:

The first part is those underused private spaces, such as kitchens that would be used only once a week, toilets that would be used just twice a day;

The second part is those leftover spaces, such as spaces under staircases, spaces between columns, spaces on the podiums

With the help from Spacehunter, people can:

1. Buy a single small bedroom in the city center as home for new-comers, while use Spacehunter to book a shared kitchen or toilet nearby whenever they need;
2. Find a small workshop between the columns to start their business or as their temporary office when they are traveling;
3. Find a small space with a bed between the double façade for 1 H , to take a rest after lunch;
4. Book a shared garden to have a gathering with friends, who live on the other side of the city,
5. Make a business by renting out their spaces, etc.

This APP is now available on Apple Store, Google Play as well as other app market. People can easily download and install it by scanning the QR code. Several kinds of spaces are offered for experiment: toilet, kitchen as well as parking lot. Basic data for public toilets and parking lots in Hong Kong and most big cities in China has been imported for use. People could easily find and book a toilet/kitchen/ parking lot nearby, and after booking, the APP will automatically generate a QR code as the key for space if it is not open to all, such as a private kitchen in a tower, and people can scan the code at the entrance of gates to access the space.

Besides, people are also free to share their private spaces or spaces they found underused on the APP by simply clicking the "+" icon and write down some basic information.

Particularly, people can make a business on this APP that they can make profit from renting out their spaces. Prices can be set when spaces are being shared, and popular payments like Visa, Mastercard, as well as Union Pay are supported already. Underused spaces rather than rooms, houses, flats or towers can be the resource for a new business.

This new model of supermicro city, would not only generate a new model of economy, and elevate the efficiency of resources, but also create numerous public spaces. A private kitchen can be a party space at certain moments, a private toilet can be a smoking room at certain moments, and an underused space between columns can also be a temporary workshop at certain moments. This kind of changes will definitely change the condition of public space that:

1. Public space will be dynamic rather than fixed both in number (area) and location, and the boundary between public space and private space will be blurred (public space will appear and disappear, and private space and public space will be interconverted all the time);
2. The distance from private to public will be shortened (your balcony may be a convenient store or a space for Mahjong);
3. Public space is no longer under strict control by the authorities (you can discuss about Kim Jongun in a shared kitchen, and it turns back to a private space after you leave).

This thesis start with the experiment of using scale as the methodology to examine the impacts on public space brought by urban development．And it ends up with a new speculation of future city based on the scale analysis and design．

Few people have realized the meaning of scale that，it not only relates to our perception of the urban environment，or the urban image，but also relates to inequality／equality from social perspectives，and relates to different economic model from the perspective of economy．People have to realize that， we do not need those huge planned，centralized＂public spaces＂which are easy to control／manage by the owners，where people do not have equal accessibility either physically or socially，and where small business cannot operate，not to mention the right for political participation or democracy．

When the city becomes bigger，however，the enlargement of scale of architecture and urban has eliminated，rather than instigated the regime of complexity，as Koolhaas has expected in his Bigness． Then，shall we learn from the urban village，as a Heterotopia in the city，to see how we can better the conditions of social equality and find a new way for future city development？

Therefore，the analysis have illustrated that，urban scale is closely related to social equality， new economic model（as well as economic equality），and the democracy of public space．The speculation of future city based on the scale analysis is that，when we create and use space in a smaller scale，there will be a more intimate，more equal，and more democratic society with a new type of economy，where individuals rather than governments become the main suppliers of public spaces，individuals／small groups rather than citizens as a whole become the main participants in public spaces，and individuals rather than big companies become the main participants of the market economy．

From the perspective of architecture，this will undoubtedly show the huge potential of architecture and urban，on how it can interact with the society and economy，how the physical scale can impact the social relationship and economic development．

## Bibliography

［1］＂The Human Condition（book）．＂Wikipedia．May 18，2015．Accessed June 12，2015．http：／／ en．wikipedia．org／wiki／The＿Human＿Condition＿（book）．
［2］lbid．
［3］＂Public Sphere．＂Wikipedia．May 19，2015．Accessed June 12，2015．http：／／en．wikipedia．org／wiki／ Public＿sphere．

## ［4］lbid．

［5］＂Heterotopia（space）．＂Wikipedia．June 9，2015．Accessed June 12，2015．http：／／en．wikipedia．org／ wiki／Heterotopia＿（space）
［6］Li，Xin．＂Partnership in the Redevelopment of Urban Villages in China．＂2010，152．Accessed June 12 2015．http：／／hub．hku．hk／bitstream／10722／174356／1／FullText．pdf．
［7］lbid．，p． 155
［8］＂关于公开展示福田区岗厦河园片区改造专项规划调整事项的通告．＂深圳规划和国土资源委员会第一直属管理局 ．January 30，2013．Accessed June 12，2015．http：／／www．szfdc．gov．cn／fj／zsy／ tzgg／201209／t20120905＿76310．html．

## Reference

Arendt，Hannah．The Human Condition．Chicago，Illinois：University of Chicago Press， 1958.
Aureli，Pier Vittorio．The Project of Autonomy Politics and Architecture within and against Capitalism． New York：Temple Hoyne Buell Center for the Study of American Architecture ：， 2008.

Aureli，Pier Vittorio．The Possibility of an Absolute Architecture．Cambridge，Mass．：MIT Press， 2011. Chung，Chuihua Judy．Great Leap Forward．Köln：Taschen， 2001.

Habermas，Ju．The Structural Transformation of the Public Sphere：An Inquiry into a Category of Bourgeois Society．Cambridge，Mass．，Massachusetts：MIT Press， 1989.

Huizinga，Johan．Homo Ludens．Madrid：Alianza Editorial， 1972
Ishigami，Junya．Junya Ishigami：Another Scale of Architecture．Kyoto：Seigensha Art Publishing， 2010.
Koolhaas，Rem．Delirious New York：A Retroactive Manifesto for Manhattan．New ed．New York，New York：Monacelli Press， 1994

Sennett，Richard．The Fall of Public Man．New York，New York：Knopf， 1977.
Tamayo，Alfredo．Informal City：Caracas Case．Munich：Prestel， 2005.

Ungers，O．M．The City in the City：Berlin ：A Green Archipelago．Zürich：Lars Müller Publishers， 2013.
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