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Designing process involve seeing and abstraction. We have to learn how to see the form of buildings, the intention of buildings and how to abstract the buildings. To build a house, it includes designing process and construction process. Within the designing process, there are two steps. Firstly, we have to see the form. To see the form is to see the mass, the outline, the field and the element of buildings. We also have to see the intention of buildings, which are habitation, urbanization, tectonics and technics. Secondly, we have to ABSTRACT things.

To study Architecture is not simply to see the FORMS.

To see is to capture the key, interpret human's intention to build. To see is to matters the priority things and leave out the second priority thing. If you cannot see, you cannot be an Architect.

When we look at something is to study the FORM. FORM is composed by four parts: field, mass, outline and element. Let's use PING SHAN as an illustration.

### Mass

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Mass is the substances that make up PING SHAN. The hectares in PING SHAN are made of concrete, bricks and stone. PING SHAN

also composes with plants, lakes and hill. Therefore, to see PING SHAN, we have to focus on the materials used to build it.

### Outline

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Outline is the boundary of the things we want to see. Taking PING SHAN as an example, it is bounded by Tin Shui Wai New Town in the north, Castle Peak Road in the south, Yuen Long New Town in the east and the Ha Tsuen in the west. To see something, we must know where the limitation of our focus is.

### Field

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Field is the ground where buildings are placed on. We may pay attention to the landform in PING SHAN. Hectares are built on a slope. This may affect how the buildings are allocated. As known from the people living in the village, between the hectares, there are some water pipes under the ground. However, because of the slope difference, the pipes cannot be covered. This shows that one of the way to see PING SHAN is to look at the ground.

### Element

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Element is the substances outside our focus. The buildings which are not in the boundary is consider as elements. When we are seeing PING SHAN buildings like the Chinese University of Hong Kong are elements. We can compare the similarities and differences between these buildings, but they are not consider in a whole.



Some FORM could change while some remains constant. When a building is knocked down, the Mass of PING SHAN has changed. However, the Outline, the Field has changed. Buildings could be changed but the culture remains unchanged. To recognize what things change is essential to see.



## Aspect of form

### Structure

Structure is the rule of how buildings are arranged. For example in PING SHAN, all hectares are strictly forbidden to build higher than 27 feet. This allows all buildings to have the same height. Structure gives order to things. There is another way to see how PING SHAN is structured, pay attention to the streets. The houses are built in this way.



### Composition

The relationship between parts will establish a composition. In PING SHAN, since most people have the same ancestor, Tang, they are closely related. Composition in PING SHAN could be the relative relationship of people, or could be the trading cycle among people. It could also be the symmetric ancestral hall. The relationship between light and space could affect where the shadow of wall, hence affecting the function of rooms.



Pay attention to details. For example, people like to gamble near the ancestral hall, playing mahjong in some houses and children play in the playground. In order to find the answer, we must search. Search until you get the answer. You must know the function before you can design houses to fit people's need.

## *Form*

Outline

Field

Element

Mass

### Rhythm

Rhythm is the pattern of how the buildings are arranged. The difference in height of the buildings could be a Rhythm. The function of buildings can also form a Rhythm. For example, when we look at a street, there could be 3 residential buildings, follow by 2 shops, follow by 3 residential buildings, repeating or not.

### Complexity

Complexity means not simple. It could be the complicated relationship between people, especially people in PING SHAN are belong to Tang's. One could be the cousin and auntie of someone. A building could be a shops and on the other hand, being a living place of a family.

### Part – whole relationship

There is relationship between parts and whole. In PING SHAN, all hectares are built with the two ancestral halls as the centre. Moreover, the two ancestral halls are two distinct groups from other buildings.

To see something is not only to see the FORM's appearance, but also to interpret its FORMS. When we see PING SHAN, we should study the history, whether we interpret from buildings or heard from the people. We may also study the life, what people usually do and where they gather.

To see PING SHAN as a whole, we can study the form of it.

However, if we zoom in into every individual building, we can study the building in four areas. The HABITATION, URBANIZATION, TECTONICS and TECHNICS.

## Habitation

**H**ABITATION is to study human life. When people gather in a house, their habits will become the culture of that family, or even affects the whole village. Therefore, it is essential for one to study the HABITATION in the past, present and future, thus a house can design to suit their needs. Daily examples like table and benches are illustrated below.

**H**ABITATION is to concern the seating arrangement around a table, the shape of gathering around the table. Taking the eating habit as an example, there is a lot of differences between Chinese and Western culture. Chinese prefer to use round table while Western people uses square shaped or rectangle shaped table. This is related to the idea of family orientated in Chinese culture. They place food in the center of the table. Because of this habit, people share food from the same dishes. In Chinese words, it can be rephrased as share the happiness and bitter together.

In fact, buildings are places for people to live, that is why human is the most important things to study.



## Urbanization

**U**RBANIZATION is a larger scale of HABITATION. To study HABITATION of a hut, one has to zoom into the details, the happening inside the hut. In the case of URBANIZATION, it is to zoom out of the hut and study all huts together as a whole. That is the city.

City is built by one house builds up another house. As a consequence, to study a hut is to study the environment. What have happened in the past to the surrounding? In what way can we see a city?

A city can be destructed into layers and studied. There are 5 layers in the city, the part, edges, district, nodes and landmarks. By knowing these elements, the hut can build according to the environment. For example, it is not suitable to build a tall building in PING SHAN. This is because tall buildings represent importance. Ancestral hall is the most important building in PING SHAN, people have to strictly follow the rules.

Moreover, a building can use to explain some meaning. It is powerful. The ancestral hall is located in the center of the village. It represents it is the focus of the habitant. This affects how people build their houses.

**U**RBANIZATION is to study the past and present city, and build up the future city.



## Tectonics.

**T**ECTONICS is composition. HABITATION considers what the space is used for. URBANIZATION concern with what exists in the past and present. TECTONICS discusses what the composition, how the parts are ordered, the arrangement. Light is an example of tectonics.

Let's take PING SHAN as an illustration. TECTONICS is to study the relationship between parts and whole. How the walls are ordered, hence the light and space could affect where the shadow, which affects the function of rooms.

Besides, light and space, proportion of objects also affects the composition of a room. In the study hall of PING SHAN, tectonics will investigate the size and the location of the pillar, how one pillar is related to another. This may affect the structure of the entire building.

TECTONICS is important in designing a hut. Taking light as an example, the location of windows will become significance. The height and size of windows will affect the shape and direction of the shadow. It has to be consistence with the habitation of people living in it. There should be sufficient amount of light shining on to the working location in the house.

TECTONICS and HABITATION is inter-related.



## Technics

**T**ECHNICS focus on two parts, the materiality and method.

### Materials

Quality and appearance of materials matter.

Different material has different quality and characteristics. For example, most buildings in PING SHAN use concrete and bricks to construct. This is because concrete and bricks are not easy to break, using them to build walls enables the house to resist strong wind and not collapse.

Besides the characteristics, the appearance of materials is also a factor. PAVILION in BARCELONA has made good use of material. Mies van der Rohe has used different kind of marble to make walls. Reflective character and the use of the different color make the whole building become an art. Every building could have both practical use and at the same time, being an art.

### Method

One could look at the joint in order to study the method of technics, the way of how the building is anchorage on the ground and how the beams and column are linked. The TECHNICS that the Chinese used to build the ancestral hall in PING SHAN are appreciated. Without using any nail, the beam and column are cut to fit one another exactly.

TECHNICS is actually a kind of art. The method used and the material used could reflect how clever the designer is.

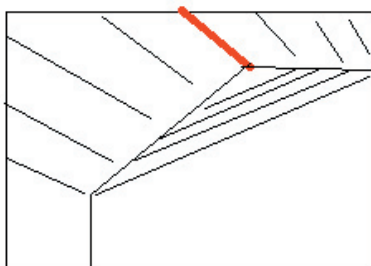
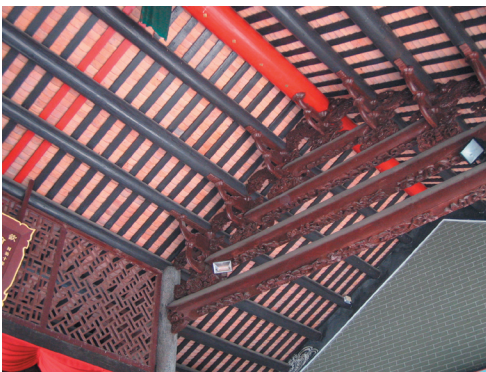


HABITATION, URBANIZATION, TECTONICS and TECHNICS are the four aspects of consideration in design the form of a hut. Without paying attention to them, the hut will become meaningless. No people want to live in a meaningless hut.

To see the form and the intention of buildings is not enough, we have to learn how to ABSTRACT what we need from the information we obtained.

To ABSTRACT is to select certain aspect of a concept from the whole. In the other words, that means we have to *remove* something that is not *essential*. Hence, how to *remove* something and decide what is *essential*?

How to ABSTRACT? The easiest way is to see the main form of buildings and neglect the details. Let's take Ping Shan as an example. Inside the villages, there are a lot of hectares. Instead of studying all the hectares, we could divide Ping Shan into districts. Every district must have its own meanings. For example, there are stores located on two sides of the entrance leading to ancestral halls. Therefore, this district is commercial area.



Another example to ABSTRACT is ancestral hall. To study ancestral hall, we can see the form of it. We might see the mass, the outline, the element and the field of it. Hence, we got a lot of information. From this information, we have to ABSTRACT what can best represent the ancestral hall. We study the beams and column in order to show the support system of the ancestral hall. It might not be necessary to study the decoration on the beams and columns as it is not part of your concern. Hence, by knowing what to take and what to withdraw help us to focus our study. However, how could we decide what is the *essential*?

The *essential* is the INTENTION. Every building must have their point of reference. The INTENTION could be habitation, urbanization, tectonics or technics. The INTENTION could also be a combination of all. When we want to abstract the buildings, we have to keep all these INTENTION. We can take Pavilion as an example. There are gaps between the floor, walls and roof in Pavilion. Mies may intend to design gaps in order to show a distortion that the roof is floating. In contrast, there is no shadow gap between the roof and the columns. This is because the columns are used to carry the weight of the roof. Therefore, instead of drawing the whole Pavilion, we can draw a picture which shows shadow gaps between walls and roof in contrast with no shadow gaps between columns and roof.

However, everything could have INTENTION beyond habitation, urbanization, tectonics and technics. For example the painting, the *Starry Night*, by Vincent Van Gogh 1889, flameless stars are represented by yellow and white circles. This means, it is not necessary to be the same with the real object, but we can understand what does it mean. This is because they share the common characteristics, both are shining. To ABSTRACT is to keep all things that show the characteristics of that object. This principle can be applied to our project. When we present our project in models, it is not necessary to use the real material to build it. For example, we do not need to use concrete to build the walls and glass to build the windows. Instead, we can use cardboard or wood to make the walls. They both define an area by separating interior and exterior. We may choose to leave a space or use translucent plastic papers for windows. Anyway, these materials imply that we can see through the buildings.



The most important thing about our method to present is whether it can communicate with the readers. We should ABSTRACT the buildings. By simplify and highlight the buildings help readers to understand our intention to build. A successful work should be able to tell a story without a lot of description.