

建築多樣性  
Diversity of Architecture

交通大學建築研究所  
碩士論文

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ABSTRACT

## 大綱

建築多樣性是論述證明培養建築設計能力養成的三大過程。學會蓋房子的能力，從無到有，期間必須學習很多。首先，學習者必須藉由大量繪製概念圖甚至進工程圖、訓練圖說能力。再來，學習者必須實際學習瞭解一件案子、一棟建築，從平地蓋起、終至完成的的所有施工過程。最後，學習者必須在既定的施工程序之下，創新設計出具可蓋性的建築，期間必須來回審視圖說，確實能落實到施工的精準，是從經驗之中獲取驗證的學習總過程。此過程主要分為三項：練習式(Practice)、案件式(Project)，和實務式(Practical)。

Abstract

Diversity of Architecture is talking about the three main processes training the ability of design architecture, from zero to workable. People who want to build a building needs learn a lot. First, he/she need to know how to draw from concept diagram to practical engineering drawing. Second, he/she should know what happened that a building from ground to completed the process of a project. Finally, he/she cannot only learn how to draw on the table but also do the practical work. That's the totally items one should learn if he/she want to know what exactly happened during learning architecture design. The whole process includes trial and error, test and evidence, which combined with the three main steps. They are Practice, Project, and practicality.

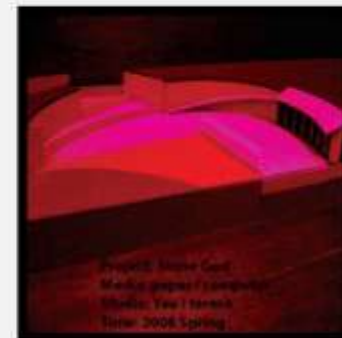
Practice<sup>5</sup>

- Paint / Ocean Park<sup>7</sup>
- Sculpture / Light<sup>9</sup>
- Music / Hall for kids<sup>11</sup>
- Dance / Tango<sup>15</sup>
- Movie / Exchange<sup>17</sup>
- Literature / Gallery<sup>19</sup>



Project<sup>21</sup>

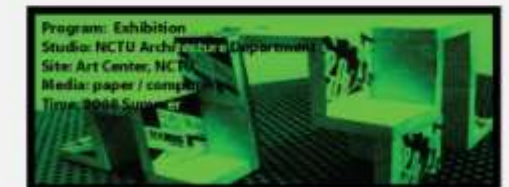
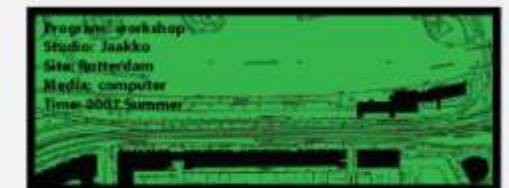
- House<sup>23</sup>
- complex riverbank<sup>25</sup>
- New style motel<sup>31</sup>
- Religious public space<sup>37</sup>



Practical<sup>43</sup>

- workshop<sup>45</sup>
- exhibition<sup>47</sup>
- internship & journey<sup>51</sup>
- factory<sup>55</sup>

結語<sup>60</sup>



## 建築設計的學成

建築在藝術性和實用性的雙軌完成過程，設計者需要不斷的自我訓練達到理性與感性的平衡點。其出發點可能是純粹藝術性的「藝術家的紀念空間」，也可能是非常實用性的「必要的車站空間」。

至於概念發想之初，則可能與各大藝術領域都有關連。藝術是人憑藉各種媒材工具、對於一切感知的抽象轉譯，為的是要讓另一個人也能夠有同感、也感受到美。而建築設計的初衷上，雖是為了蓋個遮風避雨的空間，設計的構思卻常常是根據八大藝術的原始概念而來，不論是在實際案例上不勝枚舉，在建築設計的訓練上亦是常常發生。

是因為抽象與具象設計的來回轉換，使設計不至失了活性。也是因為藝術的目的在於歌頌遙逝身而為人會有的人生經驗的精華總和，所以建築，總是能夠從各種藝術作品之中，找到靈感，發現人體行止坐臥的本質，創造新的空間需求（需求或許早就在了，但既有空間可能尚未提供最適形式）。

於是設計者在踏上建築人之路之初，花多一點心思去研究八大藝術作品包含繪畫、雕塑、音樂、文學、舞蹈、戲劇和電影，不但不算找錯教材，且可說是學習建築非常好的選擇。而此篇章，將討論的便是建築的藝術性，與八大藝術與建築的關係，亦有吾從八大藝術汲取建築基本設計靈感到後來成就的建築設計（包含過程），並看知名建築大師如何利用八大藝術來當作建築設計創作的引證案例。

### Training ability in architecture design

Where is the concept of architecture design come from?  
The relationship between architecture and arts is inseparable. Usually you can find a lot of concepts to design architecture from different kinds of arts, because they are beautiful and meaningful that people can get inspiration easily from them. Most important of all, architecture is necessary in human's life, if there are aesthetic elements in architecture, and then it will enhance the quality of life.

# PRACTICE



Project: Ocean Park (Painting)  
Data: Richard Diebenkorn  
Studio: Ian  
Media: paper / computer  
Time: 2005 Fall



Project: Light (sculpture)  
Media: cement / gypsum  
Studio: Nancy  
Time: 2005 Fall



Project: Music Hall (Music)  
Studio: Nancy  
Site: NCTU HS.1 Building  
Media: paper / computer  
Time: 2006 Spring



Project: Gallery (literature)  
Studio: Nancy  
Data: Robert Smithson  
Site: University Road, Hsinchu  
Media: paper / computer  
Time: 2006 Spring



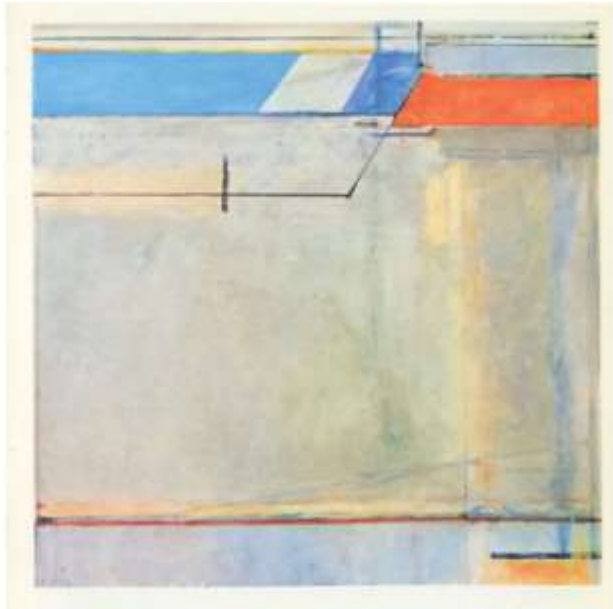
Project: Tango (Dancing)  
Media: paper / computer  
Studio: Ian / Eager  
Time: 2005 Fall



Project: Tango (Movie)  
Media: paper / computer  
Studio: Ian / Eager  
Time: 2005 Fall



Project: Space of exchange  
Media: wood / computer  
Studio: Eager / Ian  
Time: 2006 winter



Richard Diebenkorn / Ocean Park

在一張50X50cm 的奶瓶紙上，  
以切割方式進行Ocean Park的模型衍生創作。  
(2D > 2.5D)  
以不能切掉模型版的任何部位為原則。

# FROM PAINTING

西元前八大藝術的區分

音樂、雕塑、建築、音樂、文學、舞蹈、戲劇、電影。此為八大藝術的區分，名為藝術的此八個學門之中，建築是在第三區，其藝術性不容被質疑。而繪畫、雕塑、版畫，被歸類為純藝術(Fine Art)，因它們在非常早的時候就被歸類為藝術之類。並且，中世紀時，人們將此三項視為基督教的神聖媒介途徑。

其中，八大藝術之間的創作靈感是可以互相引發的，但建築本身，還容納了其他藝術的發生。藝術家要在有著最廣闊的地方創作，其實其作品也必須被安置在最安全的地方，維持其永久性。

繪畫之於建築

在建築設計訓練過程中，轉譯平面繪畫使之成為三度空間模型，最為基本。除了觀察創作本身，亦要研究個案個性本質以及其創作動機，才能準確達到轉化與重新詮釋的目的。又藝術與時期，繪畫本身開始存在有空間的意圖，在平面材料上面企圖表現立體，而建築空間也常常出現平面式的簡約設計，表示繪畫與建築的互相轉化詮釋早已行之有年，用以將之作為建築設計的第一場練習由來真是最佳選擇。

此次過程包含直覺轉譯、快速設計、邏輯演化和分析等，重新詮釋創作本身，創作上的態度、彩度、密度，全數變為純白模型紙在空間中飄蕩。

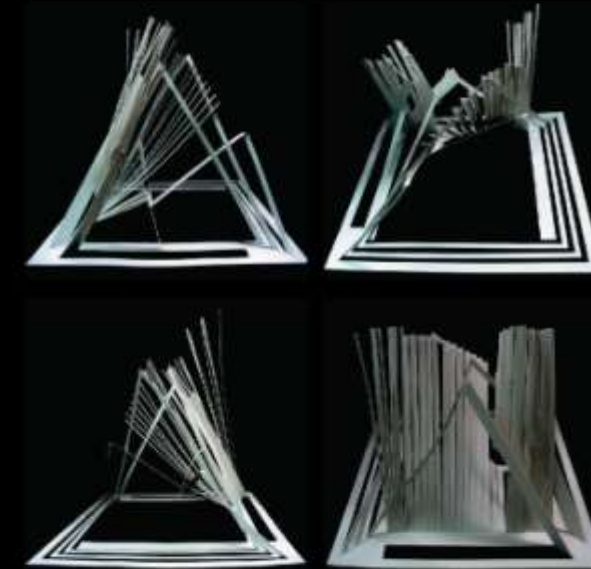


點、線、面、色、相



凹、凸

分色、將每定調主色區域所對應的光譜長短以刀數作為分割識別，以此產生模型。



## Create space from Painting

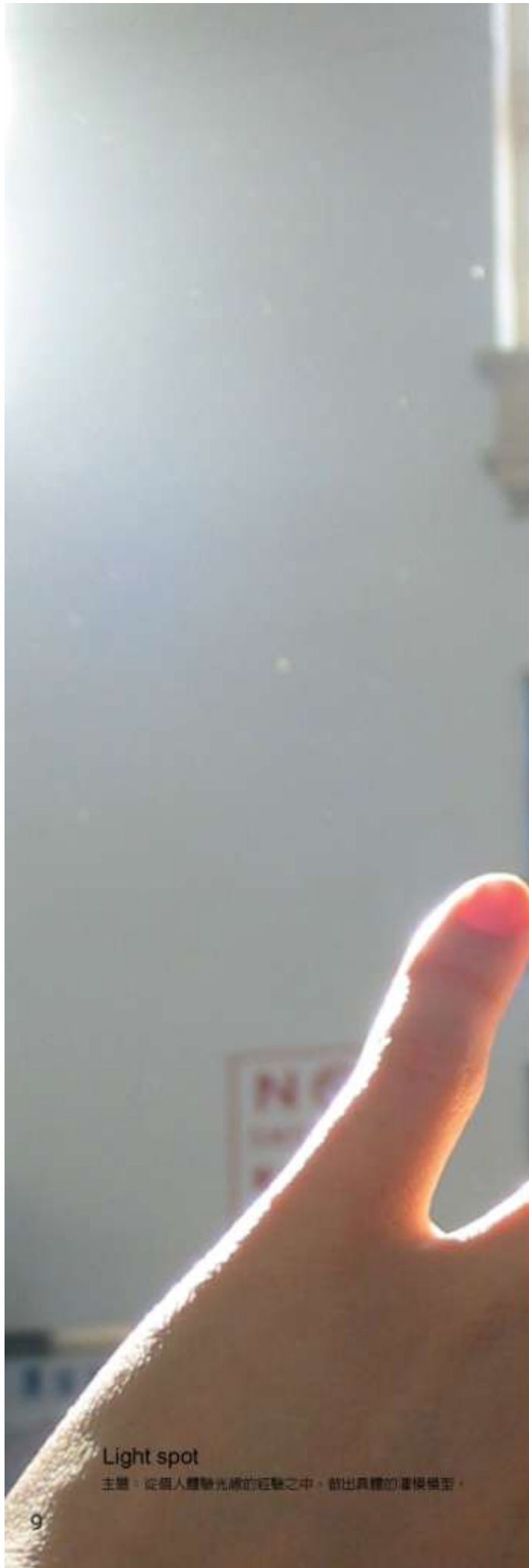
Since architecture design could be inspired from any kind of ART, the first try was created space model from famous painting, Ocean Park series, by Richard Diebenkorn. Ocean Park is a series of abstract painting without any concrete image inside but only colors and lines on them. It will help because students need abstract practice at first. It's a one month work, students all came from different department without architecture background. Basically, allowed to cut on a piece of 50cmX50cm model paper, but cannot cut off any piece of paper. It will be better doing some research of the painter, Richard Diebenkorn. Knowing the intention of why the painter painted will help people recreate a 2.5D space model from Ocean Park, 2D painting. The basic elements of painting include point, line plane and color, designer can redesign by them.



Project: Ocean Park (Painting)  
Data: Richard Diebenkorn  
Studio: Ian  
Media: paper / computer  
Time: 2005 Fall

「第一個作品，通常會表現出你是怎樣的人。」





Light spot

主題：從個人體驗光線的經驗之中，做出具體的模型模型。

# FROM SCULPTURE



Project: Light sculpture  
Media: cement / gypsum  
Studio: Nancy  
Time: 2005 Fall

## 光線經驗

雕塑和建築，同為人類體驗空間、另再創造的空間。虛實之間，往往蘊有更多空間用的可能。而光線，往往就是檢驗空間是否存在有美感的直接經驗，只要光線進來，能讓人感覺到精彩和滿足，便是事半功倍。

「光的空間」，我第一個念頭：電影院裡面的放映機在後方，打出影片的光線呈現在布幕上面，每當有人運到，或是起身，螢幕上面就會出現人影，並且有趣的，光線之中，可以明顯的看到空氣中的塵粒，清清楚楚的，被光線照耀而現形。這個光線經驗，大家都有過。越不複雜的光線好上手操作。而在大白天時，也是有那樣的情況存在的。新竹火車站早上八點鐘，車站的窗口就像放映機一樣，把空氣中的光塵明明白白的照射現形。是用相機拍得出來的程度。

### 光點 VS. 光源 -

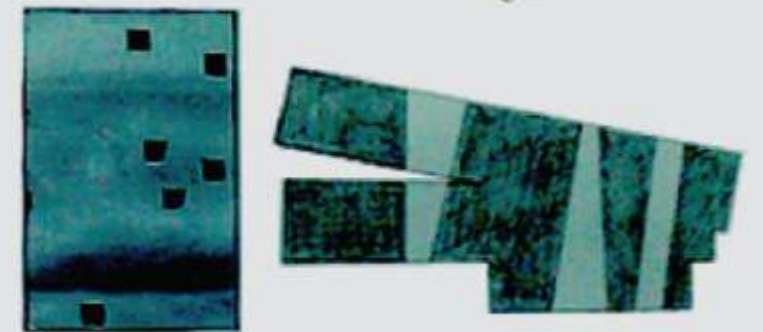
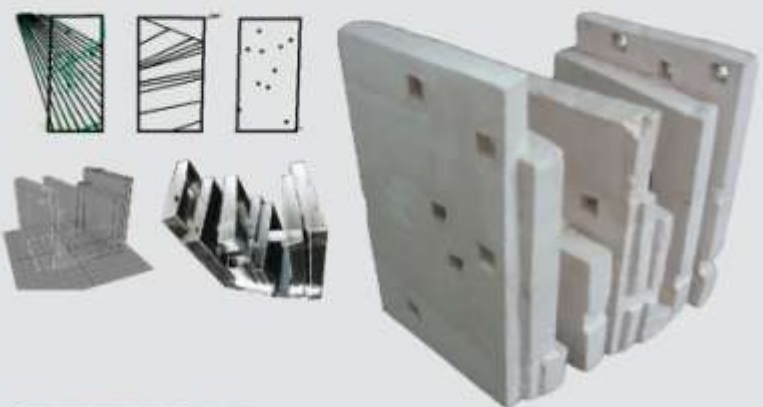
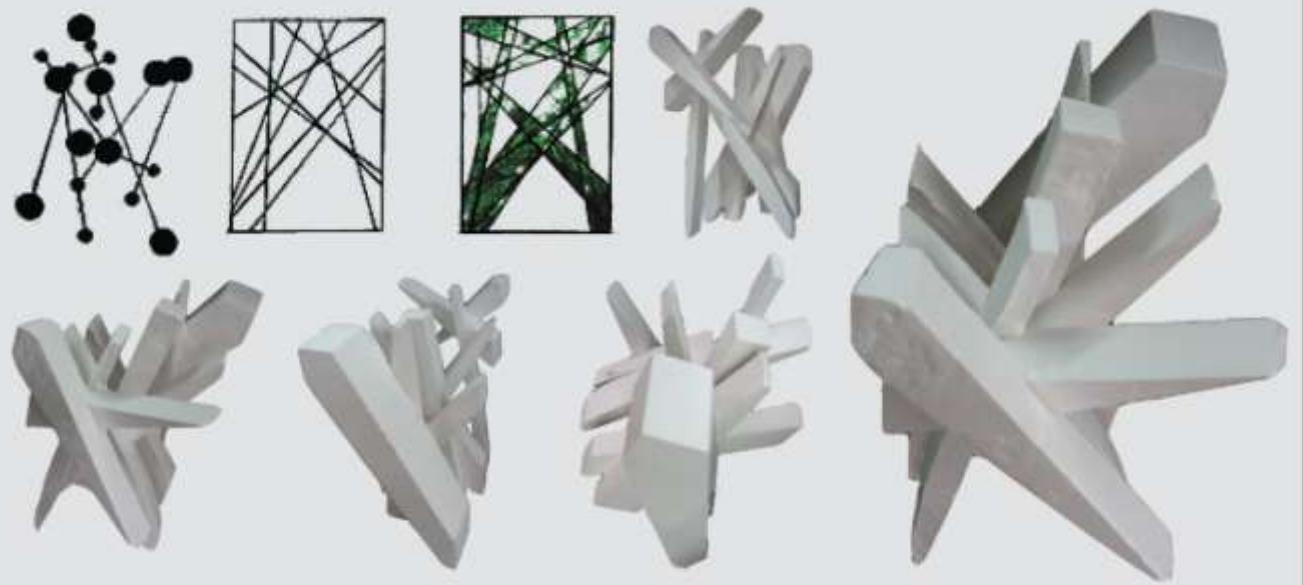
光點得以呈現在照片上，是因為空氣中的微塵呈不規則狀，其受光面與光源、觀者之間，有著鏡面法線的對稱關係。意思就是在那一瞬間，塵埃變成了觀者和光源之間的鏡射介質（鏡子），而下一瞬間便不是了。我取每一張照片的最亮的亮點，在光源與觀者間連成一條線。按照直截的對應關係，完成第一個邏輯模型，十條互相交錯的法線和十種對應角度，講述的是光線雖著安安靜靜，花花世界的千萬分子們卻在底下躍動著。

### 法線關係 -

光線是像瓶子一樣灑落在空間和平面上面的。假設窗外的太陽被當作點光源射進來（雖然陽光平行光源，但就小範圍空間來講它是可以被當成點光源的。）都把塵埃們照鏡反射到我這個視角平面，所以當然對應於每個光點的法線們是不平行的。不同的光線角度，把不同位置上的塵埃照射在我這個視角平面上面可以接收的範圍，所以法線是關鍵。第二個模型是把它們排成一排，然後用光點的相對位置去穿棧。棧板做很久，我排20個小時在製作模型的樣子，做出來看起來還會卡癢。但貼好膠帶再塗凡士林。就順利的拆模，但是就是有一根沒塗到凡士林，那一根，就卡癢了。「不要違背材料的本性。」但是其實它是很堅固的。只是前置工作不夠完全。至於為何要把十張照片排成一排，因為我認為時間元素可以反述光線的瞬間永恒。

### 模型VS主題

「要不要從你所做出來的模型裡面找出有趣的點？」意思是，既然你已經花了那麼多時間跟感情去做出你覺得跟主題有關的分析，又剛好做出來的模型裡面有有趣的成分，那，從這些有趣的點（無心創造出來的形式暗示）去重新詮釋主題模型，可能是可行的。這樣的確是簡化了許多。「個人直覺的詮釋」，表示你的感覺跑在你的想法前面，先放手去抓住直覺操作，後來你會發現有道理並且有趣的想法，在終點跟你說哈囉。



## Create sculpture from light spread in space

Sculpture could be the inverse of space, so making a concrete sculpture can make people know better of so-called space. The first step of learning create architecture is learning create concrete object and abstract space, then making sculpture can help. Light play the most important roll especially when designer intends to represent the feeling of space, so it's the theme. Picking an experience feeling light happens in your life, and tries to make it concrete, to be a sculpture object. Light-Spot is my subject that when a grain floats in the space lighten by light, it means a kind of relationship happened between light and object and observer. Moreover, creator and observer play different roles appreciate the light; it's another relationship about verse and inverse.





### Music Hall for kids

主題：由自選古典音樂作為氣氛基調，設計出假日兒童音樂學院的最適用空間。此選用樂章為巴哈小步舞曲。

# FROM MUSIC

具現化音樂  
「音樂是流動的建築、建築是凝固的音樂」。它最常被解讀的意思是，因為它們共同擁有著迷人的秩序，沁入人的肢體百骸、引發人的各種知覺感受，眼耳鼻舌身意互相作用，但難以一一將之充分解釋或具現轉化。

基地是校內音樂系館，在裡面設計一個週末假日供給小朋友學習音樂的音樂教室空間。既然是設計音樂空間，其基調是必須選出一份樂譜當作設計起點。

取譜限制是古典音樂，我選的是巴哈的小步舞曲。先用耳朵聽音樂，主觀輕快活潑，結構簡單，很適合代表小朋友學習音樂應該要有的心情。再用眼睛去看樂譜分析：整個樂譜共一頁，很適合拿來作整體全部的分析。

小步舞曲這一體裁在十八世紀歐洲的宮廷音樂中十分盛行，因此許多巴洛克時代的作曲家都創作過大量的小步舞曲。

#### f(2)

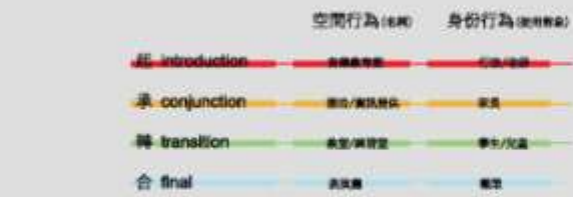
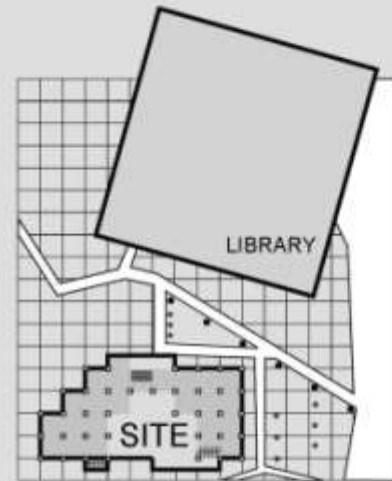
f(1)：將樂譜的「音階高低」、「節拍長度」整合、圖像化，變成一般人的視覺就可以閱讀的「兩個數值相乘的矩形」。得到一串高低起伏不平等的矩形隊伍。上面是右手，下面是左手。

f(2)：為了要找出裡面的規則性，我再將音符分成五大類，用白、25%灰、50%灰、75%灰、黑，的五種色階填到f(1)裡面，填充圖列。

這時就能清楚的讀到樂譜章節之間的個性，完全依照這一張圖，觀看它的「顏色律動」、「高低起伏」，再加上「左右手關係」，去作畫線分段的動作。分段之後，去作個性分析：各段落個性：

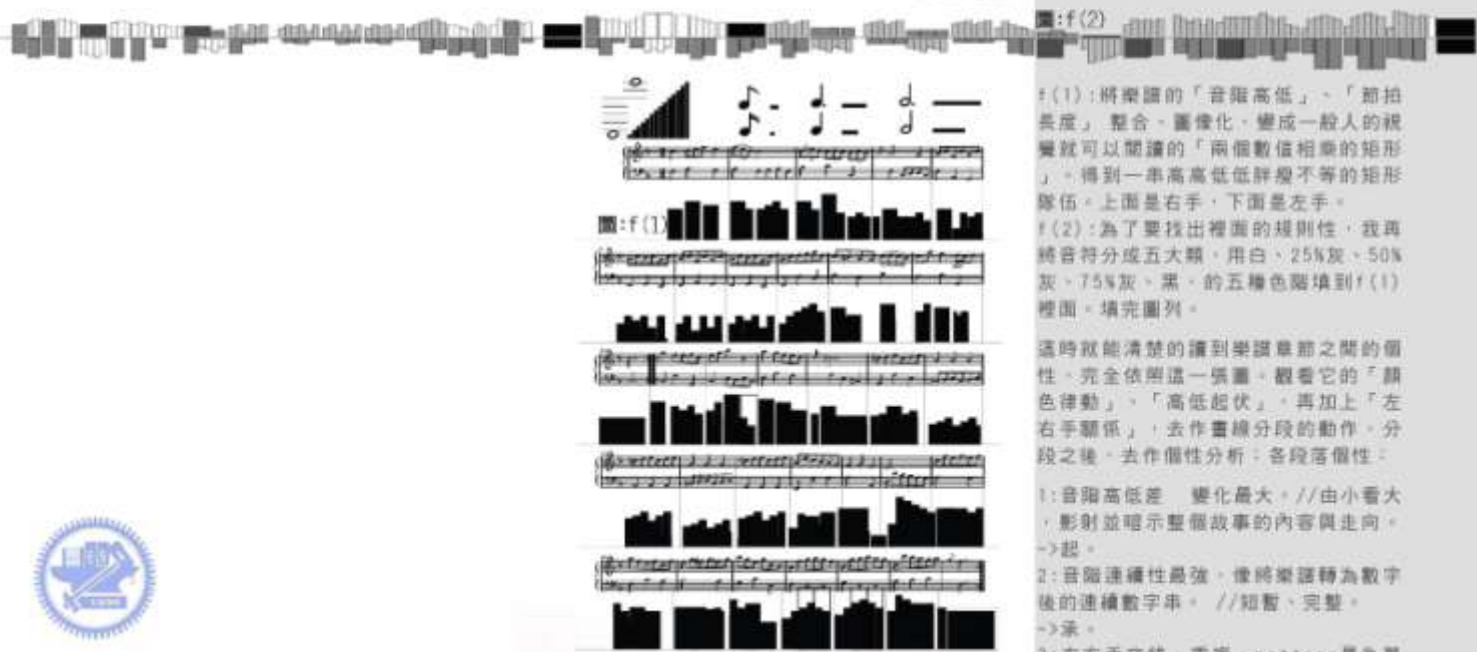
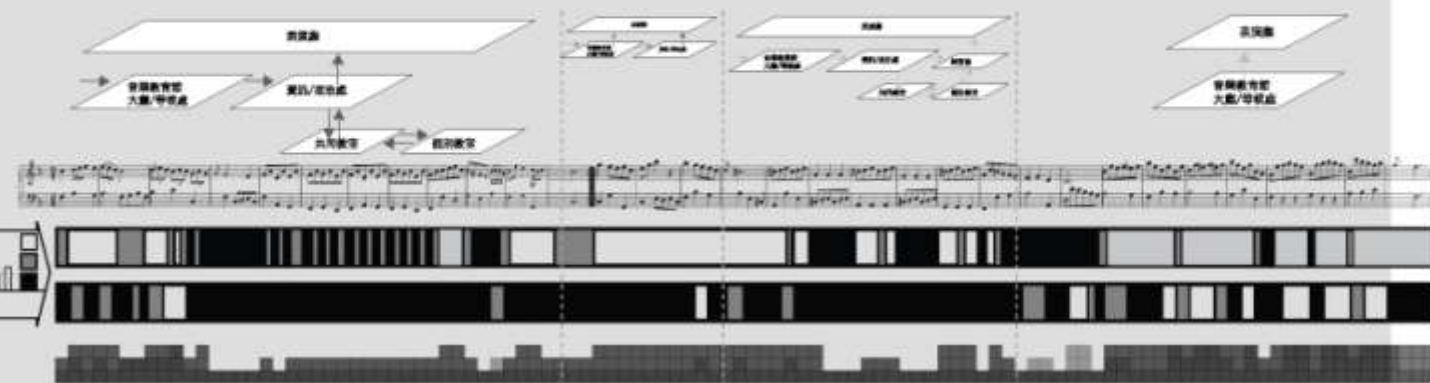
- 1:音階高低差 變化最大。//由小看大，影射並暗示整個故事的內容與走向。->起。
- 2:音階連續性最強，像將樂譜轉為數字後的連續數字串。//短暫、完整。->承。
- 3:左右手交錯，重複，pattern最為單純。//交錯、對稱、變調、整。->轉。
- 4:單看左右手，不論是色調或是評度，各自都非常單純劃一；細看的話，各自之間都不規律、不完整。//尾結有力。->合。

這樣所做出來的分段，去對照樂譜，發現跟這首曲子的分段是符合的。這些個性描述以「起、承、轉、合」命名簡述。幾命名之後，那些形式呈現的個性，都是接下來做設計還要依從的元素。形式本身蘊含著大量語彙，或許會各花入各眼，家家解讀不同。這也就是為甚麼形式本身必須存儲大量美感的原因，剩下的，就讓各自去解讀。



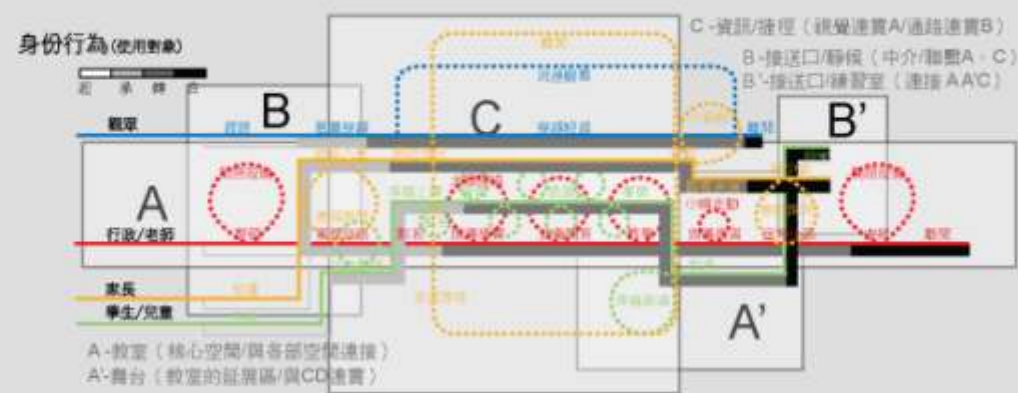
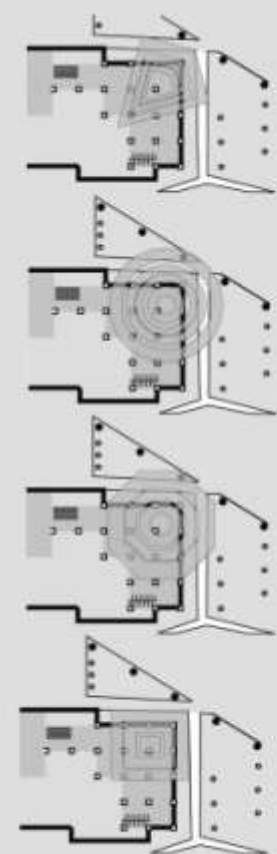
### transforming process

The music itself will give you an atmosphere, which is the main topic that space design should hold. And, music score itself exist lots of clue can used to different spaces for different roles need. These diagrams describe the process how a music score transform to pics, and pics can represent much usage for space. And, even the passage is included, too.



### 音樂融入建築，行之有年。

柯布 (Le Corbusier) 所設計的拉杜瑞特修道院 (Le Couvent de La Tourette) 其中非常廣為人知的是，柯布將音樂樂譜中抑揚頓挫的音符，轉化為高低錯落的垂直遮陽板，從內外窗框皆可輕易解讀此面音樂牆，鋼筋混泥土框與不同高度的透明玻璃所夾合形成的視線可閱讀之牆。窗框有寬有窄，分別代表音階高低，呈現出音樂的律動。



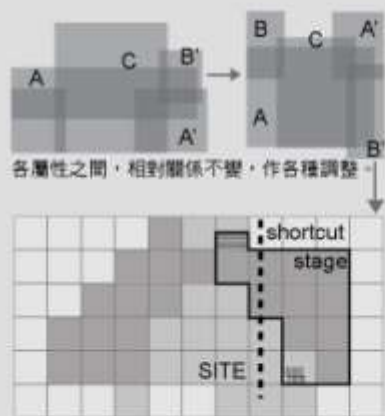
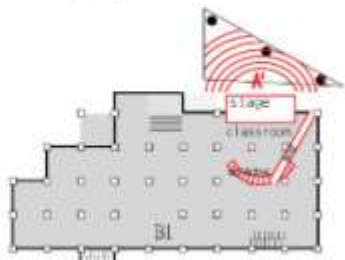
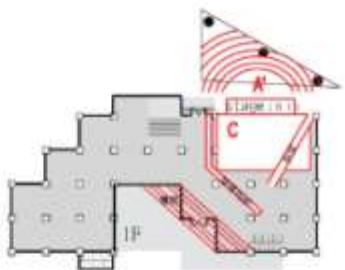
### Create space from Music

When music plays, people can feel the meter and special order with time goes by. When you enter an artificial space, that's the same feeling designer want to give you. The most difficult part transform musical sound to not only visual space but also feeling feel is you have no base to do. Because sounds cannot be touched nor be saw. Usually, designer will take the music score to make some drawing and then finding clue to go on. My first try was making lots of rectangles by music score, Menuet, J. S. Bach. Rectangles were come from the long of every musical note maintain, and the key of them played. Since transform musical score to visual diagram, it's easier to think more about what music should be looked like. However, the thing is, designer need to notice the feeling between music and space will give observer should be the same. I mean, how to let observer feel space designed exactly from music is the most important thing.

FROM MUSIC



SITE



apply diagram to real

Here are four elements for the analysis result: introduction, conjunction, transition and finale. Each word represent one story should be, and all from the music score. So we can not only map the rhythm to building form but also the atmosphere exactly from music score to real space. The characteristics from children, teacher, parents and audience will have place to stay as well.

根據所得， $f(1)+f(2)=f(3)$  又， $f(3)=起+承+轉+合$

起 introduction 序曲

承 conjunction 【文】連接詞、結合;【語】連接【C】[1]

轉 transition 【音】臨時轉調、轉調或滑音

合 finale 終曲;末樂章/終場;結尾 summing-up

起承轉合在音樂上面就是前奏、副歌、結曲、樂器產生音樂然後與空間融合在一起;這樣的個性對應到建築設計上面,就是使用者使用空間,互相配合、融合。這樣的起承轉合可以對應到空間行為、使用者身份行為上面,因為每個空間都有它的用途;每種身份使用空間的目的跟方法也都有所不同,我針對使用者的各種身份,去作每個禮拜,在Music Hall所會有的行為,去列出所有在空間使用上的線性對應。

時間線的重疊處,表示有互動的部分,虛線圈出各種大小尺度的人體行為;這樣的對應圖說明的是誰需要用到哪些空間,使用空間的尺度又有多大,從這裡就可以圈畫出,至少一共需要有多少種類的空間以供週末Music Hall所用。而這些圈出來的空間也直接由使用者的行為需求, mapping到空間行為名稱上面。

特別是,這些空間彼此之間有overlap的情況發生,表示各空間除了主要使用之外,還要和另一個有交集關係的空間有所關聯、連接。除此之外,框框的面積大小也反映出空間的尺度需要,所以這個diagram就是這一整個設計的主要依據。

主要大方向有了,再來就是要考慮大基地空間的介入方法:先看整個基地的樓層關係和環境關係,對應到diagram所需要的overlap。(B-觀眾/家長 B'-老師/學生)環境相扣,可以看見需要的是個從遠處貫到近空間,也就是每個人在進去到出來這個空間的過程裡面,都有體驗。

第一個就是進出,每種身份從進入到出去就是發生一個故事,就連路人也是,他會在本來只是要路過這個空間之際,就體驗到Music Hall裡所發生的事,根據這一點我們找到這個基地裡被用來當捷徑的主要路徑。(大門與後門)和基地周圍的高低起伏地形,找到最適合置放Music Hall的位置,是在右上角的地方,那個地方有一層樓的高低差,坡度方向是與預設路徑垂直的,此為舞台。如果我要從樓上到樓下,光用既有樓梯,是不能完成overlap這件事情。如果要從樓上到樓下(或是從樓下到樓上),也提供一個路徑,斜切在基地上,是從裡到外,也是從上到下的貫穿通過。有了主要通過之後,接下來就是作相關空間的調整,overlap告訴我們,除了路人觀眾和Music Hall有發生關連,家長和Music Hall也有發生關連……把所有的角色在使用空間上會發生的交集關係這些相互關連都把它們列成表,一一去排置空間,也是後來回頭去審視空間關連性的依據。

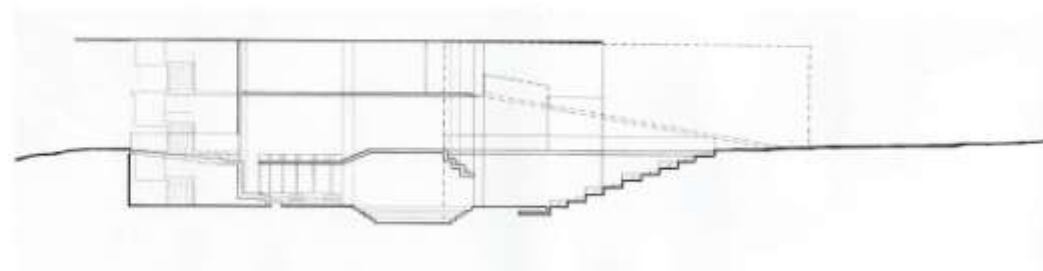
例如重要的overlap:(剖面圖)老師、

學生一對一教學時,長上課前準備家長觀看老師、

學生(一對一教學)路人看見 家長、老師、學生(1F直接穿越)

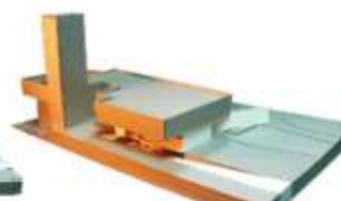
路人看見 家長、老師、學生(1F-2F穿越)

路人看見在資訊室的家長……這些具有故事性的事件,都有圖面上的適合路徑可以對應。



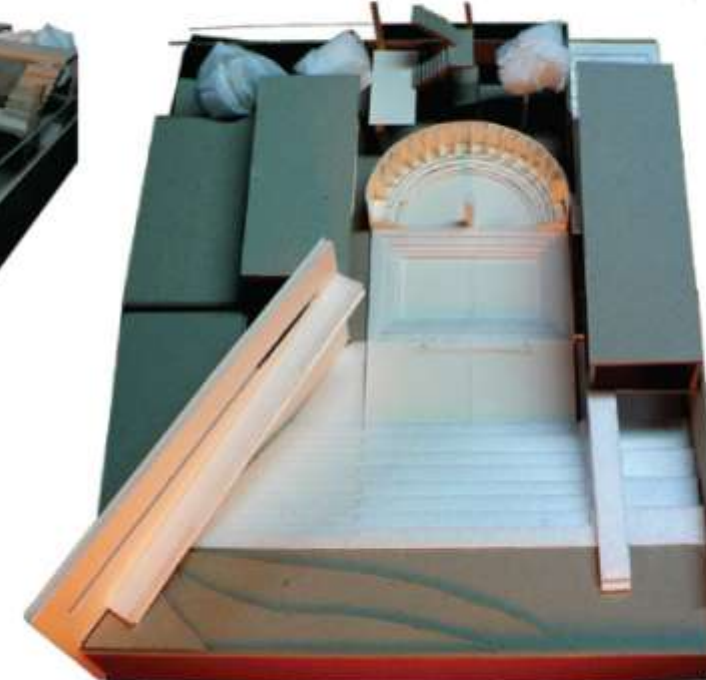
Create space from Music

People may just pass by a place for lots reason, attract them to stay, to be the audience watching children play music and feel the fun atmosphere is the purpose. Students and their parents can follow the obvious passage to go to classroom and play at the same time. Then parents can leave and also stay to appreciate the class process. About the teacher, they have inverse passage from the other roles. Menuet, from J. S. Bach, do have the diversity to complete all of them. Moreover, the interactive between different roles will happen when they are in the process during the class goes by.



Model concept:

replace the old part, gray, to the new part, white parts to see the music department and music hall for kids in holiday.







### Create model from movie and dance

How to describe dance by making a single model? This question is just the same as asking how to make a model by the movie. Obviously, both dance and movie have timeline that you can pick one moment to represent the typical spirit of it. Or you can use abstract method to re-interpret the dance step or the story. Most important of all is you need to let people feel the same thing when they watch the model you create. Then, you can use the beautiful model as a prototype to create a actual useful space in advance. Every advantage has its disadvantage. Visual action can be a good help when making another space by what you had saw, but it also can destroy the simple concept if you catch too much pictures, because you won't know how to follow. Think dance as the main topic, and both human body action and model paper combination just media trying represent dance as well. Moreover, the new model you recreate will have its own space that maybe can be the new space type not only useful in dance space but also a very nice space for human body. This kind of indirect design method can create very new space style for not only dance but also international world.



# FROM DANCE/MOVIE

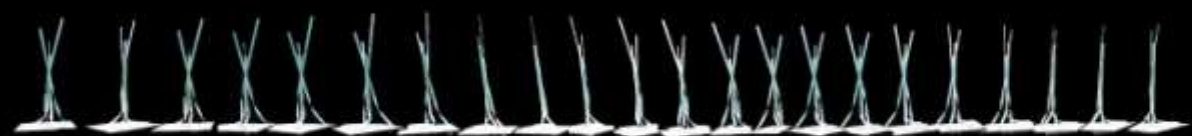
簡單動作元素，轉化為具體模型

此，與戲劇電影，而是藝術學門重點。此次展覽係先行觀賞研究舞類電影「The Tango Lesson」並加以分析探討其基本元素，進而再行模型演進化結構的過程。

不同舞蹈有不同的特質，Tango的兩人舞關係與腳步動作，與其他舞蹈有明顯的差別，可以輕易地被辨識出來。透過舞蹈進行中的空間運動特性與電影連續所呈現的氛圍解析，再轉化為而彰顯出抽象空間與進行強化之。

### 舞蹈之新建築

在建築設計訓練過程中，動態轉譯為具體空間神覺，是不可或缺的必修課程。因為藉由觀察動態事件所構成的空間佔用是抽象的，若要將之化為具體的創新空間，勢必需要經過二次轉化過程，即為化為為用，化用為空，進而實現的互換交換，相互考慮。



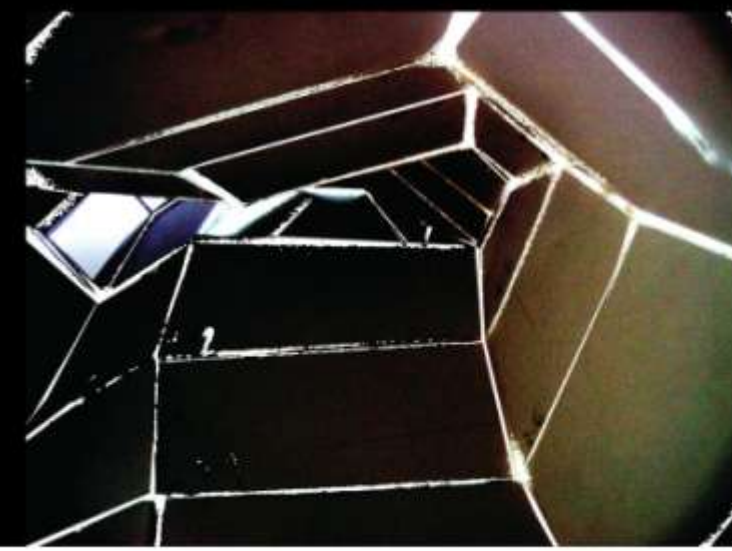
### 影視之於建築

動態藝術表現與主觀的放大或是特殊角度拍攝，就是影視藝術的主要特出之處。動態則帶除了直接拍攝事件之外，尚能運用連續圖片，製造攝影時的動態效果，再加以研究畫面佔據比率，從而研究出秩序。然而這樣的過程是雙重主觀之下的特殊行為，如此，或能發展出更具特出形式的抽象設計，用以表達主題，同時，更有不能割捨與不能割捨性。



### Relationship between movie and space

This practice is watching a movie about dance Tango then making model from it. You can say it is a practice interprets movie or dance to model. Dance is event happened in 3D space but movie is 2D compression. My way is use 2D movie talking about dance Tango as the analysis to do the diagram and use 3D real Tango dance to draw the 3D space in model. The process taking Tango dance as a movie is the process from 3D to 2D. And, the process transform the diagram to model is the process from 2D to 3D. The relationship between movie and Tango is just like the relationship between diagram and model(space). So maybe it is workable mapping the Tango movie to diagram, then mapping the diagram to space. Finally, the result will be abstract and creative.



第一屆作品，溫培會教授與何能志攝於人。」



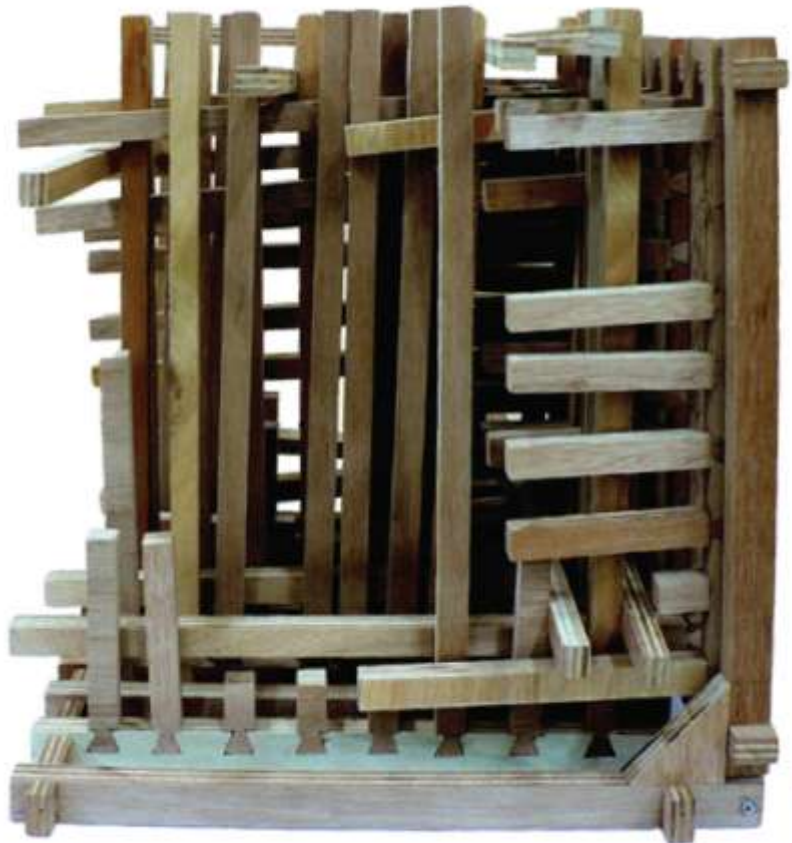
Project: Space of Exchange  
Media: wood / computer  
Studio: Eiger / Igo  
Time: 2003 winter

為了「敲門、開門」當中故事 的設計

敲門的人會打開離對方比較近的門，提供對方可以走近看清楚自己的優先權。」這就是我對於「門」存在於人類生活裡的期待。是隔絕，也是機會。多做幾個東西出來，應該可以在作品裡面找出我可以重新出發的點。這一個用一個晚上聽出來的模型講的事情是：敲門是開門，開門的過程讓你越來越看清楚一個人。

「都是初學建築的人，大學部的東西比研究所有趣，但研究所想法比較完整。」雖然我聽起來覺得當然，要求邏輯完整就會被原罪。要有興趣的話就不能先考慮邏輯完整。大家都在顧此失彼，要求學與研究的出發點上。

「踏視」：營造一個空間看起來不能穿過，但是只要你願意嘗試走進去，你就完成開門，得以通行。所以我做出一個看起來不能通行的可通行空間。  
蔡明說老師：「你的設計過程可能是你所理解的開門，也就是說最後這個作品應該是一開始，然後漸漸發展成你本來一開始想要的東西。」



# SPACE OF EXCHANGE

試讓這扇門一個兩人互動行為

人與人的互動行為，自然的會即提出空間需求，中間也可能有明確的介質讓兩人做交互互動的動作。利用這樣的特性，由導演演繹以劇本發揮，文學作家也能藉由描述來傳達構思思想。

敲門，開門。」

通常常發生在生活即動作事件，在戲劇裡面非被鎖定的關係則重，原因是動作本身雖然平凡無奇，卻提供了兩個人之間的各種關係的一個絕佳的互聯上演的舞台。

研究、分析、假設、實驗。

I.subject think  
定義門的本質—  
人類行為/界定內外/區隔空間/  
我所定義的門—  
有安全感的介質存在/造就可真的空間/  
互相觀察無法逃匿

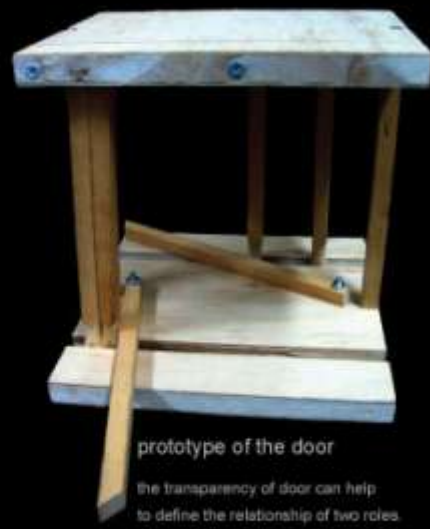
定義敲門、開門—  
Space from 凝聚 to 相遇 /  
people from 羈縻 to 聯繫

不安全空間—  
沒有角落可躲藏，沒有長距離可保持  
隱匿空間—  
氣氛感覺不安全空間，再給它一扇門。

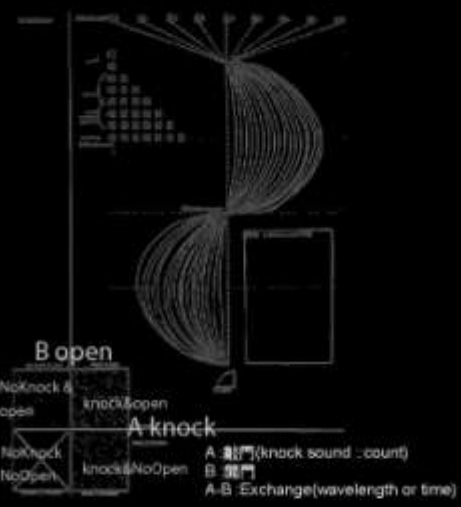
A-knock-主動、試探  
B-open-觀察、互動營造

開門方向在內，在自己-選擇、自危  
開門方向在外，在對方-防禦、溝通

what I want-  
打破「敲門、開門」的线性順序關係，  
敲門不再是你打我換的關係，造出一  
個可以雙方拉鋸的平等狀態。

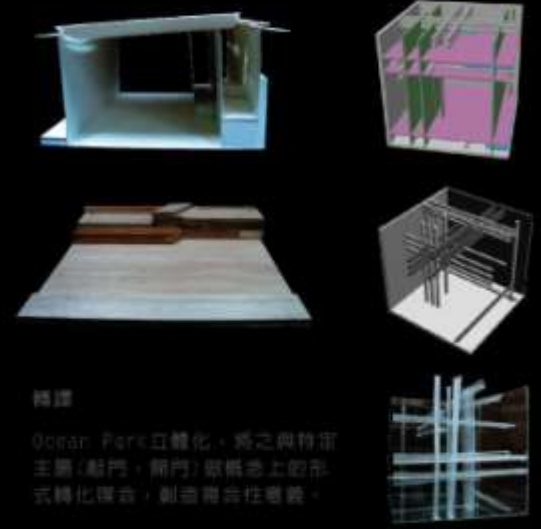
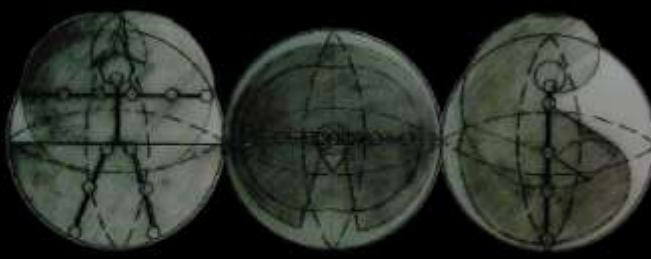


prototype of the door  
the transparency of door can help  
to define the relationship of two roles



## Create a door to represent a new meaning of "knock, open the door"

Choose an interactive motion between two people, the inter medium must be as obvious as possible that designer can design an object to let two people use it in necessary way. The main idea is treating door as a test that two people should show their truly heart to make the door open. So, the so-called "door" will have two alices in one. When one knock, one side door will open and waiting for the other side open. All possibility considered to contain all kinds of stories. The mainly material tests are bamboo and wood, use computer and paper to simulate the situation. The right concept needs compact with the right material. It takes a long time and lots of practice to merge idea and reality. Every conceptual test can be the key step during the process. Sometimes designer cannot get it because he/she lost in the mass so cannot judge and do the right selection. Then, it will be better that stop in every period and listen to others opinions in your case.



轉譯  
Ocean Park互體化，將之與特定  
主題(敲門、開門)做概念上的形  
式轉化演繹，製造獨特在感覺。



材質選用測試  
材料有自己特性，使用前必須研究  
材質本身是否適用於此次設計主題。



### 設計理念與現實材質的搭配

主題明確之後，必須找到適用對應材質。在一般狀況之下，設計者口袋之中已經有無數經驗過以立即選出對的對應材料。應用於設計，而在學習設計的過程之中，則必須藉由不斷的實驗，嘗試各種不同材質用於同一設計概念上，方能訓練出使用材質的正確直覺。如此，一邊養成實驗訓練，一邊學習具有美感的设计能力，是基本建築設計的重要過程。在此過程之中，失敗品即有其不可取代之價值，在設計者本身日後可能還是會用到。





Project: Gallery literature  
 Studio: Nancy  
 Data: Robert Smithson  
 Site: University Road, Hsinchu  
 Media: paper / computer  
 Time: 2006 Spring

# LITERATURE

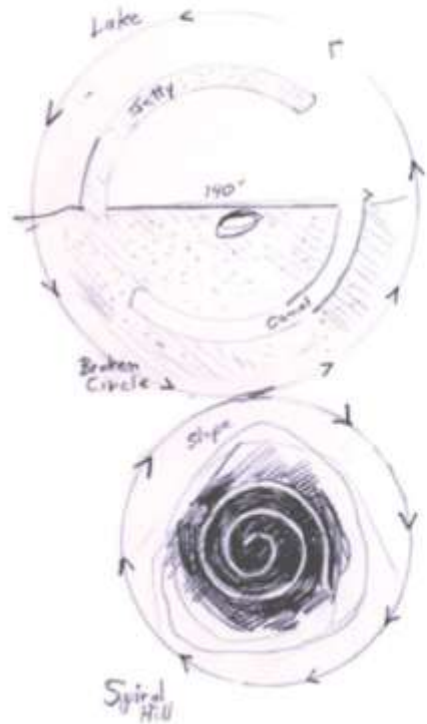
為一位偉大的藝術家Robert Smithson  
 設計一個專屬展覽空間。詮釋其情感。

空間是單純的，情感是複雜的。

Robert Smithson 雖然利用正負的形式  
 創作作品，並且有不少的文字篇章講述  
 自然的力量與人類發展的關係。他的  
 地景藝術作品常常刻畫著大自然的美化  
 生在自己的作品上，像是讓藝術作品  
 已幫自己講述。也顯露了觀者對於藝  
 術作品的永恒性與不可成長性的印象。

人的記憶存在於任何形式甚至於無形，  
 每個聲音與魔法都會引發記憶與創造  
 記憶，如果情感總是複雜，那麼，則意  
 識空間時，總是會顯得更為複雜。

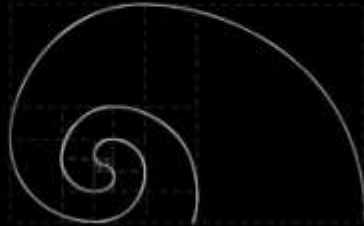
這就是為甚麼能夠觸發記憶的展覽空間  
 形式，無意卻能如此吸引。



設計的第一階段，是研究藝術家的精神  
 觀察，加以歸納並抽取出精粹的概念。  
 有了概念便進入第二階段，係把概念重  
 點加上空間設計者對它們的理解與詮釋  
 方式做出融合階段。這是產生很多珍貴  
 diagram 的重要時期，這個部分，只要  
 我們對於第一階段的那幾個重點有數字  
 邏輯，並且有嚴的解釋方式，可以順利  
 與第二階段接軌，那就真是一個以、成  
 功的過程。

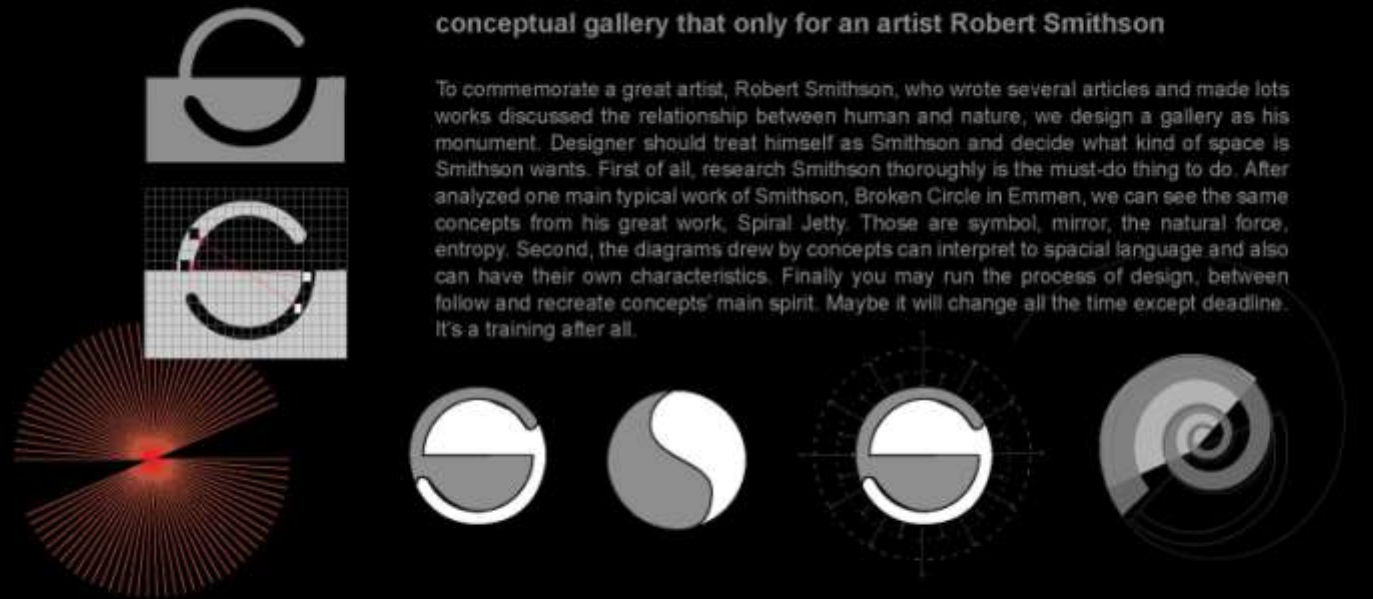
但是在轉化 diagram 為 design 的過  
 程，就又是一項挑戰，一樣，要用合乎  
 邏輯直覺，並且要「有戲」的方式，讓  
 平面的圖，原本是用來詮釋 Smithson  
 原作「重點」的 diagram，可以有展  
 出空間的可能。所謂的「長出來」，最  
 簡單的一種方式就是依據現有平面圖樣，  
 extrude 出一個立體出來，3D 繪圖  
 常用的此法，但是這樣子在太過直接，  
 但可能會讓接下來的設計過程喪失其也  
 可能性。

spiral rule: the right proportion  
 makes several size to use.



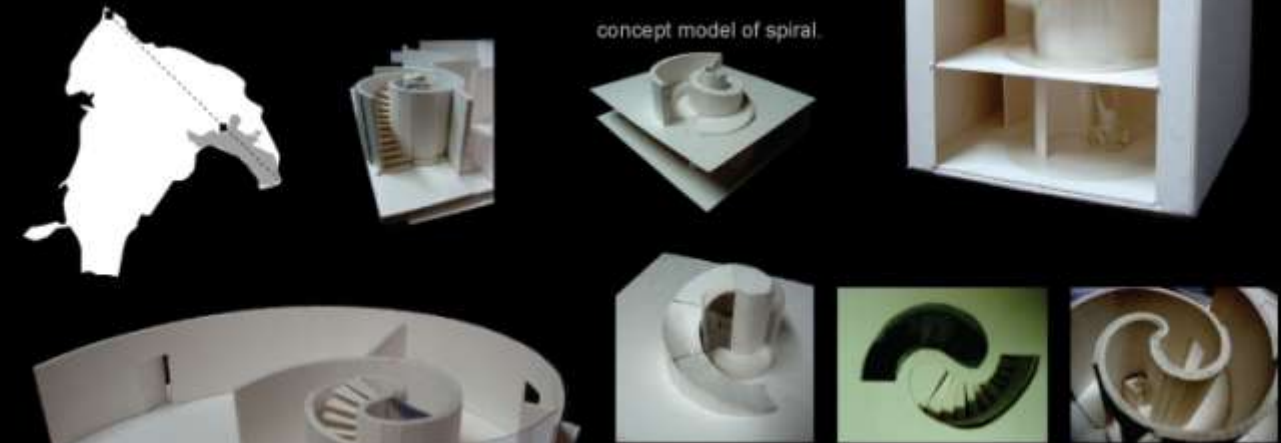
## conceptual gallery that only for an artist Robert Smithson

To commemorate a great artist, Robert Smithson, who wrote several articles and made lots works discussed the relationship between human and nature, we design a gallery as his monument. Designer should treat himself as Smithson and decide what kind of space is Smithson wants. First of all, research Smithson thoroughly is the must-do thing to do. After analyzed one main typical work of Smithson, Broken Circle in Emmen, we can see the same concepts from his great work, Spiral Jetty. Those are symbol, mirror, the natural force, entropy. Second, the diagrams drew by concepts can interpret to spacial language and also can have their own characteristics. Finally you may run the process of design, between follow and recreate concepts' main spirit. Maybe it will change all the time except deadline. It's a training after all.



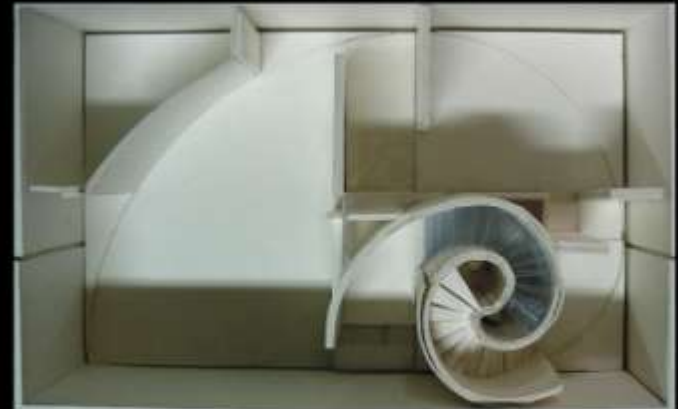
concept 3D model of spiral passage.

concept model of spiral.



### 文學講述之於建築

不止是Robert Smithson利用其講述，將概念轉化為地  
 景藝術空間，還有許多文字工作者亦有如此成功經驗，  
 例如記者邱慈新對於都市和建築尚有一貫想法，後來便  
 轉行學習建築設計，並且已經成為當代臺灣最大的建築大  
 師之一。台灣知名建築史學評論家羅敏祥教授發現，高  
 行商業的人都有可能轉行學習建築並且有所成就，其理  
 由不難歸諸於人類生活經驗的累積和推展，能夠造就與  
 不同想法的設計者為實則專業者，並且進一步將每個時  
 代的接受，文學本質就是一種紀錄，而建築也是，他們  
 在某種程度上，是彼此紀錄、相互呼應的關係。



### 藝術家的講述

Robert Smithson是一位非常擅長講述的藝術家，在理論與實做上面皆有不變成績，其作品很多元，  
 從雕塑，到拍照，到裝置藝術乃至地景藝術等等。由於他也是一位藝術評論家，所以有留下許多的文字  
 資料，甚有文學性。另外，他做設計的一些草圖，也都透露出他設計發展的主要關鍵點。  
 所切入的案例是Robert Smithson在荷蘭埃門 (Emmen) 受邀做的大地改造計畫「BrokenCircle」  
 地景案，本來是暫時性的一個藝術作品，後來因為荷蘭人太喜歡了，所以決定繼續留下來。  
 Broken Circle旁間又緊接著另一個Robert Smithson的作品，叫做「SpiralHill」，兩者可以視  
 為是同一件作品。也可以對稱視之。我先把兩件作品放在一起看，可發現若這樣看待的話，它們所講  
 的，和單一BrokenCircle要講的，都是同樣一件事。然後再將Robert Smithson的代表作，「  
 螺旋河堤」放進來一起看，便清楚可看出它們的共同點了，而這樣的共同點，便是在很多Smithson的  
 設計作品裡面，都企圖想說明的：

- 符號 (\*1)
- 互補 (\*2)
- 自然平衡 (\*3)



## 設計家操作

比較建築與其他藝術項目各自和人類生活關連度的話，不難發現，若要滿足人類生存的需求，不用繪畫，不用雕塑，不用音樂和文學，也不需要舞蹈，戲劇和電影。為了生存角度而言，建築實在可列在人類衣食住行的需求清單之中。（人類在擺脫風避雨之洞穴生活之後，開始建築屬於人類避難之處的建築。）亞里斯多德說，只有醫師與建築師得以穿白袍，因為，醫師照顧人內部身體環境，而建築師照顧人外部身體環境。

可以見得建築這件事情，不只是藝術上的人類精神自身慰藉，也是生存上不可或缺的一個事件。

建築因此變得更为複雜。

藝術家可以對建築有更美感上的期待；實務家可以對建築有實用的期待；而一般人對於建築，會有著融合此二者期待，發生於他們所看見的建築上。

建築設計能力的養成過程，是極為要求美感與實際邏輯必須並重，在此間，不乏反覆遇到理想與現實的衝擊與妥協過程。

這是建築的本質，也是建築難以被歸類研究的原因。

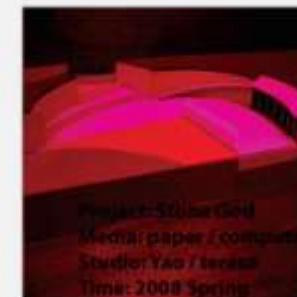
建築設計作品不論建設費多麼高昂或是低廉，若作品不能「被使用」，或是不好用，建築便失去其價值。於是乎在一連串的藝術式美感設計訓練之後，建築設計的訓練必須進階到實家練習上面。其前提條件上，一一進場的會有業主的需求和基地與預算的限制，甚至會必須配合外在特殊要求例如交通限制和建築法規等等。在限制之下找出路並實踐設計，是設計家永遠不變的答案。

## Operate a whole project practically

Compare with other arts, architecture distinguish itself because it is not only a kind of art but also the necessities of life. Human beings need space to survive from the time primitive age, barbarian hide in a cage, to temporary, people can live in their own house. Therefore, the first thing people build a building always for the basic necessary of people's life. However, it is the second thing in architecture design. That is, after the training of esthetic then the school will teach you to learn the skill of structure and texture.

The complicated thing is that every designer should force him/herself to find the balance between practical skill and esthetical insist that only belong to themselves. Budgets are limited after all. Don't think to please everyone. There is no correct answer, because the judge may be the house owner, the professional person of art or architecture, or the passerby.

# PROJECT





Project: Housen  
Media: Paper / computer  
Studio: chiyl  
Time: 2005 winter

### 從小型建築家做起

模仿不但是最高的讚美，也是進步最快的訓練方式。在一個實際案列剛開始前，不乏有許多指導者要求學生臨摹著名作品一篇，為的就是在實際感受的過程之中，找出大作之所以為大作的細膩之處。住宅常常是供給學子臨摹的最佳作品。另外，著名建築大師常常也是因為將住宅案做得極為特出，因而發跡。甚至有些名氣最高的建築大師，在接下一件又一件的大型公共建築案之後，回頭還想接一些價值不高但是挑戰性大並且有趣的住宅案。可以說，住宅，這個最貼近人類生存需求的空間設計案，麻雀雖小，五臟俱全，設計者得在此間有限的預算與空間之內，盡情發揮也盡情揮灑，像是自問自答一般的完成居住空間設計的修煉。隨著人的年紀漸變，設計者的觀念和使用者的態度也會變，因此，如何設計出一個歷久彌新的住宅，看似簡單，卻是重要的事。在設計學習上是入門，在熟練者來說是趣味。

### From project of house

Professors like train new guy just learn space design by imitating masters' masterpiece especially in their house case. After knowing the main idea of a masterpiece, the thing need to do is redo everything that happened before. When imitating, you can find there are many hints can inspire one self's design ability that may wouldn't useful this time but maybe next time. Broadly speaking, imitate masterpiece means one can advance in design at faster way. The reason imitate house design of master is to learn a complete project in small scale, so even the new guy can handle it. In master's opinion, house design is the hardest work no matter what to do that they cannot satisfy ever.

### Imitate John Pason's work

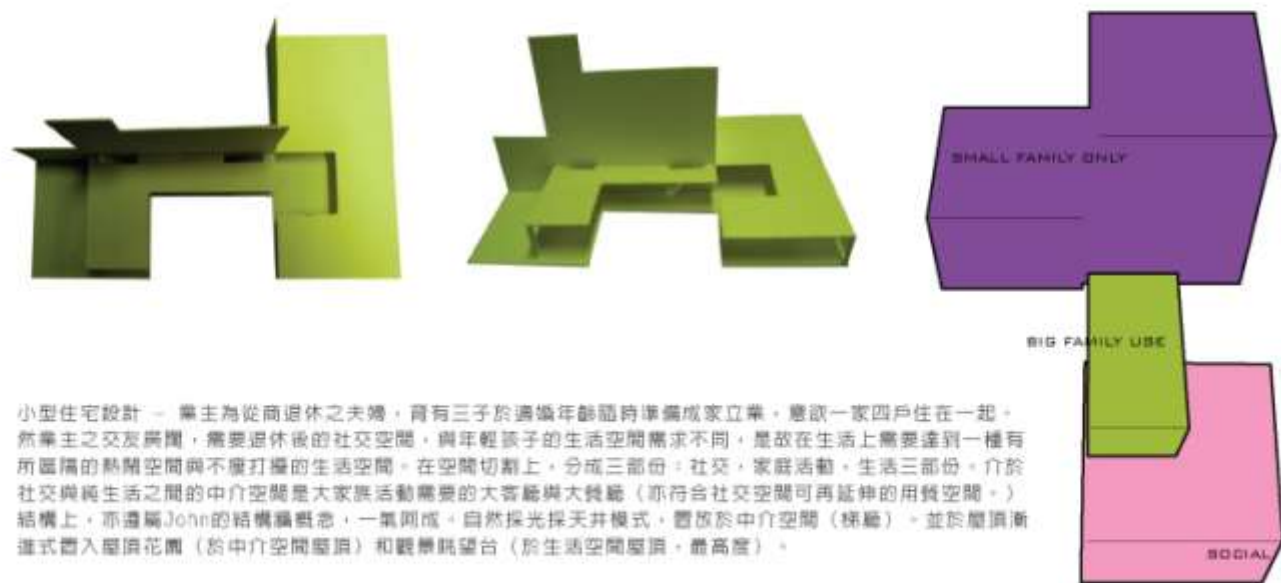
Case study: House of John Pason. By buying an old house in London, John Pason restructured the whole house in elegant way. Merge indoor space and outdoor space to make space looks wider and brilliant. Not only the main idea about the house owner want should be known, researcher must know the parti, movement, proportion and the arrangement of the house. The marriage makes the atmosphere complete. After case study designer propose her self's site and requirement. Then she can do another design project but obey the case study's spirit. The spirit isn't copying Pason's form but the method he deal with the space and material even the light.



capacity study - 固定基地空間有其最大可蓋建物容積，就像堆積木一般，必須嘗試堆疊出有限空間的最佳樣式。在決定建築風格之後 (from case study)，開始考慮業主在各種空間屬性上的需求並從capacity study中選出。



STUDY CASE - John Pason自宅案。在倫敦住宅區，原是一個空間極有限的老宅，舊宅內重新施工。John 在其住宅裡面多建一個板系統結構，分割也支撐了樓梯和生活使用的空間和重層，為了要在小小的空間裡面營造舒適感，他收掉所有會有障礙可能的物件，並且把室內空間抽長延伸到室外一貫，利用戶外空間，讓人體視覺與感覺到更寬廣的空間。另外，他在自然採光與間接照明光源的處理上，也存在著自然與人造光的中介，讓人像呼吸一樣不覺。



小型住宅設計 - 業主為從商退休之夫婦，育有三子於適齡年齡時準備成家立業，意欲一家四戶住在一起。然業主之交友廣闊，需要退休後的社交空間，與年輕孩子的生活空間需求不同，是故在生活上需要達到一種有所區隔的熱鬧空間與不擾打擾的生活空間。在空間切割上，分成三部分：社交，家庭活動，生活三部分。介於社交與生活之間的中介空間是大家庭活動需要的大客廳與大餐廳（亦符合社交空間可再延伸的用途空間。）結構上，亦遵照John的結構概念，一氣呵成。自然採光採天井模式，置放於中介空間（樓梯）。並於屋頂漸進式置入屋頂花園（於中介空間屋頂）和觀景眺望台（於生活空間屋頂，最高處）。

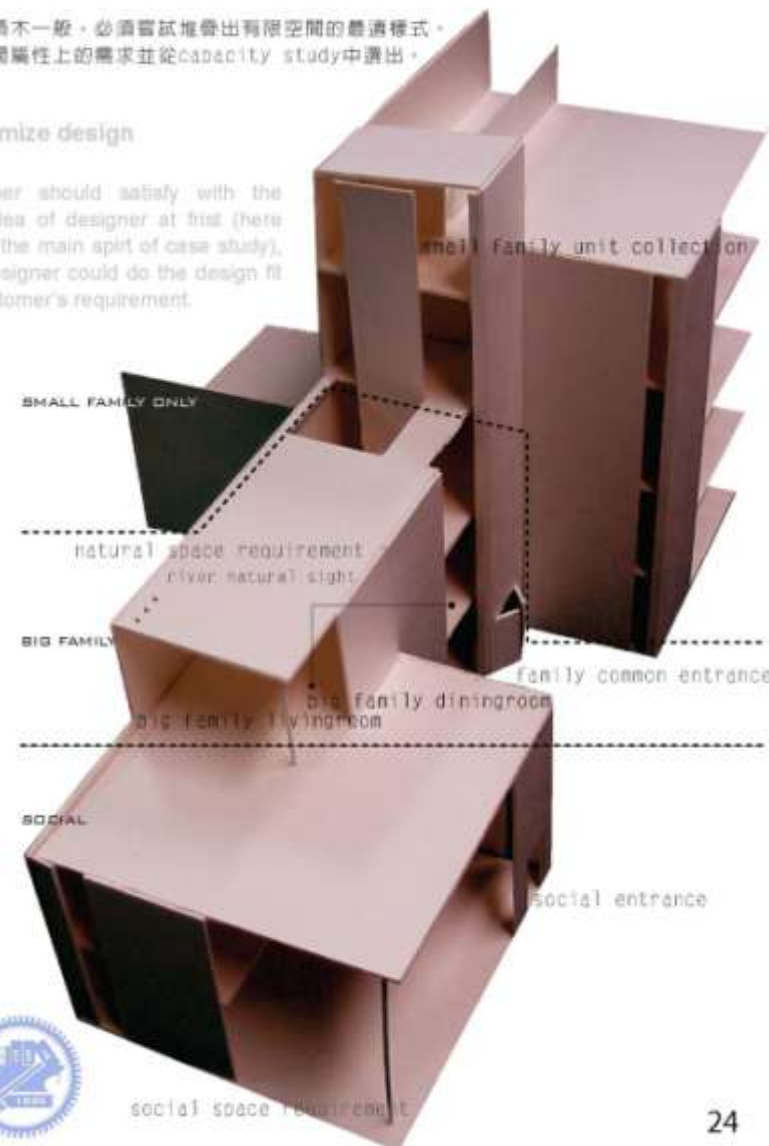
### Customize design

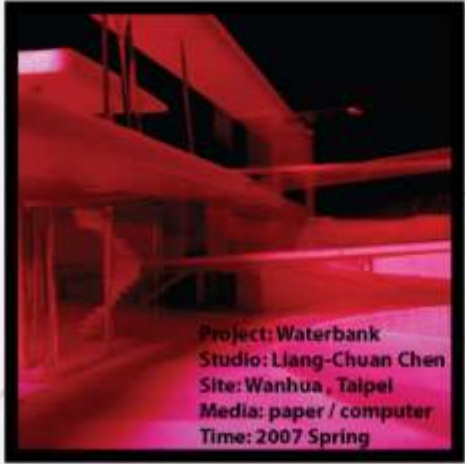
Customer should satisfy with the main idea of designer at first (here means the main spirit of case study), then designer could do the design fit the customer's requirement.



### Merge the special issue and the necessary

Social main space, big family space(include 4 small families) and small family space that are necessary in this project. There are three parts of this house project that in order to follow the main idea designer could try to merge three parts in one. That is, Pason merge all in one small old house. Using design method can solve it. Then designer can adjust the linking in detail.





Project: Waterbank  
 Studio: Liang-Chuan Chen  
 Site: Wanhua, Taipei  
 Media: paper / computer  
 Time: 2007 Spring

都市河岸區域更新計畫

本案位於台北市的萬華區河邊地區，是都市計畫更新計畫之一。台北市由於早期的過度開發造成洪水氾濫，於是河道填海防洪掩藏災情而使海濱成為台北最感遺憾的區域。市民無法親近擁有河濱資源，甚至在都市發展過程中受到很多阻礙。目前台北萬華區就處於這種狀態。

整個計畫的進行，是先利用對於現行既有都市計畫報告書的閱讀與瞭解，加上事前的相關圖資與資料調查研究，透過討論既有的得失利弊之後重新評估，進而擬定一個創新可行的計畫。

主要精神在於轉換設計策略與提出正確的都市計畫觀念，並且能夠實際操作到建築設計本身，同時理解到都市設計與建築設計的關係。

在步驟上，是先作研究與分析，接續計畫書提報，再做計畫案的設計提報，最後一段進行都市計畫審議的過程。



昔日貴陽街

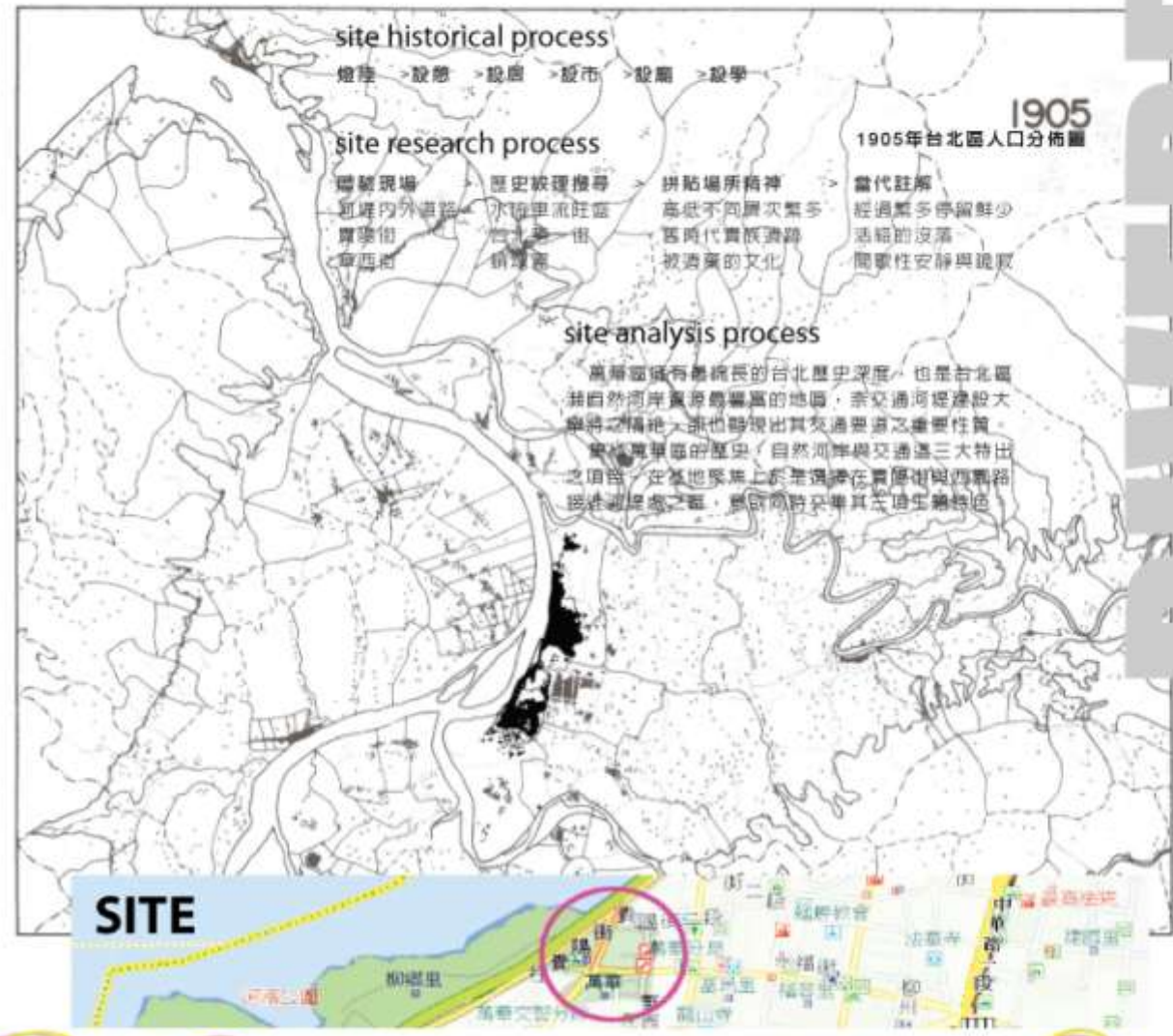


昔日艋舺碼頭

Replan the urban plan strategy

This project is one of the Taipei city urban plans that in order to renew an area of old part of Taipei, government should recruit official and even unofficial team to think about the new strategy. In the beginning, government built a long riverbank to prevent the flood happened by over development of the old core of Taipei city. Therefore, the natural river and ecosystem is stopped outside of the city. Now everywhere around Taipei city, people cannot breath the air from the sea neither see the green sight in the city.

The most important thing of this training is to equally emphasize abilities of urban design and architecture design of designer.



RIVERBANK



基地選擇與設計策略

從大範圍的基地裡面精準地選出確切的建築設計基地範圍也最重要。從都市設計的角度來看，由於建設經費是都市最大的開支，對的地方作建設，可以促進經濟區域發展順利並達到事半功倍之效，非常重要。而從建築設計的角度來看，對的基地可以幫助設計者離開出絕佳的設計題材，雖然設計者並不能選擇基地，只能在業主所指定的基地上大做文章。而本設計案即是在前半段做都市觀察與設計的工作，接下來才進入建築設計，是故在基地選擇上面是一大利處。這樣的訓練也可以培養出設計者從始至終完全瞭解並沉浸在案例之中。

基地特性

商業低樓  
巷弄間可以見得河堤高架橋  
歷史性書院和國小等公共處  
有河南路道路路寬等較為二  
三層樓公署就在外頭  
眾多小型公共設施  
包括傳統市場、公園、商場

構想與操作手法

盡整地買大  
可以當作都市內部往外圍的商業  
動向相處，可重新布文等空間  
可在道路與微生帶等相連，  
外部水岸應引導進城市內部  
外圍生態連結內部綠地帶  
地帶或連結湖岸與內部公園綠地等



Three main topics

Wetland and riverbank, traffic, and old city area are the three main topics that this project should concentrate on. To find the exact point that can merge three of them can help the project more workable. (because the budget is limited.)

There is an area include three of them place in a temple area, where is near by the public park and school, community market and night market.

Ecology, traffic and city history construct the project, if there is something must happen here, then it cannot lose anyone of them.

Strategy of choosing site

It is very important that choose the exactly site. In urban design point of view, it costs a lot to build some public space. Therefore, build the right thing in right place is very important. In architecture design point of view, the right place can inspire designer to do a good design. Although space designer cannot decide where the site is, this project start from urban design and will end in concrete architecture design that means designer have more space to operate the whole project.



A-學海書院 B-湖濱公園開發地 C-靜修公園 D-龍崎公園 E-萬華與州聖安市

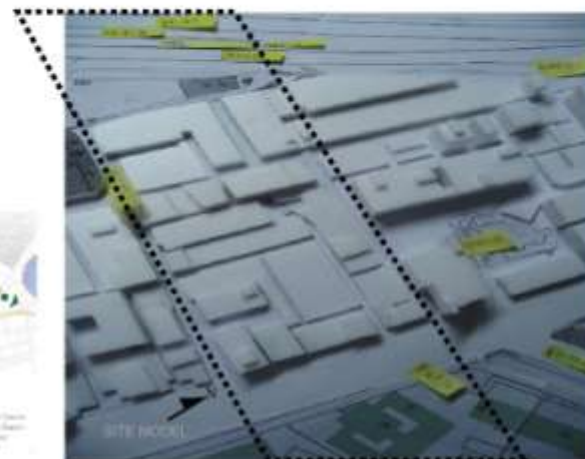


生態 建築設計 城市  
生態基地 建築設計 城市  
生態基地 建築設計 城市

生態廊道整體計畫



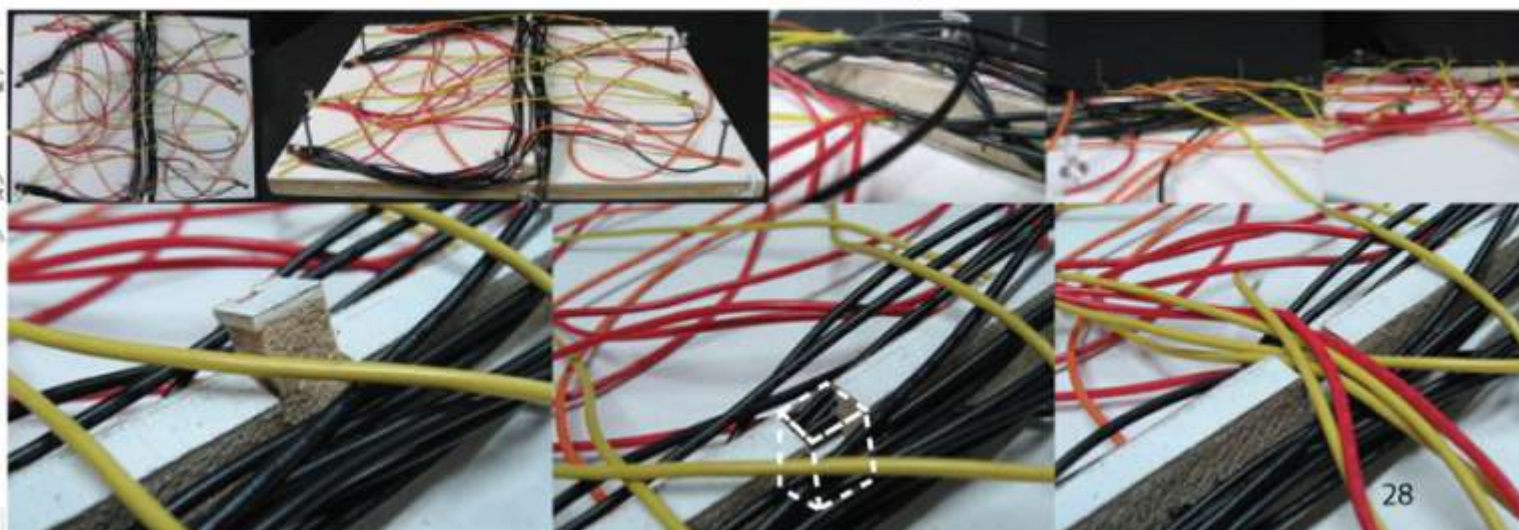
有承接性的地景策略



透明建築 = 生態窗口 = 40年後的紀念碑?



●●人 ●●自然



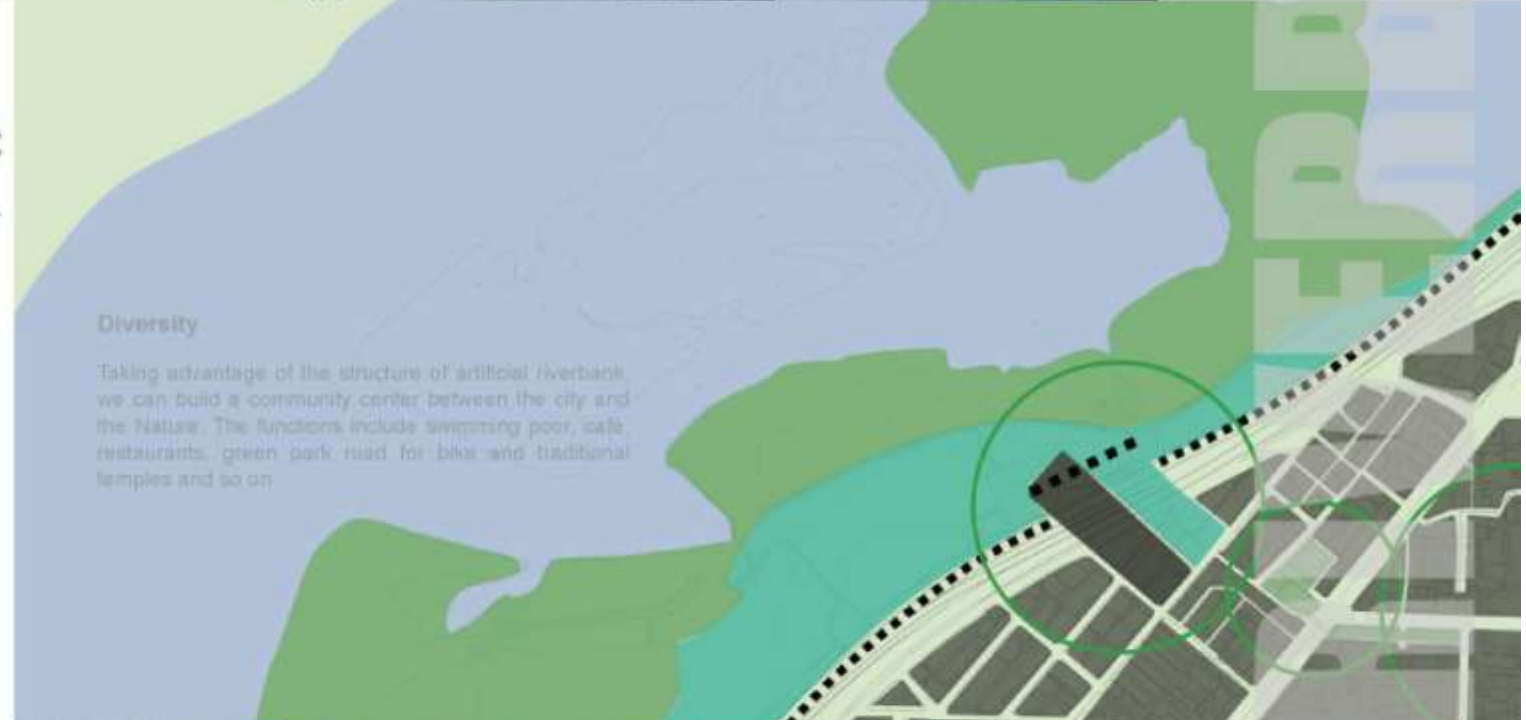
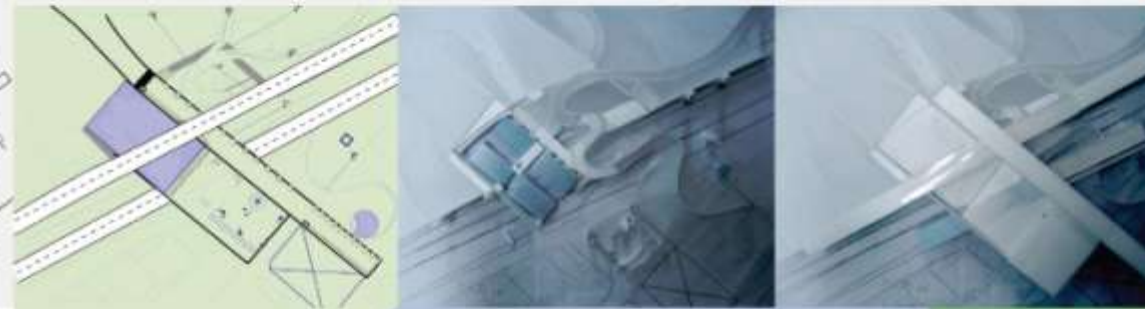
RIVERBANK



# RIVERBANK

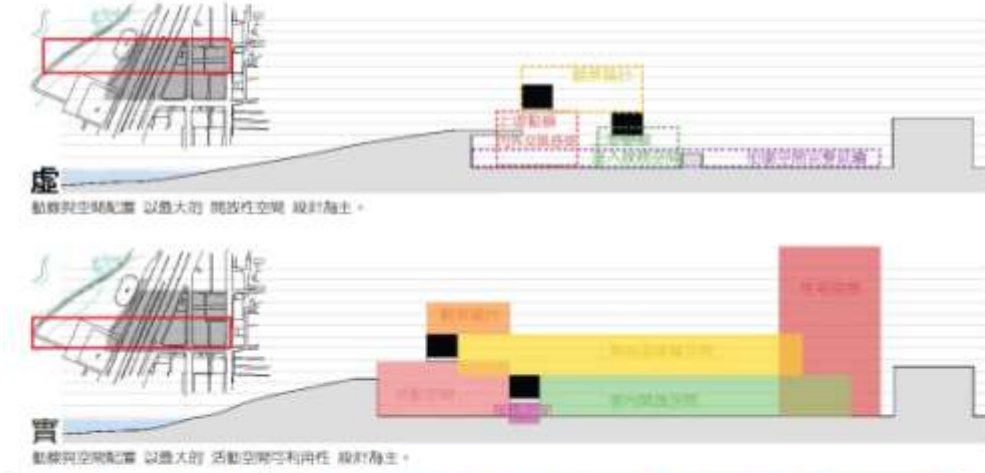
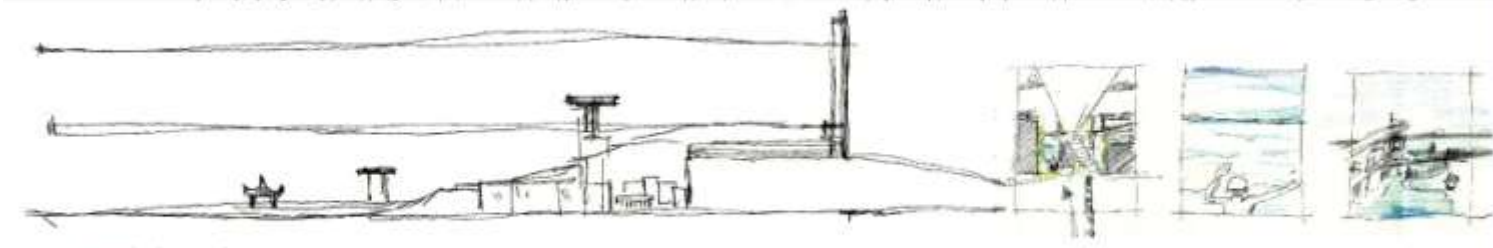
## New concept of riverbank with community center

It is necessary that human beings need to learn to cope with the Nature. In the future, cities will open all boundaries between city and the Nature as they could. What can we do now is very hard but important because you cannot just open the riverbank up. Original riverbank is too artificial to touch the Nature so the designer should try finding a balance between open and close, opening some windows in between.



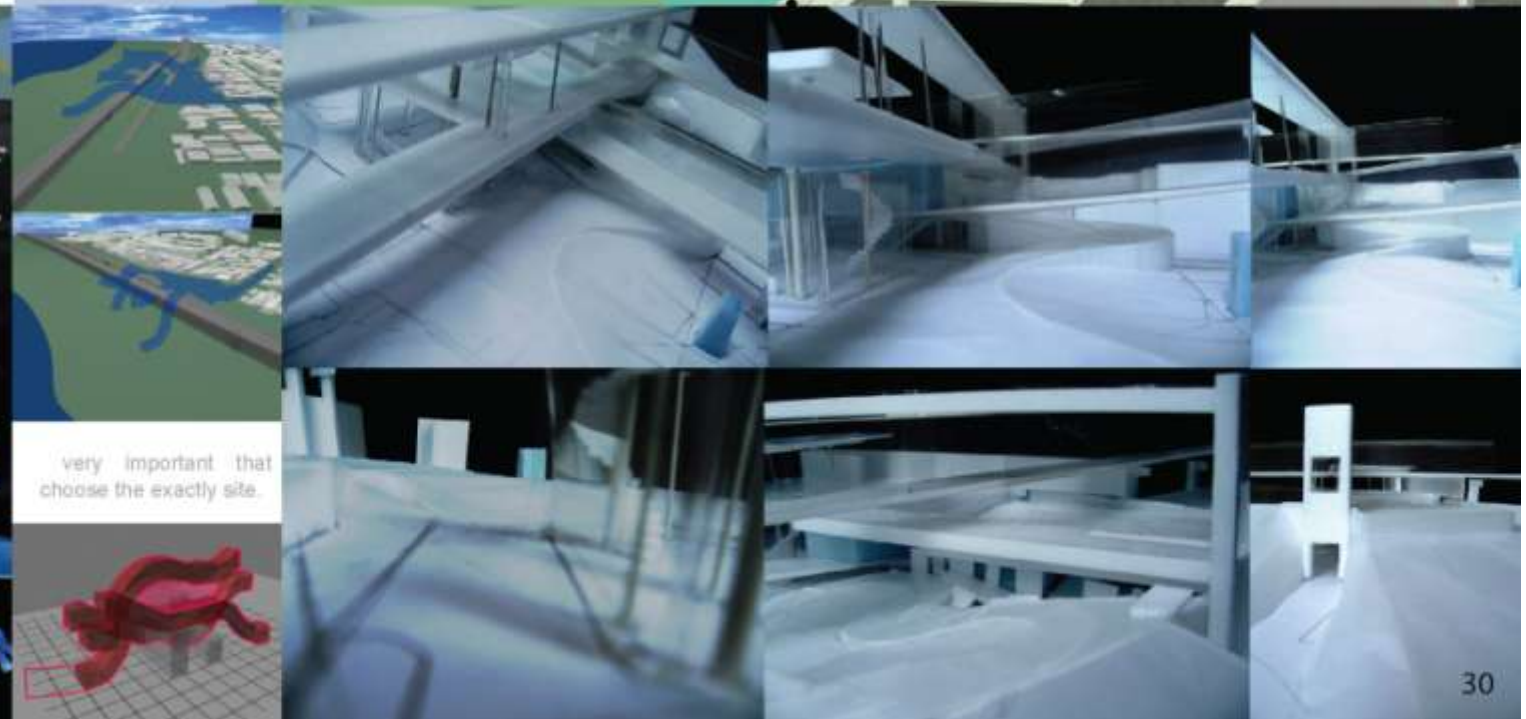
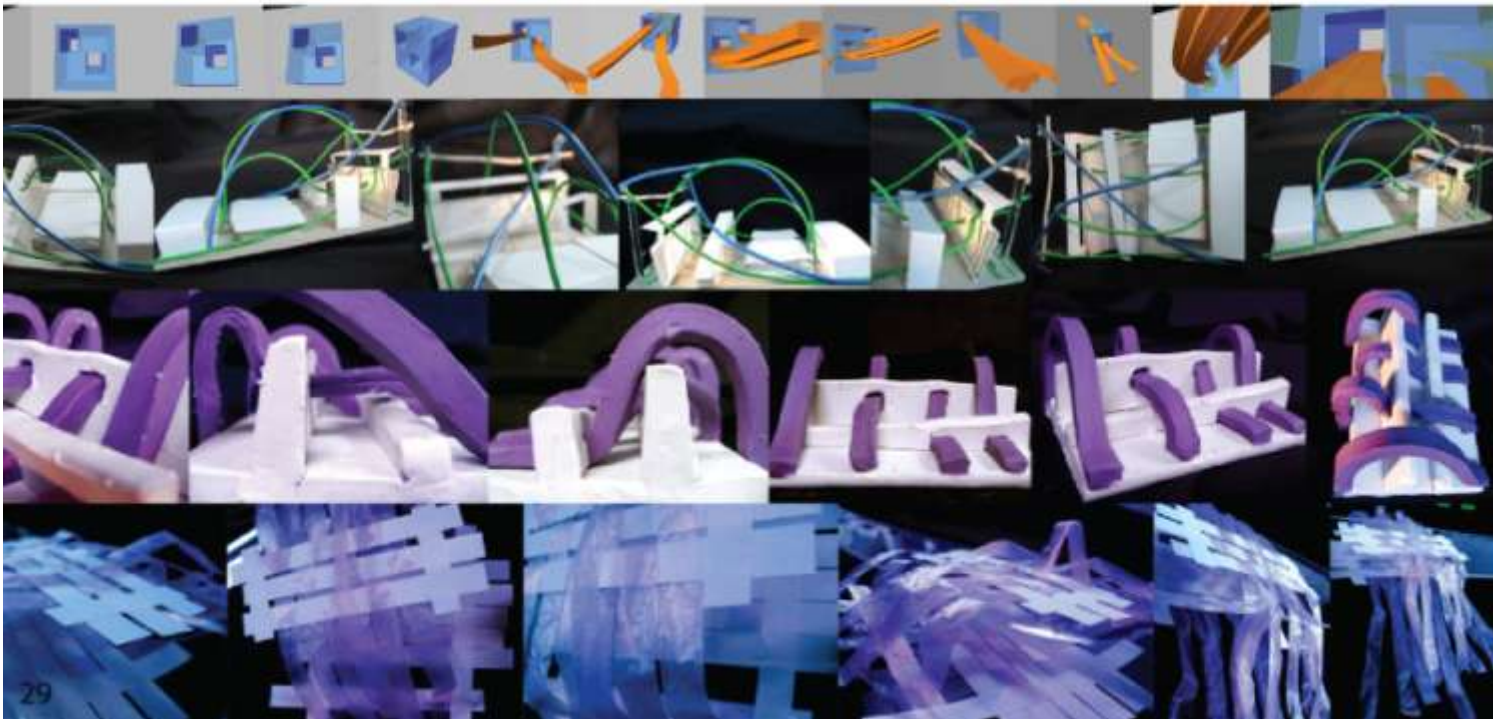
### Diversity

Taking advantage of the structure of artificial riverbank we can build a community center between the city and the Nature. The functions include swimming pool, cafe, restaurants, green park road for bike and traditional temples and so on.



### 新河堤概念

學習與大自然漸進妥協，是未來生活趨勢，過於人工的河堤道路，將會在未來漸漸被其他方式取代。而城市會逐漸伸出親近大自然的觸角。在現在與未來的過渡期之間，都市設計者斷不能直接開啓河堤破壞其保護城市的功能，亦不能消極不理會市民欲接觸大自然的需。於是乎其必須想辦法開啓兩者之間的窗口，達到漸穿並重的程度。河堤本身結構性很強，善加利用這一點，便能開啓河堤內外之間的通道建物，其用性則是與市民活動息息相關的新樂活空間設施。



very important that choose the exactly site.





Project: Histative  
Media: paper / computer  
Studio: Wei-Li Liao  
Time: 2007 Winter

### 樓層 / 新竹生活館

設計案的起始與結束，頭尾其實是綁在一起的。案由可能是一個理想，可能是一塊基地，也可能是一筆資金。由於起始便充滿各種可能，後續的經驗也就五花八門了。但是它們都會走向必要的流程裡面，那些步驟對於有些案子來說，像是結尾，對於有些案子而言則是起頭，設計案於是形成一環無限迴響。

本案起便於城市觀察，由設計者自由意志下選出最感興趣的城市一隅，繼而進行深入調查與分析，之後再藉此做一都市設計提案。可以是公共建設也可以是私人空間，主旨則是強化基地形象並達到促進都市發展的目的。

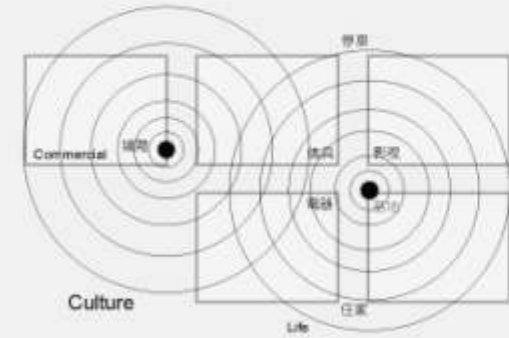
此設計過程走到最後，主題才浮現在最後結論裡面，然而在都市設計提案報告裡面，主題卻必須先被知會，此後設計情況出不窮，意味著設計裡面的多變趣味，正因為如此事件繁多，當你在研究一個案子到底是發生甚麼事？概念先有還是需求先有？那已經不是重點了。



### To brew a concept of a project

This is a project discussing how to renew an old city part, how to do a small thing to change a whole community, and how to create a right business in a tight place. During the project, designer can choose any part of a city as her wish just because she is interesting in. Afterward, she must do lots of serious research about the site she had chosen. Broadly speaking, the concept will inspired in the process when designer doing the research, taking advantage of the concept designer could development a serious of design to cope with site and solve the problems happened in the site.

However, the first thing which will be presented in the proposal is about the concept. The proposer does not need to know if the concept is the trigger or the conclusion in the project.



To analysis the whole site area we can conclude the relationship between commercial behavior and community life.

### 基地調查

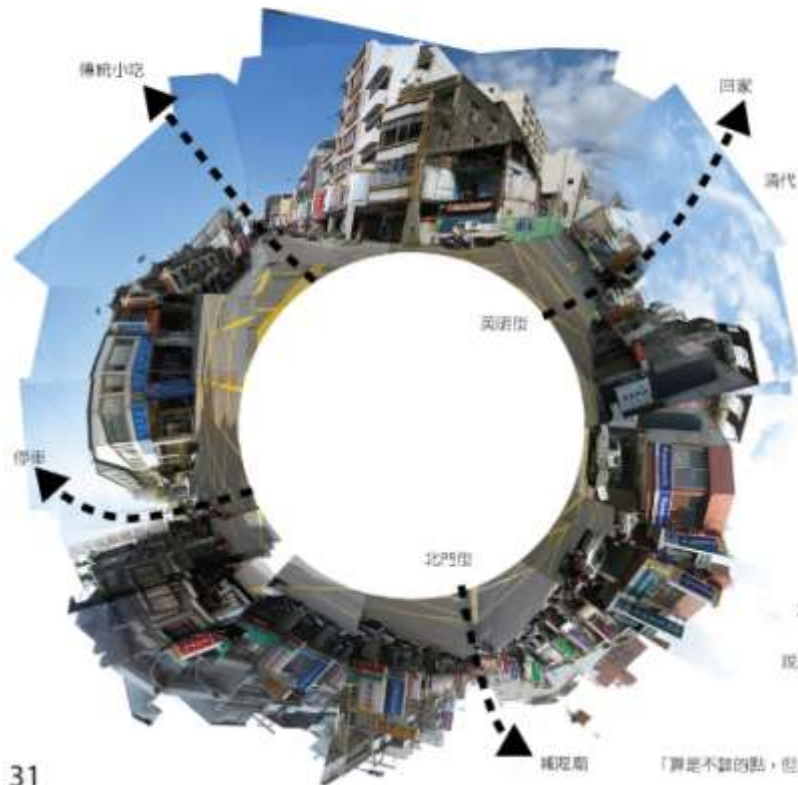
新竹市區內，在旅順期區有一條「新竹第一街」之稱的北門街，字三百五十年前就已經形成的市街。隨著時間和商業形式的漸變，從繁盛到凋零，目前街道舊風味仍在，卻衰軟於重慶過往繁華。

除了歷史悠久產生的地權複雜性，尚存在有產業定位的不明確性，在在讓業者坐擁珍貴地段而欲振乏力。經過不斷的外在拉皮，北門街外在呈現著豐富的時代紋理，然而其內在結構有很大的比例依舊保留有古時代留下來的建造工法。

| 建造時期      | 式樣              | 比例    | 材料、結構        | PS        |
|-----------|-----------------|-------|--------------|-----------|
| 清代        | 閩南式             | 24.6% | 磚面、土壁、木柱樑柱   |           |
| 大正        | 樓閣式<br>仿巴洛克(折衷) | 10.5% | 紅磚、魚鱗板       | 內部為清代傳統建築 |
| 昭和        | 現代主義            | 6.0%  | 磚面、洗石子、R.C 構 | 內為清傳統建築   |
| 1940-1950 | 新式樓房            | 11.2% | R.C 加強磚構     | 內為清傳統建築   |
| 1960 以後   | 新式建築            | 45.0% | R.C、鋼骨       | 全新改建      |



「大馬路是給觀光客走的，我們走小路比較方便。」



從兩百年前開始，這裡就開始蓋房子，清代、大正、昭和、抗戰、民國。

這裡是建築立面共和議。



### 節點

2005年，他們把英明街拓寬，兩邊各留下半棟寬的房子，說是滿足區域發展而無礙於遊客未來，創業者兄弟時常看了。

「算是不錯的點，但是賣小吃還是賣貴家呢？」



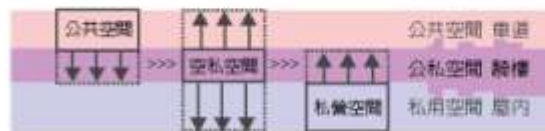
The site keeps empty by reconstruction road in the corner of crossroad; we can see the section clearly which shows the old structure in the street. Just in the place it collects lots of activities about the community and the commercial acts in the city center. In the small street where need many parking space so most part of house near by the street change to be private parking space.



緣分  
在十字路口讓他和她相遇，  
散步、買菜、散步，  
外出的出外一餐餐，  
出門買菜買菜。



This kind of old street cannot be cut apart between public space and private space because the community got used to talk on the road just like talking in front of their house. There is a way can protect their safety and prevent traffic problem: create private space for public.

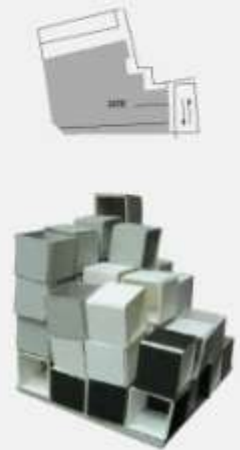


|    | 馬路                              | 騎樓                             | 室內                             |
|----|---------------------------------|--------------------------------|--------------------------------|
| 空間 | +雙向無機車人行道<br>+十字路口沒紅綠燈<br>+小路拓寬 | +高低差異<br>+材質差異<br>+私有化(常設棚、圍住) | +舊日式結構<br>+新現代內裝<br>+天井與戶外通道   |
| 角色 | 在地居民、老中荷                        | 在地店家、中、荷                       | 遊客、老、中荷                        |
| 活動 | +樓梯改作店<br>+常設經營生活<br>+荒地閒置      | +騎樓一人散步<br>+點點小商店<br>+舊時常都不長   | +在地居民步行<br>+市民入城拜拜拜<br>+遊客入或汽車 |

# HISTATIVE



那的時代喧鬧和熱鬧，  
樓樓層層，  
舊街改出外一餐餐，  
舊街內裡還有許多老者的故事。

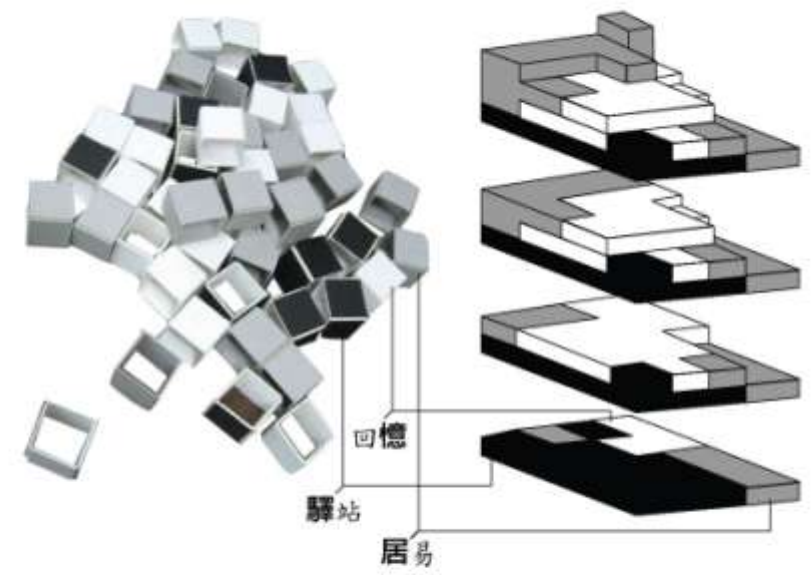


**萬古遺今**

一塊土地在不斷地被重建的過程之中，若留下實體的痕跡，便能從中追尋過往的蛛絲馬跡。以生活在當下的人而言，除舊佈新的意義是正面的，而留下舊痕跡是可能是預算有限，也可能是時代重疊之下的來不及同步的更新痕跡。

適取在英明街與北門路十字路口的四戶基地，由右而在分別可以看到建物的由舊至新、由矮至高，顯示出了歷來都市發展與規劃之下的痕跡。

現在在北門路與城隍廟之間的空間需求除了停車和居民市場的必經之路之外，北門路上樣式多元的建築門面、文化事業店面也常常吸引外地觀光客的轉進駐蹕。以上三項特色點便能促進推動在基地上營造一個融合生活、觀光和休閒的複合式空間。



**all in one**

Even though people may not like to live in an old space, they may love to spend one or two days living in an old place recreated. Some old buildings in this street have old wooden structure but new skin outside because those owners renovated their houses by time. Coping with the requirements of the visits and residents, leisure, tourism and culture, the site can provide an space feed different needs for different customers.

**SITE**

天時、地利、人和。

釋義

指在戰時的自然氣候條件、地理環境和人心的向背。

《孟子·公孫丑下》：「天時不如地利，地利不如人和。」

《孫子兵法·月戰》：「天時、地利、人和，三者不得，雖勝有殃。」

個人行為、社群活動，都會影響空間的造就關係；而既成的空間型態也影響了人們的行為活動。

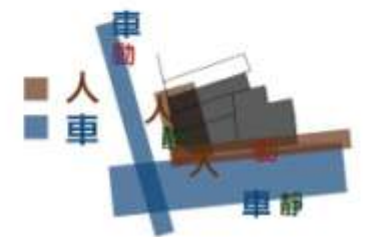
| 特色     | 問題      | 解決態度       | 綜合性      |
|--------|---------|------------|----------|
| 新竹文化街  | 舊形式不適應  | 新商業形式      | 住商混合區    |
| 舊式硬體   | 逐漸消滅    | 時空膠囊(歷史存留) | 舊結構形式保留區 |
| 居民生活維繫 | 沒有空間提供  | 行人避風空間     | 徒步區      |
| 區域交通要道 | 尖峰的無謂混亂 | 新舊結構用融合    | 駁船屋劃區    |
| 騎樓風氣   | 騎樓與不連續  | 停頓與切割個性轉移  | 駁船區      |

**program**

- Moter - 提供汽車進站 (獲得停車與指示資訊)
- Station - 提供本外地人暫留的空間 (日常娛樂、辦理住商手續)
- Hotel - 提供遊客體驗舊城區生活 (一日居民)



**His** 新竹生活節 **Live**  
**tory** 驛站 **tation...**



- 北門街文化生活館**
- HISTORY HALL** — 「北門街文化藝廊」。廊道、展覽、休頓、紀念品。
  - HISTORY LIFE** — 「一日舊活」。街屋內廊、廚灶、庭園、宿房。
  - CONTEMPORARY LIFE** — 「時代居民」。客廳、廚房、房間、衛浴。
  - LIFE STATION** — 「訂腳」。暫站區、茶水、等候與事務處理區。
  - ROADSIDE STOP** — 「歇腳」。歇處、補給、資訊、商品。

**自體呼應 混合環境**

內部多元空間型態外顯化。



### 空間需求與實際策略

此案宜為一複合式的休閒旅館會館，提供居住與市民生活休閒的空間。路口有提供鄰里街坊進出的駐足聊天空間，再深入則有街坊介紹活動宣導櫃臺提供城座廟區間相關資料，同時亦有輕食吧臺提供飲品咖啡。再進則是時光機似的私人旅遊空間，遊客可以選擇近三百年來台灣各時代的主題時代表演居住一宿。

大方向的设计是經過不斷地分析評估，其間必須有經由與人充分的討論而得。決定空間的主題個性之後，便進入細節設計。大方向空間設計訓練都市設計決策的眼光，而細節設計則是訓練空間操作的能力。平面圖與剖面圖的配合能清楚展現空間實況。

### Arrange the usage of space

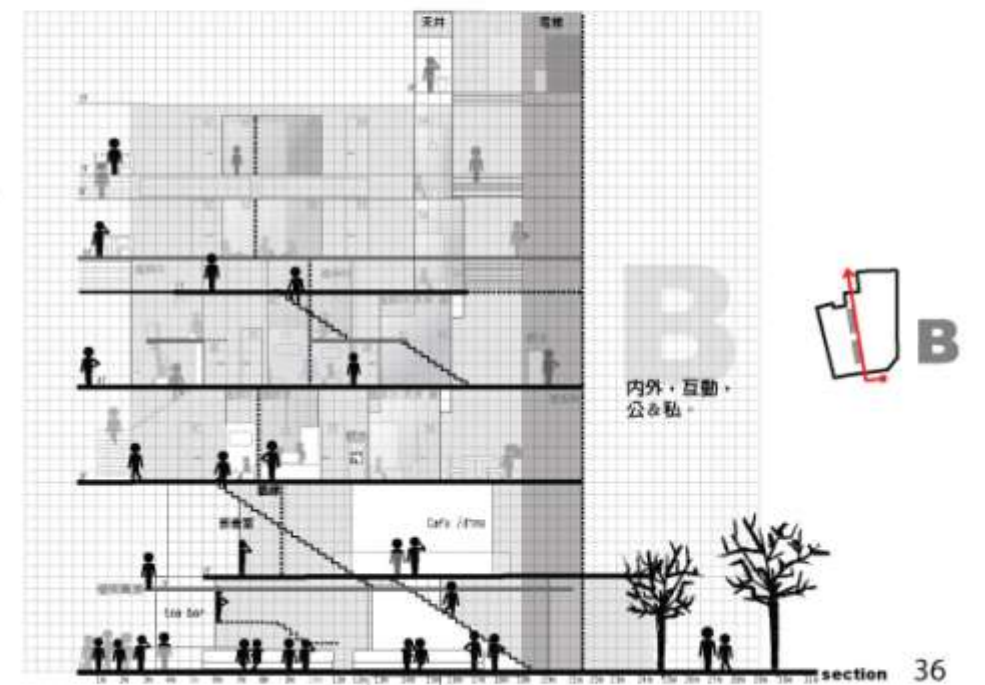
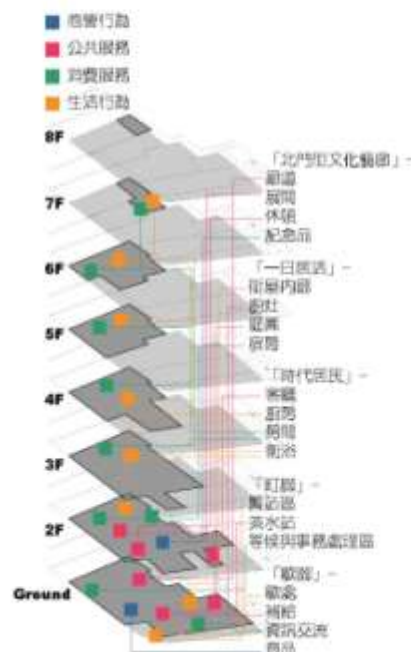
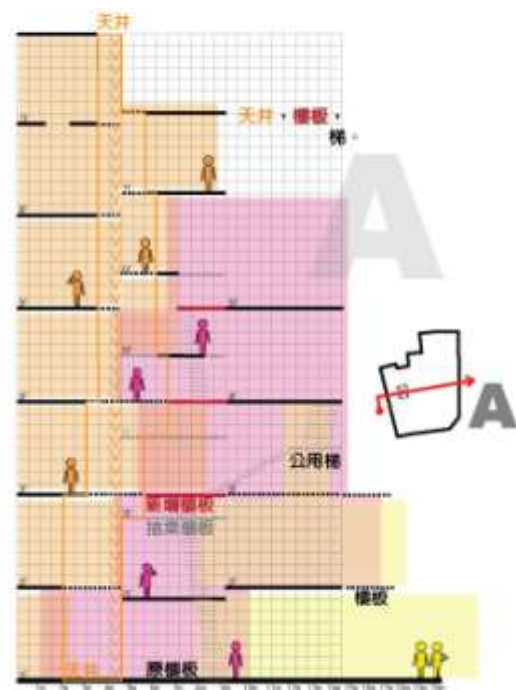
There are three parts idea in this project: community life, culture info and hotel space. It provides neighbors who pass by can talk a while together, passengers who need some tour guide can get information, visitors who want stay two or more days in HsinChu have place to live.

Most part space in the first floor is public space, people who won't spend money will be welcome to use the public space as well. Originally, there is a place people get together for chatting and waiting for friends, this spirit should be preserved.

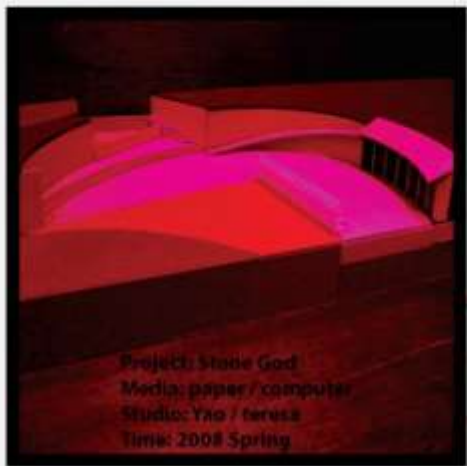
### Responsibility of design

When you design the usage of a place in this moment, the place will be used for decades. Design will affect a space for a long time. Big conceptual design is come from lots of analysis and discussions, designer learn urban design from learning big space decision. Nevertheless, detail design can train the designer learn how to operate the passage and the create usage in a space.

Plane drawing and section drawing not only help others understanding your design idea but also help yourself understanding well.



既有空間在各樓之間，存在著因為不同時代不同的樓高觀念而造成的樓高差，在新舊合併的過程之中必須要注意各層樓高之間的巧妙變化，層層往往也是出路的所在，不同樓高提供了使用者在使用時的關注，藉此以能進行城市紋理的宣導教育。

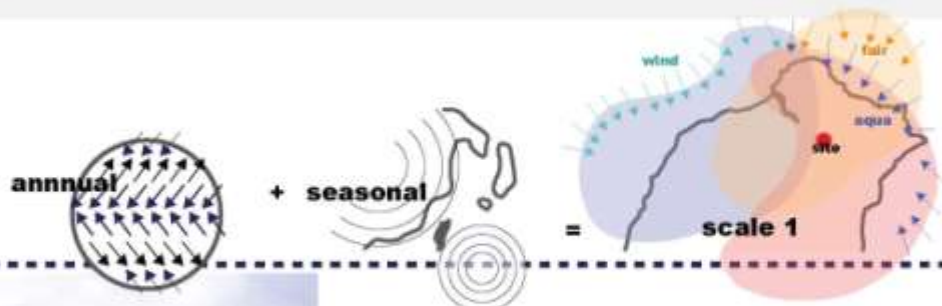
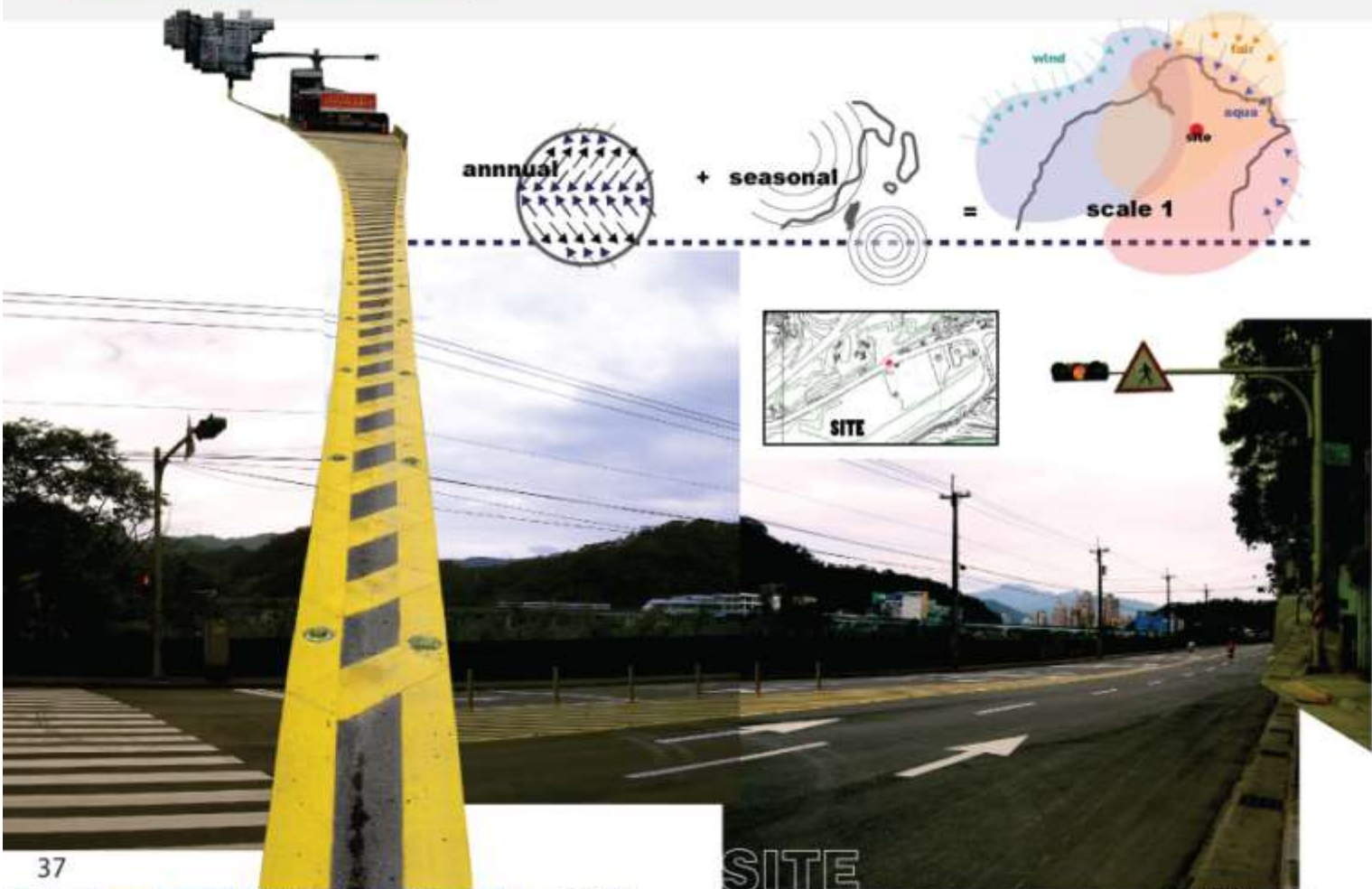


Project Stone God  
Media: paper / computer  
Studio: Yao / feresz  
Time: 2008 Spring

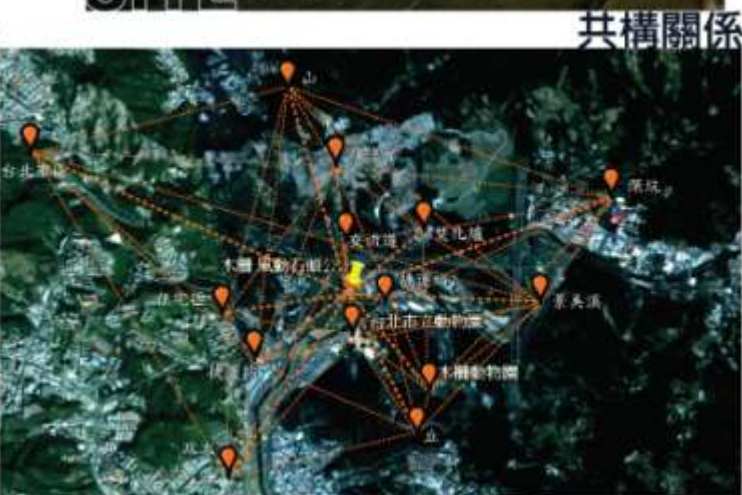
特殊地景研究

本案起位於一處台北市文化局手足無措的尷尬基地：文山巖石頭公廟。它橫置在台北往深坑必經的重要交通幹道上面，卻因為道路的多次施造而將此廟埋進了道路底下。儘管如此，廟還是存在，車輛也依舊終日繁忙駛經其上。文化局難啟精神處理此塊特殊地景，即看似動則得咎。於是特邀設計團隊提供創新的提案職能參考。

研究分析之初，設計者以一特殊專業學者身份對石頭公廟進行研究與分析，從得到的結論當作設計概念之初的切入點。本例為一氣象學專家對此基地的天候與地理交互影響的迴溯與預測，做出回應石頭公廟字基地的建議：20年後在溫室效應之下海平面即將上升，石頭公廟可能又回覆到初始狀態，繼續與環境共處。人與自然的關係不可能拆解，這是一個教育人民尊重大自然並和諧共高的機會。



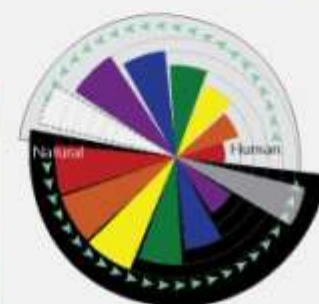
山丘谷勢  
景美溪河  
景美溪岸  
蓄洪池區  
夜總會坡  
交流道線  
焚化爐廠  
住宅大樓  
捷運站線  
動物園區  
怪手機廠  
小吃攤位



共構關係



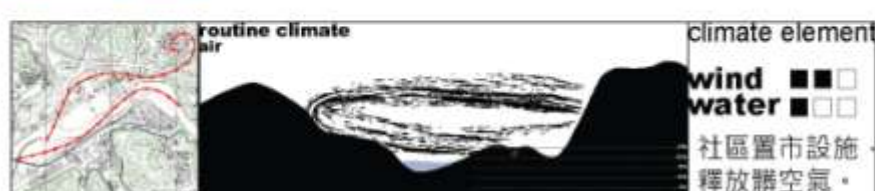
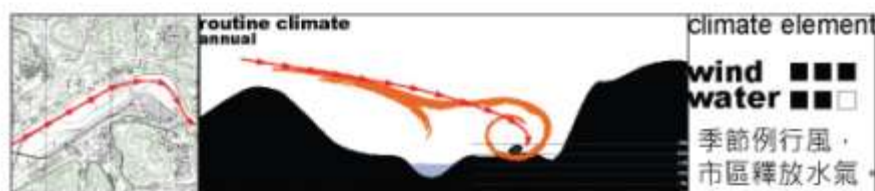
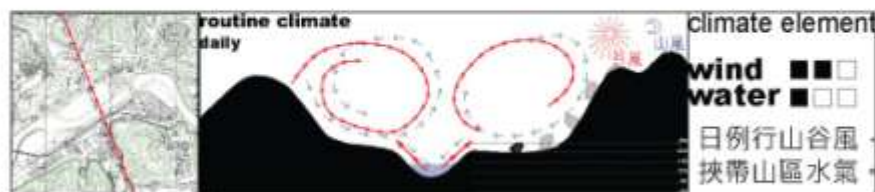
地球暖化  
(15年海平面上升10m)  
+ 3.25m



From a specific landscape

It is a site located in Taipei city belonged by Cultural Affairs Bureau of Taipei City Government, Stone-God Temple. Originally it was a big stone on the road which link Taipei and Shenkeng. When the time goes by, the stone was buried in the road but still consecrated as a Temple. Now people should go downstairs in the road to see the big stone. Cultural Affairs Bureau does not know how to do but really want do something on it and this project competition happened.

In the beginning, designer should choose a specific professional researcher doing analysis on the Stone-God, in the team there are experts of sociology, archeology, geology, statistics and meteorology research the Stone-God in the same time. In this project it is the case which talking about designer design a project from meteorology research.

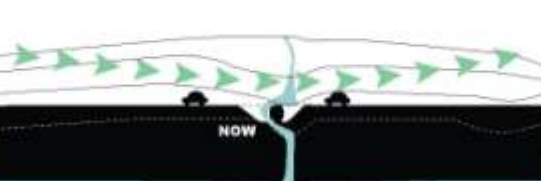
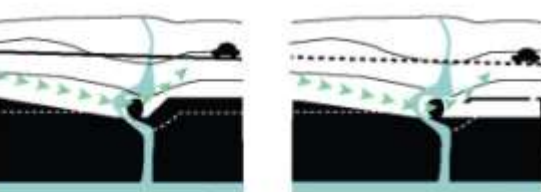
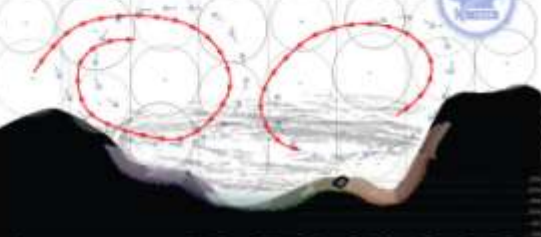


Meteorology element

Water and wind are the two roles in this performance. The big stone rolled down to the hill in the very beginning, to fire this thing up were water and wind.

After doing the classification, we can handle the situation about how big the water and wind affect the site before, now and event in the future. Although people cannot predict the future because it depends on what human beings treat the world, we still can do some, in objective way.

take the advantage of the various winds



STONE GOD

風壓實驗

配合地形型態與為了觀察風的動向，以模型模擬進行簡單的實驗，為的是要捕捉石頭公基地存在的風勢特性，將紀錄用以評估其影響力，將是設計上重要的指標。

顯取出風勢pattern加以歸類，不同種類的風勢的優劣個性以及可運用性可以決定設計的走向。並且由於「風動石頭公」最重要的特徵便是「風」，如何利用風勢與石頭公互動將會是整個設計的最大概念。

每日的山風與谷風重複擺動著基地本身，加上山形引進的季風與水分，在自然天候上可以給當地民衆很明顯的感觸，藉此，可以加以利用以講述自然與人文之間的關係，強調出人類的生活環境和大自然密不可分的事實。

人是目前主宰環境的主角，但自然氣候的力量漸漸強大，早期人類與自然的共存關係之間便是信仰，藉由自然物謙卑的早期人類祈求上天能夠提供安適生存的空間，文化於是乎形成。



Experiment of wind

To cope with the wind around the site, there is a small experiment recording the pattern of the wind in the site environment. It is a scenario helping designer more understand the site situation.

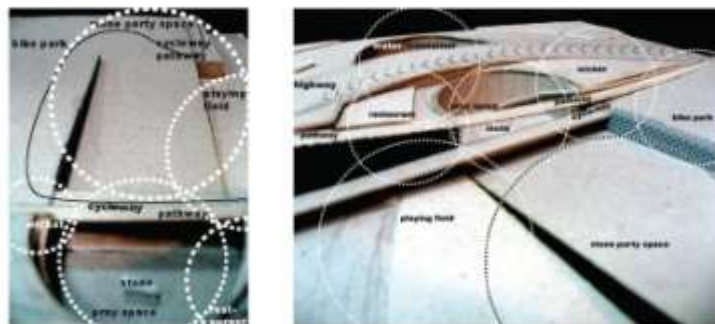
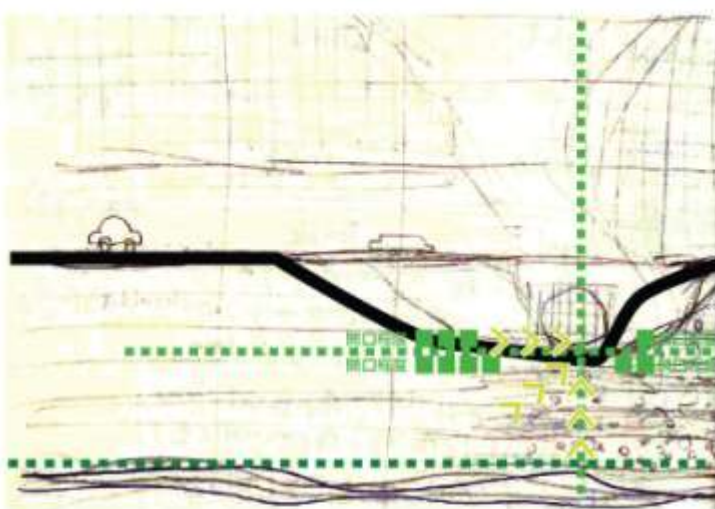
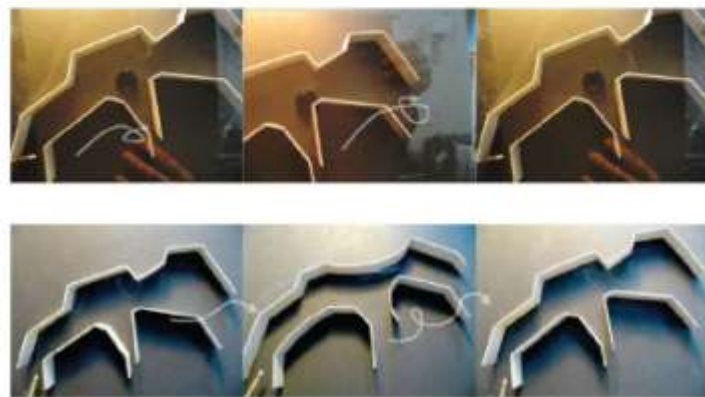
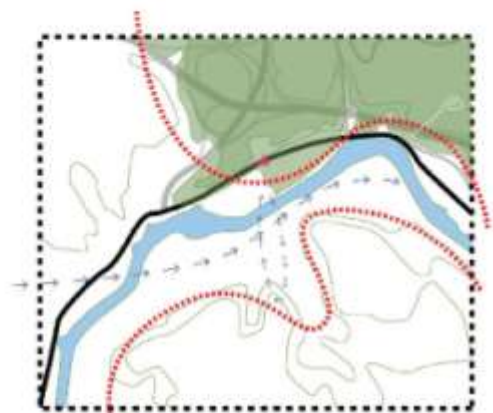
The wind everyday exist in the valley include the mountain breeze and the seasonal weather.

Mankind always think they are the king of the world cannot pay more respect to the Nature, the fact is that the Nature response the behaviors of human beings in more and more violent way. In old age, human beings were used to pray the God give them a environment to survive, that is one part of culture existed between the human and the Nature.

Infant scheme

Compare to the zoo, Metro stop, incinerator and river park those kinds of facility, the meaning of Stone-God is it's culture position in Taipei. There are too many cars pass by the road but few stop by. Actually, the government could create some public space there attracting people who want to go to the zoo stop by. Not only animals but also culture thing can make a family have fun and learning in weekend.

The fact is even now this area still have no enough parking spaces in the weekend time, only in that situation people will park their cars around Stone-God area. So it is a good idea holding a new private parking shop built by the government, it means holding a new BOT project.



Functions

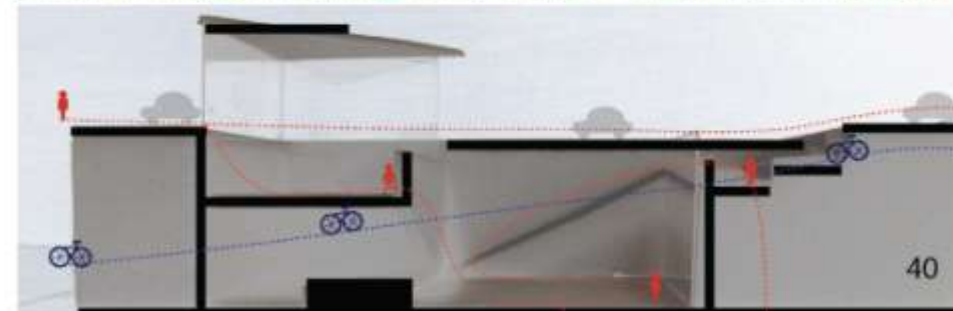
- kids 摸石頭/彩繪石頭
- family 腳踏車道/岩石燒料理/石頭藝術
- believer 頭好壯壯/石頭彩券
- people 石厝漫步道/社區精神指標



初步規劃

相較於到大基地範圍周邊既有設施諸如捷運、焚化爐、動物園以及河濱公園等停車場，石頭公的角色是別於它們的文化意義指標。石頭公目前人潮不斷停止的過渡帶，車流眾多卻沒能留住，原因是其缺乏一多元可用的公共空間，空間不是沒有，而是在那邊被廢棄棄著。

是故，延伸到動物園河濱依舊不剩的停車場空間，便能善用石頭公的腹地來做此一公共建設，利用BOT的方式民營經營複合式的停車場遂成為此一設計案的主題。



STONE GOD



文化性複合式停車場

首先在風動測試引導下可產生一聯應風勢的概念模型，能夠較長補基地上風所造成的現象，讓風動石公成為名符其實的信仰中心。另外在水流的引導與利用亦是一大重點：原本將石公沖刷而下的水流，與河岸交會而形成的三角洲地帶能作為一親子親水場域。至於最重要的人流與車流，決定了本案的用途程度，必須瞭解現行人流與車流狀況，然後規劃出合理的調整，保留住人流與車流，並且能夠使之停留以確立達到能夠字體經營的私營公共空間目標。

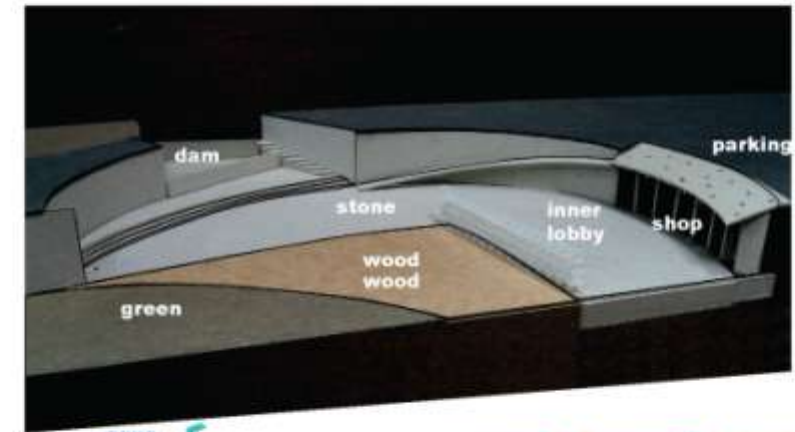
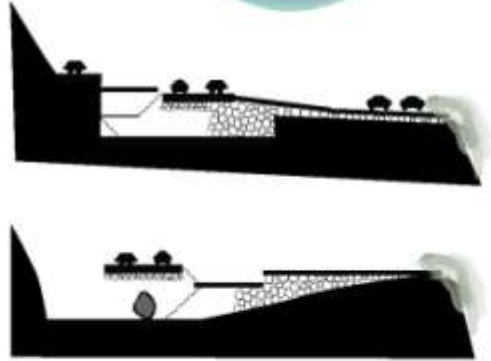
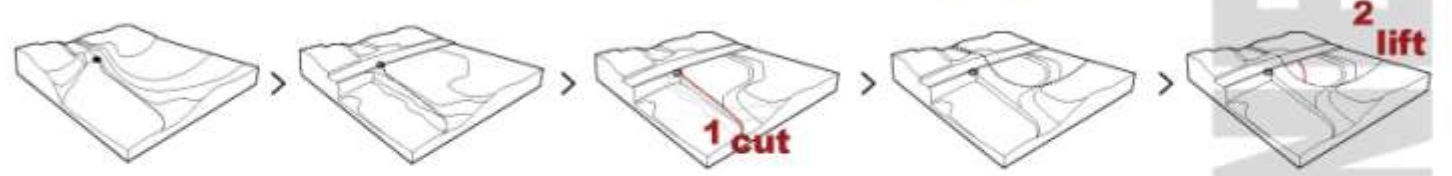
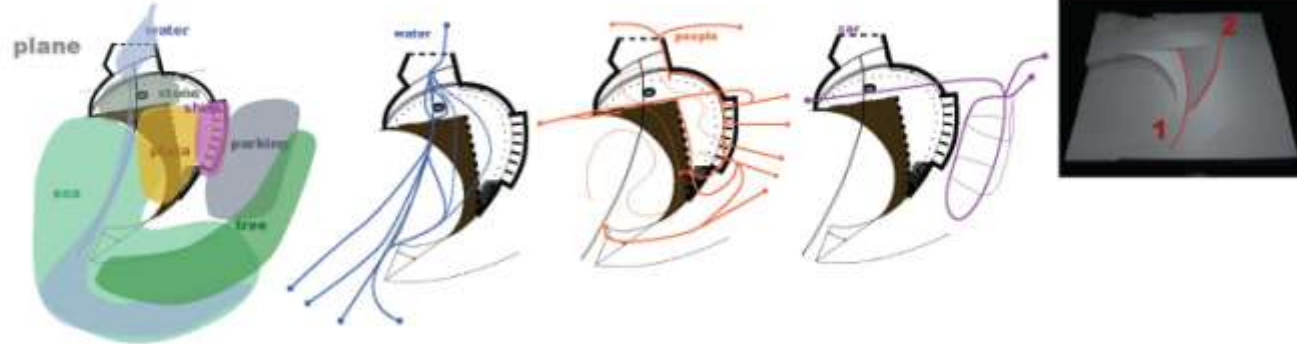
平面計畫上，大抵上開出兩刀重點結構，一為順應地理變化的河流切割強化，幫助結構的穩定與影響河流交流與合眾之間的關係。另一刀，則是根據此一停車空間需求而所做出的量體拓張，如此急能在適當地位置上，新填出停車收費管理小間兼為石公入口與親水廣場入口。

剖面計畫設計原則，是需要安排石公自身的安靜信仰場域和休憩輕食小店之間的平衡，這兩處性格迥異的空間必須達到和諧共處並且雙方向外都能得到大自然親水親切的景觀空間。

內部空間規劃必須以舒適的休閒與靜謐的信仰空間為主要考量，除了容納進停車取車的動物園遊客之外，另有一批必須定時上山祭拜的民眾進出，亦會將風動石公當作主要崇拜對象的信徒需要服務，最重要的是長期使用的社區居民，可以將此場域當作社區活動中心。

A cultureful parking space

To add more parking is the necessary undoubtedly, to raise the position of Stone-God is very important thing also. The thing is, maybe they can collect all in one. Image that, families plan having the weekend in the city zoo, but they find it is very hard to find some parking spaces, so finally they decide park in the Stone-God shop and walk to the zoo. In the afternoon time before they go home they will be tired and hungry, there will be the perfect place provide resting environment, and near their cars. Not only plane but also section design has its own point. Geography branch of the river across the Stone-God and it was the reason which caused the big stone drop by. The first cutting in the site is obeying the branch, it can be the structure also. The second cutting of the design is the entrance of the parking space, the ticket window. It is the entrance of the stone-God also. Inside the project has some café help people relaxes here. Actually, resident is the main role here, so there is a community center as well that people can held lots activities around the natural space.



Relationship between the wind and water

In this design wind and water is fluent not only in the surface but also underground. Opening the door for wind and aqua especially in the section of this project is the main spirit of the design.



STONE-GOD

## 實務經驗

建築設計訓練過程跨越包括學園環境與社會環境。學校時期的訓練，往往著重在純粹紙上談兵和純粹的實務操作兩個層面上，因為如此純粹，才能讓學生有充分的時間精神去體會極致的理性和極致的感性。而進入社會之後，才是實務上練習融合理想與現實的訓練。但當代校園時期的建築設計訓練不再放任學生僅只做兩部分的極端練習，而是在學期之間任何空檔或機會去體會實務上的學以致用。於是寒暑假期間，會有實習、課程之間也會騰出空檔舉辦 workshop 工作坊、甚至舉辦實際的展覽，或是利用設計課搭配題圖來規範學生在做設計時能學習掌握理論與現實之間的分寸。

寒暑假時期，最好的假期運用便是往知名建築師事務所實習或嘗試建築旅行，持續累積個人建築經驗。

校園工作坊的發生，是在國外知名客座教授來台時舉辦的短期設計家訓練，題目往往與教授的專業事務有關，可能是當代熱門議題，亦可能是正在進行的案子，藉由不同視界的師生討論與實作，達到教學相長的目的。

展覽活動能夠集結學生群的創意濃縮，透過再整理的動作，反覆思考醞釀每一件未完成的案子，畢竟建築設計案永遠只有 deadline，沒有結束。這也是幫助學生重新整理自己的作品有機會能推出參加實際競賽的過程，是踏出學園的好方式。

工廠操作可以拋棄過於學理的部分，全心投注在直覺和用性的勾勒，到達物件生成的最高績效。建築是由龐大的物件群所構成，學會掌握生成一顆小螺絲丁，那麼組構成一座城堡的能力將不遠矣。

## Experience of practical

The training processes of Architecture design include school period and social period. School will concentrate its force to teach student logical theory and pure factory operation, to let students feel the pure sense and sensibility. Afterward, when they graduate from school the society world will teach them how to compromise the actual environment gradually. However, now school can provide more. That is, during the vocation time between every semester in school, students need to do more plan to learn to enhance their ability about merging dream and reality in architecture design. There are several options they can choose to do during their winter or summer vocation. They are internships, architectural travel, exhibition and workshop.

In order to enhance personal experience of architecture that student should do some internship in famous architecture company or go travel during long vocation. Workshops always happen in campus or special conferences. Famous international professor can not only join the conference but also invited by university to direct one or two workshops that can learn international interactive by teach.

Exhibition is the extra collection includes many students' creativity in order to hold an exhibition, students must rearrange their works. Take advantage of the rearrangement students can think dipper of the case they thought already finished. Case won't finish forever, there is only deadline in architecture design project. Students even can join the suitable competition when they finish the rearrangement. That is a popular way that students can advance to society from school contemporaneously. Finally, practical factory operate can make sure ones practical ability is equal to his theory, that is the most important of all.

# PRACTICALITY



Program: workshop  
Studio: Jaakko  
Site: Rotterdam  
Media: computer  
Time: 2007 Summer



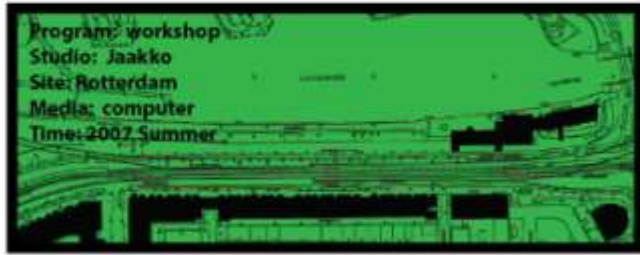
Program: Exhibition  
Studio: NCTU Architecture Department  
Site: Art Center, NCTU  
Media: paper / computer  
Time: 2008 Summer



Program: Internship / Exchange study  
Places: 創意中心 / ITR / AS Tainan / 田中央 / Yi-Lan / Sweden  
Time: 2006 Summer / 2007 Spring / 2007 Summer / 2008 Summer



Project: Furniture  
Studio: Mill  
Media: woods  
Time: 2006 Spring



火花研究-專題作坊

校園內的對外學術交流，發生在知名教授與大師，不定期地與學校或是校內教授接觸而受邀參加的交流活動。他們有時能夠在研討會或是提案會議之外，另抽出幾天寶貴的時間與學生進行短暫但是密切的交流活動。而此案即是其中之一，來自於荷蘭鹿特丹的Jaakko 與交大建築所學生所嘗試發展的作坊。

帶引團隊認識荷蘭第二大城，鹿特丹，經過事前簡略的說明之後，便是緊湊的分為四組，進入為期三天的作坊。期間，分為四組的architectural solution, landscape, program and section solution的人馬，必須以快狠準，的設計直覺提出創新的提案，與Jaakko進行討論甚至提報。而成員之間，也必須快速互相適應。

設計過程裡面最要謹慎孕育的主要概念與diagram於是像脫韁的野馬，得以不受克制地百花齊放。這也是專題作坊的主要精神，師生在過程中藉由不斷的討論而快速成長，甚至獲有不受成積。

四組都必須在規定時間內完成提案報告，各有精彩。這邊除了本案吾人所歸屬於的program solution小組，內容上亦有architectural solution, landscape solution 和section solution的提案結論。建築案鏖戰過程與之相仿類似，時間長短不等，是故這樣的經驗有助於學生在學校體驗畢業後會有的實務經驗。



WORKSHOP

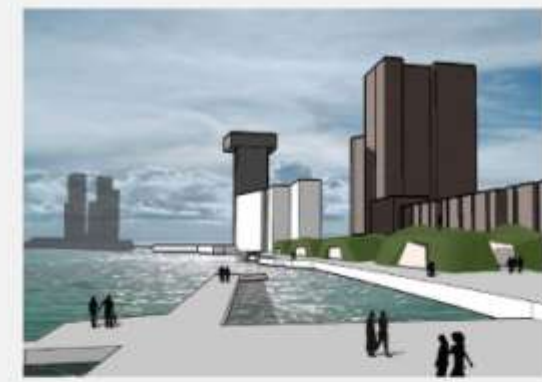


flashing workshop

Interaction outside from campus happened in the time that famous professor or master who invited by school. They come because of international seminar, and around the seminar they need to arrange a period special time for the workshop. This project is one of the workshops that director is Jaakko, from Rotterdam.



First of all Jaakko introduced Rotterdam for classmates and talked about the site situation. Then, the class divided into four teams as architectural solution, landscape solution, program solution and section solution.



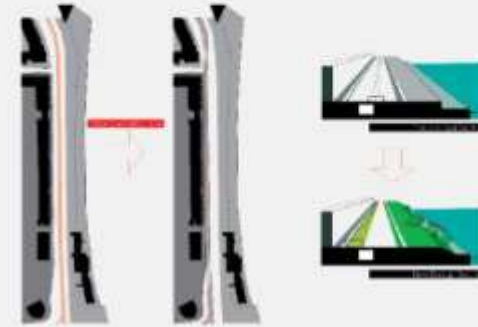
About the information Jaakko provided it seems like clear enough however, the team members still need lots information by their own way, everyone has his own opinion anyway.



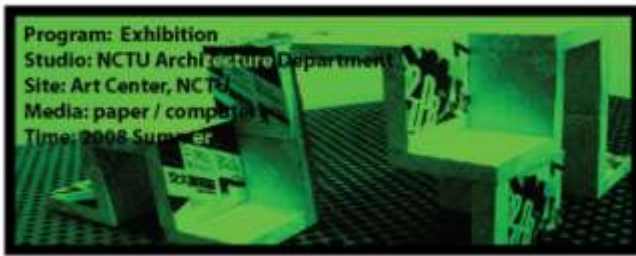
During the time, the four team should do presentation to Jaakko and even discussed with him with speed, resolute and exactness.

So everyone could release their vivid imagination in the workshop, it is the main idea that workshop need. Not only students learned but also the professor can learn lots from it.

Expect my team belonged to program solution group, here are three other solutions mentioned. This experience is very the same as practical process and helpful for students in school.







建築展覽

對外公開的校內建築展，目的是促進所上各組(設計組、學士後、數位組)的合作經驗，並且對外設置一友善的交流平台，供外界認識交大。建築設計首要溝通達到進步目的，是故將既有設計案再整理設計的過程不但可審視自身過往的設計，亦能對照他人如何呈現設計。

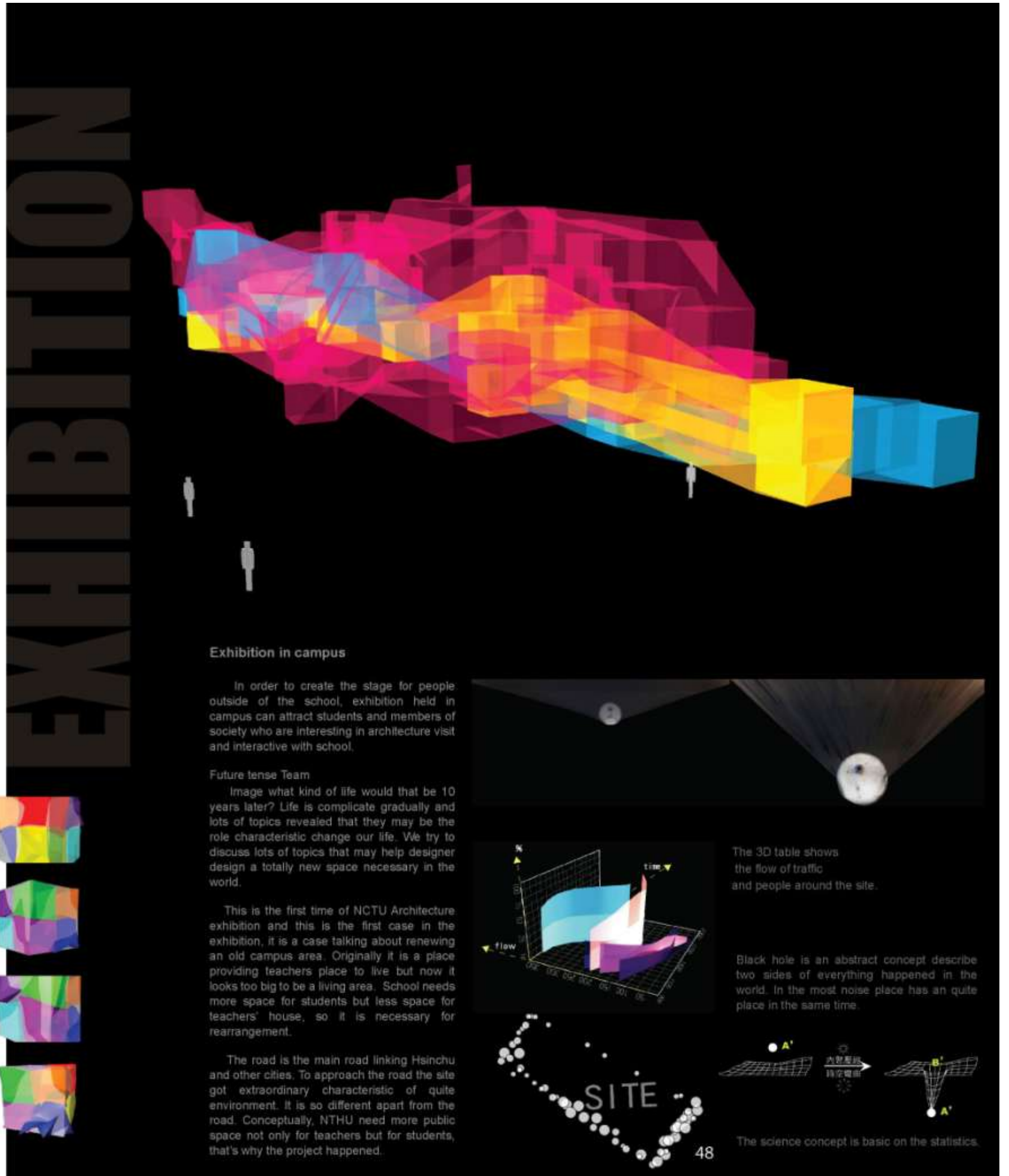
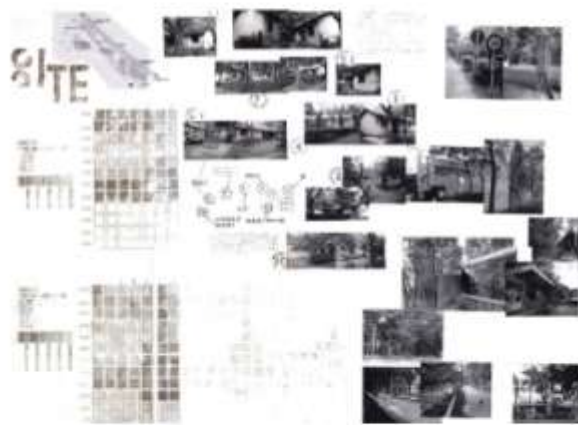
生活未來式(分組)

想像一下，你十年之後是怎樣生活？生活逐漸多元複雜，各個新議題的浮現，都可能是改變現今生活的關鍵角色。它們都應該有一個被完全探討的空間，用以假設將之置入未來生活的模擬經驗。

我們懷念過往美好的年代，所以將經典藝術家的精神哲思引入進空間；我們期待科學以等比級數的速度躍進，所以從基因重組上面根本的翻覆空間；我們也知道微型城市生活趨勢漸顯，所以在任何空間都應該有複合設計的想像。這就是「未來生活式」的初步探險。

此為第一屆的交大建築展覽，在本展覽中，我的設計是為代表建築所學士後建築組的第一案例，用的是在經過一連串設計訓練之後所做的第一次正式建築設計案，包括一開始的基地調查與統計、概念發展和型態落實等等。基地是新竹市光復路上的清大教師宿舍群，一塊需要保留其靜謐需求與必須加強空間使用密度的校地。

光復路是新竹市與他縣市之間連結最重要的交通幹道，環境品質與基地需求大相逕庭，卻又不能避免。於是必須利用設計的手法，將喧鬧區域找出來並用作他途。概念上是清大需要更大的宿舍密度空間，並且不僅專屬於教職員，另外還必須挪出全校性的公共空間。



Exhibition in campus

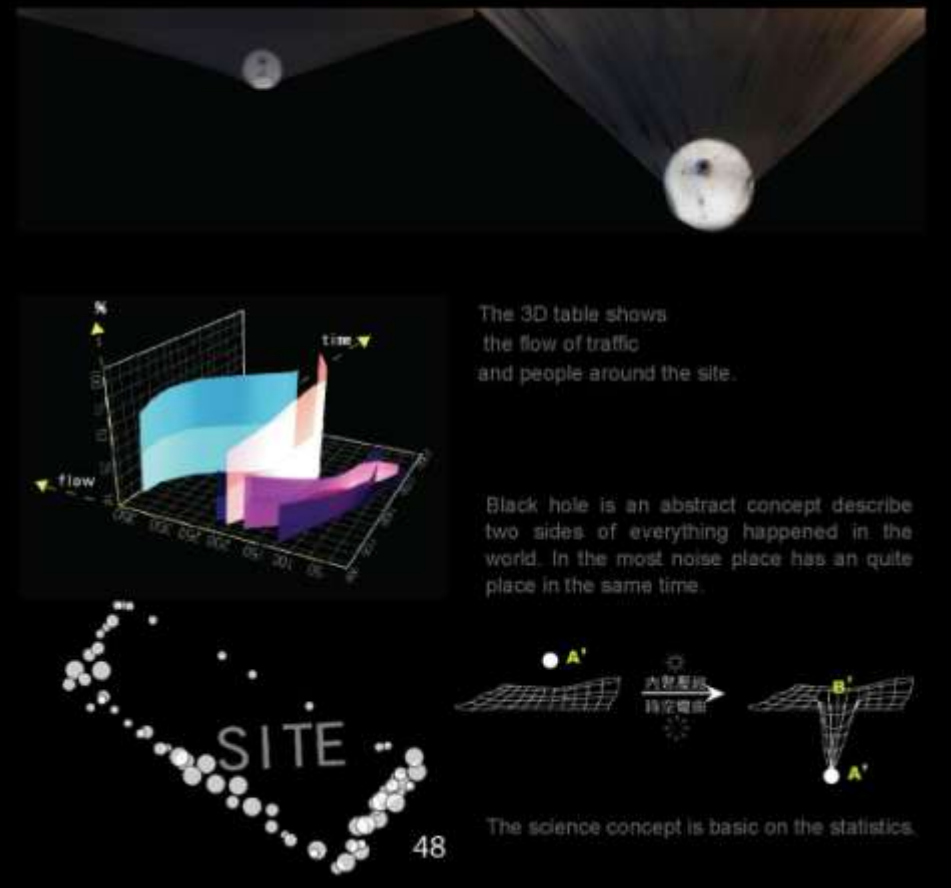
In order to create the stage for people outside of the school, exhibition held in campus can attract students and members of society who are interesting in architecture visit and interactive with school.

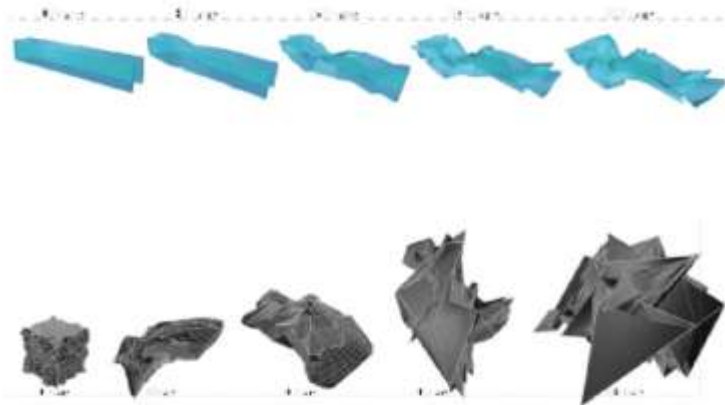
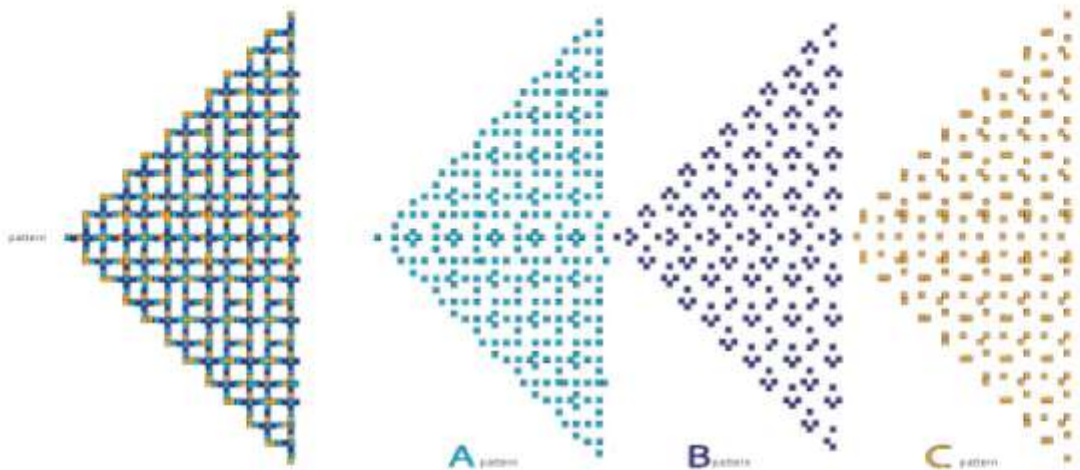
Future tense Team

Image what kind of life would that be 10 years later? Life is complicate gradually and lots of topics revealed that they may be the role characteristic change our life. We try to discuss lots of topics that may help designer design a totally new space necessary in the world.

This is the first time of NCTU Architecture exhibition and this is the first case in the exhibition, it is a case talking about renewing an old campus area. Originally it is a place providing teachers place to live but now it looks too big to be a living area. School needs more space for students but less space for teachers' house, so it is necessary for rearrangement.

The road is the main road linking Hsinchu and other cities. To approach the road the site got extraordinary characteristic of quite environment. It is so different apart from the road. Conceptually, NTHU need more public space not only for teachers but for students, that's why the project happened.





比鄰在最安靜而步調緩慢的校園區和最熱鬧繁忙的重要交通線之間，該給一個怎樣的集合居住環境？相對論所謂的兩角色之間的相對性可否拿來作為對照並且深入去探討？悠閒的生活品質又怎樣轉換成可動可靜的居住複合校園空間？

解題的方法總是不只一個，在沒有正確答案的問題之中找到最適答案、人生的自我探尋，也不過如此模式。

真實的案件和理想的理論如何能夠結合在一起？建築師總是在最現實的環境之中掙扎著要保留住最純粹的設計理論，所以過程必定是從極端的矛盾的兩方面開始研究並進行，這也是此一設計的過程：我們從實地的基地勘查，一邊探尋特殊元素，也一邊從科學理論的邏輯發展創造一套設計方法，並讓他們在電火石光之中碰頭。

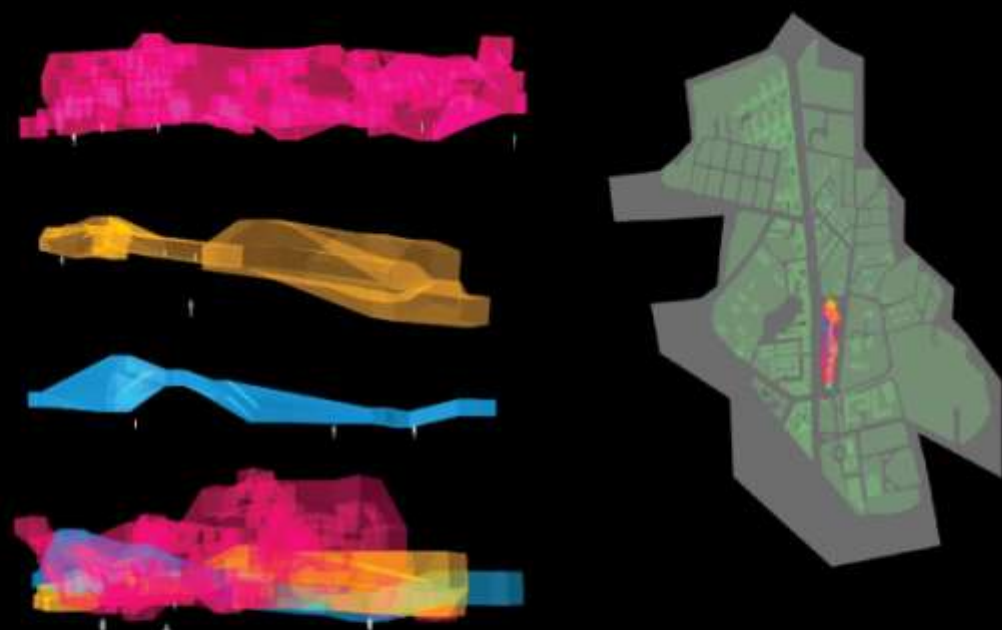
基地的現實狀況是一塊夾心餅乾，夾在最安靜的教授居住的校園，和最喧鬧的新竹主要交通幹道之間，在空間不敷使用的情況下，要維持安靜的環境品質，並且增加空間的使用；要維持基地原有給人的優質形象，並且加入未來必須使用的機能。這是一個新集合住宅實驗，韻律的形狀具現化、相對論的原理形式化，空間的屬性因此產生。



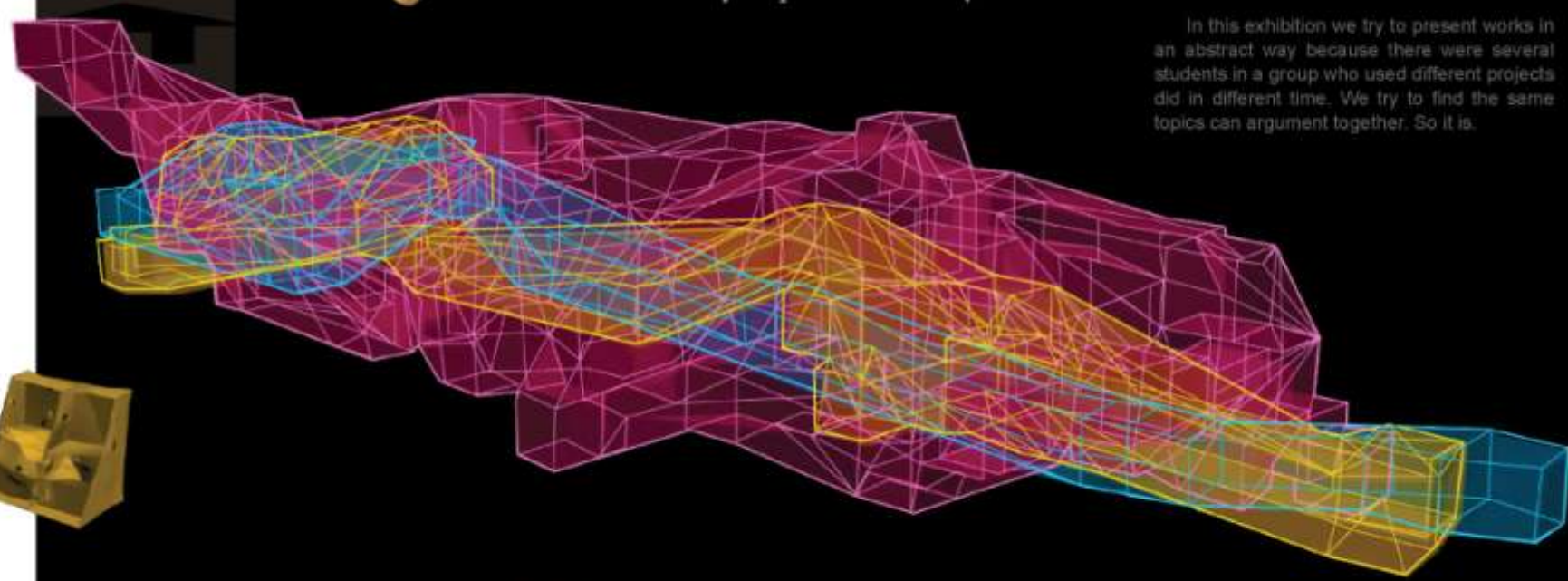
The site in reality is a sandwich, clamped between the quiet campus with professor residence and the heaviest traffic load of Hsin-Tzu. Under the desperate need of more space, we aimed at maintaining the quiet surroundings and increase the use of space; keep the positive image of the original site and add some necessary programs for the future. This is a new experiment of compound housing community. As the design went on, thus came into being the materialization of main rhythm, the formalization of relativism and the properties of space.

What kind of compound living environment should be offered on the border between a quiet and slow campus and a hustle-bustle traffic line? Could the relativity of relativism provide comparison for further discussion? How might the leisure life be transformed into the active-passive compound of living and teaching? There's never a single solution for any problem. The quest of self in life resembles the search for a best answer for a question of no standard answer. Life's just like this.

How can a real case combined with idealistic theories? Architects strive to protect the chaste design theories in the realistic life. As a result the process must begin from different polarities. This case is no exception. We visited and investigated the site, searched for some special elements while developing a design method through the logic of scientific theories. And clash.



In this exhibition we try to present works in an abstract way because there were several students in a group who used different projects did in different time. We try to find the same topics can argument together. So it is.





#### ITRI-新竹工研院創意中心

由大學的資訊背景跨至建築的過程，工研院的創意中心提供一個非常適合我的實習機會。如此，便能充分運用3D電腦繪圖結合新啟蒙的設計學習能力，透過實務操作截長補短的訓練。

工研院的工作範疇主要是針對社會的需求去驅動科技研發，產業出動前的實驗室。我在大學時代便已經在工研院的資訊中心作過實習，事隔兩年又重新回到工研院。此次實習主要為操作MAYA軟體，支援一互動動畫計畫。

#### Creativity Laboratory of ITRI

Creativity Laboratory is an important center of Industrial Technology Research Institute (ITRI) in HsinChu. I got a internship chance in information center of ITRI in 2004 and later in Creativity Center in 2006. My work was operated MAYA created 3D model in support of an interactive project.

work table



environment



INTERNSHIP

#### SAS-台南市曾永信建築師事務所

事務所實習是跟專業界實務最直截的方式，經過作品集審核與面試之後，長假中前往事務所上班。事務所內可學習的實務種類繁多，若鎖定目標與有專人帶領，可以加強學習和工作效率。

在此期間我主要參與的工作是景觀主題園宅競圖，與事務所網頁建置。



#### Architect office in Tainan, SAS

The direct way for students to catch up to the practical field is having an internship in architect office. The first real architectural internship I had is in SAS, Tainan. I learned affairs joining a competition and built SAS official web-site that time. It will help a lot if there is a leader teaches you how to do during the internship time. The main idea what you want to learn locked is important also.

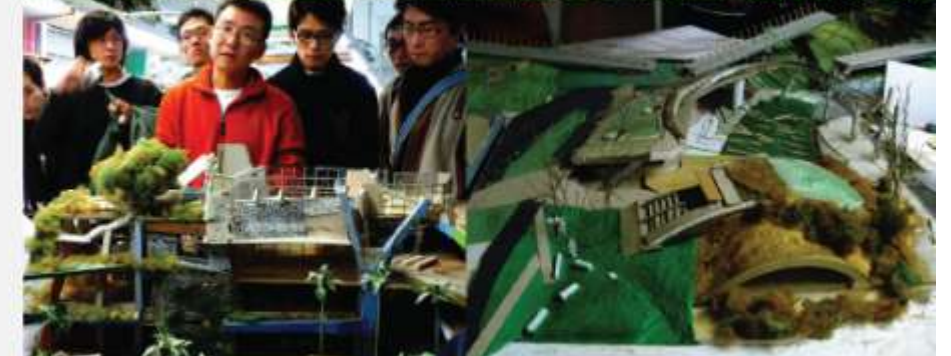
#### 田中央

位於宜蘭的田中央是建築師黃聲遠主持的事務所，堅持大部分接案都在宜蘭可及範圍，以企達到隨時觀察基地性情的方便，確保做出的設計能夠貼近實際需求不失手。在高教於樂的工作環境裡面，任何實驗性的操作都有成為實際案例的可能。事務所環境特色不一，在不同的事務所會有不同的學習方式和心得，這也是建築設計學習路上一項重要經驗。

#### Field office in Yilan

Professors Sheng-Yuan Huang is a very famous architect who has a office named Field office in Yilan city. Every year he invites several students join in his office doing internship works. The specific advantage work in Field office is you can enjoy yourself 100% in work, it just like games.

Every office has its own atmosphere it makes and learning how to adapt at every situation is a main topic learning how to be a good architect.



#### 各大學設計交流-

當代建築設計的學習過程愈趨豐富，除了前述的在校內接收外界資訊，與交流的工作坊和展覽之外，亦會走出學校，作團隊上的各校交流行動。除了長期固定和東海建研所8組作共同設計評圖之外，也有不定期與淡江建築、實踐建築、台南藝大和台科大等等大學建築系所，進行學習觀摩。甚至前往瑞典Chalmers大學作交換學生的經驗也是一例。



#### Interactive between Schools

It becomes diversity of the temporary architecture design learning. Except the interactive inside the school, schools also supply the chance walk outside the school that students could learn more outside his own school. My experiences of learning outside school included interacted with March 1 students of THU, students in TKU, USC, NTUST, TNNUA and etc. Moreover, I went to Chalmers University, Sweden, to be an exchange student.

#### 歐洲體驗-

眼界的拓展能夠直截活化個人的設計觀，在走出學校、走出所在城市後，走訪異國亦能刺激更多想法。在瑞典修習了瑞典語課程，還有北歐知名的永續發展課程與北歐建築研究、建築之旅，另見習其建築設計教育模式，並走訪北歐各國甚至南歐，體驗經典建築俯拾即是歐洲。

#### Europe Experience

Broad ones view could broad ones design thinking directly. After breaking the boundary of schools and cities, visit abroad could inspire more. In Sweden, I majored the Swedish language, sustainable development and Nordic architecture. Moreover, I saw the method of architecture design education in Europe, visited several Europe countries to see innumerable classical buildings in Europe.



#### Sustainable Development and the Design Professions

##### +Close-loop material flows (from Cradle to Cradle) –

According to William McDonough, things that cannot be digested by Nature (ex: plastic) should not be produced in human world. So we should stop producing plastic. That's so ideal. William McDonough mentioned a idea of Material Passport, which means that everything produced should has its own instructions, can help people use it as well as possible, because things always be dropped too fast even though they are still useful. Besides, he stated that we should produce things that can be totally reproduced. Today's science and technology can do it, that's no doubt, but expensive.

However, most of countries in Asia now are the developing countries, what developing countries need is to devote to the industry development to improve their commerce and economy. So, it is very difficult for them to consider that sustainable development is necessary. (especially one say that the only way to function sustainable development is stopping producing chemical products & greenhouse gas.) Although it seems like a mission impossible, it still is a guideline of sustainable development. We can find a compromise to deal with changing climate base on the statement.

##### +Backcasting (from Backcasting: A natural step in operationalising SD.) –

It means that we should not just forecast how terrible the future will be, we should try to image what the future life we want, and start to prepare for it now. In order not to exhaust the resource in the world, the writer John Holmberg creates The resource funnel that try to manage requirement and supply.

##### +Implement adaptation (from Climate Change Adaptation by Design) –

Climate keeps changing, sooner or later. What we need to do is not only changing our life style (to reduce Green House Gas emissions, passive attitude.) but also finding new design attitude to adapt the future life. (to create new method to design urban or buildings, active attitude.)

Class literature lists 3 kinds of scale to talking about how to implement adaption into Urban/Building design (the active attitude): 1-conurbation scale, 2-neighbourhood scale, 3-building scale. And as the article said, there are many cases already completed in the world. In some way, these show practical cases of Backcasting. So, sustainable development is no longer a fancy dream.

my personal strategy is:

1. All human being should be educated to know that the resource cannot be waste. (the concept of cradle to cradle)
2. All governments should establish policies that suitable for their own countries. (base on the principles of Backcasting and the resource funnel.)
3. All designers should treat sustainable design as a main attitude in practical case. (implement adaptation)



木全工藝訓練

工廠，是屢屢也屢讓人有成就感的地方。身為第一屆學士後，在工廠設計與搬遷的過程之中，全程體驗。另外，一整年的工廠課程讓實作能力部份得以完整。

主要事件為搬遷設置大工廠，木工集成桌椅，金工桌椅與裝置藝術三大項。

Handcraft raining

Factory is the place give human being exhaustion but accomplishment. As the first annual of March 1 in NCTU, we need to set up a whole new factory by our own, include arranged all stuff inside it. Moreover, the factory class maintained a whole year. It fully supplied students the handcraft ability training.

搬遷與木工集成

在一連串的工具操作訓練之後，一方面必須將機具搬往更寬敞的大工廠，另一方面也開始了第一套家具的集成與製作。木工是最貼近類比特性的一種施工方式，木頭的原始材質讓人類迷戀，成果往往讓人滿意。

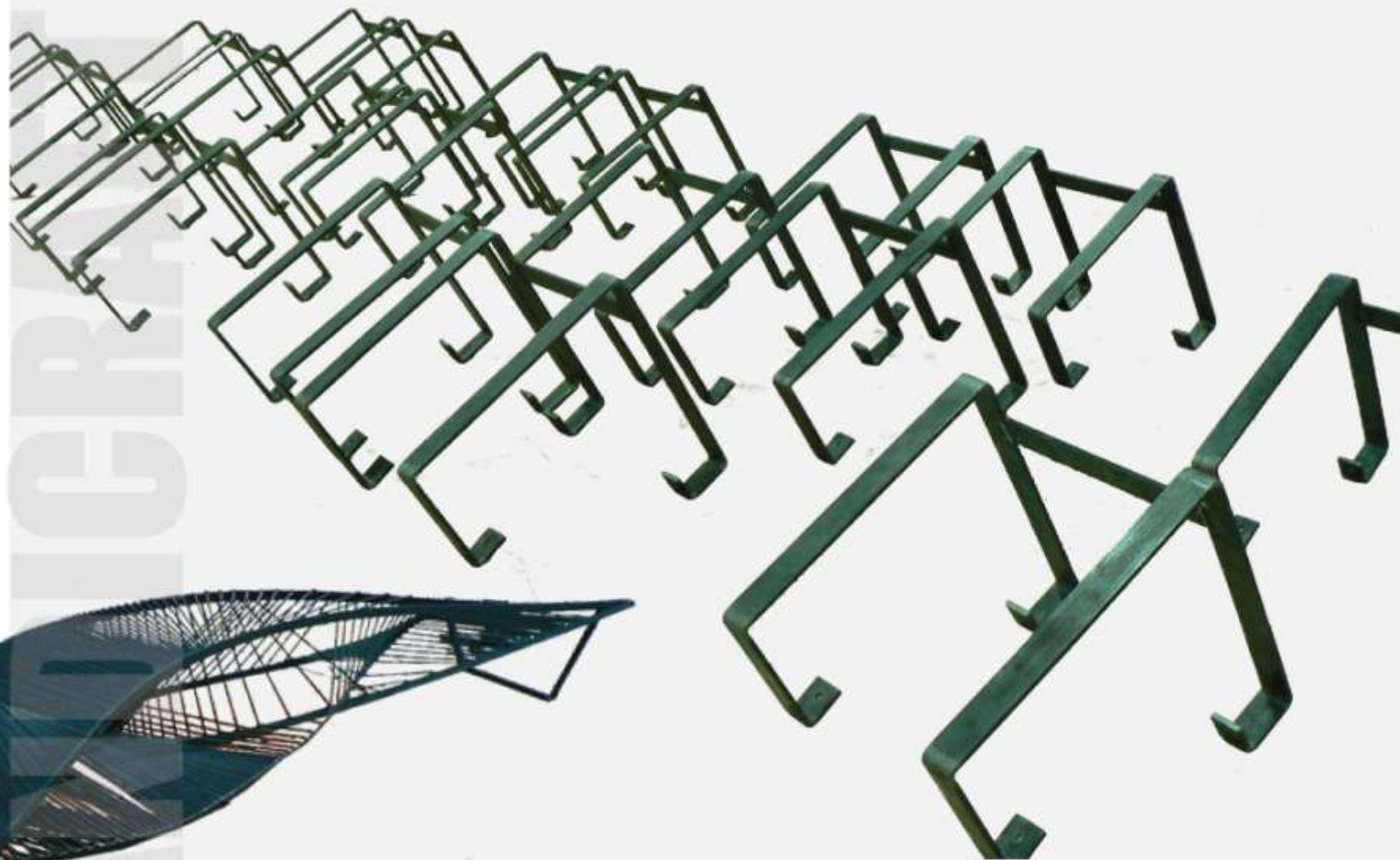
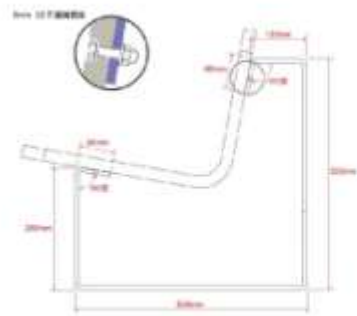
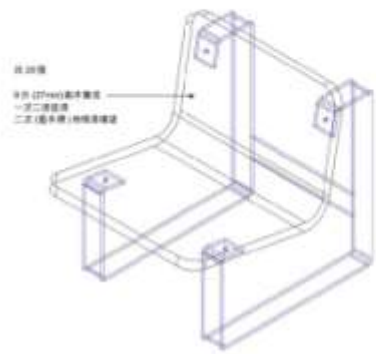
moving factory and woodworking

After the training of tool use, we got a bigger space so we need to move tools. In the same time we started the first set of furniture. Somehow there are analogies between carpentry and human handcraft when making construction. Maybe it is because the texture of woods.



HANDICRAFT





#### 全工桌椅與裝置藝術-

施行鑄工裁切與焊接成本較高危險性亦高，然而要維持物件成品的經久耐用，全工是很好的選擇。此案是與交大合作的校園公共空間裝置藝術與桌椅專案，必須作一套桌椅與數個裝置藝術物件置放於資工所大樓一樓中庭。

16套的一桌兩椅，兩個禮拜的七人工作，完全人力的生產線，是在研究所生涯裡回憶起來最懷念的一段，勞動換來實體的物件成果，頗能體會舊時代手工藝人的榮耀感。

#### Metalworking and installation

Making things by metal process can make things be more sustainable. It's a project in NCTU public spaces; we made a set of furniture for the open place use in campus.

That is the best memory I had in NCTU not only created 16 sets of furniture but also experienced the truly handcraft spirit.





## Diversity of Architecture

結語

嘗試著描繪出一路走來的線索。  
如果它們對誰來說，能有用。

