A Bath of Ice and Fire
Geothermal bath design in Changbai Mountain, China
Yan Zou
Chinese Aesthetic towards to Landscape
Chapter 1

Into the Mountain

“Everything is interconnected.”

— Alexander Von Humboldt
After addicting to the Roman’s luxury bath palace, Chinese began to chase a Japanese nature-like hot spring resort. The nature-like environment costs abundant of artificial energy to maintain the whole system operate, for instance, the manpower, electricity, financial resource.

The hot water is pumped from pools to pools. The so-called “hot spring” is a result of boiler. In order to make a leisure feeling and the best service, the towels and the bathrobes are unlimited supplied. There is no control on the use of shampoo, nor napkin, etc. The waste water is just piped out in the area opposite the Biosphere Reserve Area.

In nowadays, most of the leisure value or aesthetic are built on the wealth. Leisure should be intangible and is made from may experience. Except the envy our friends have for us when we post the trip photos on Facebook, what are we actually looking for?
Chapter 2
Beyond the Valley

“The role bathing plays within a culture reveals the culture’s attitude toward human relaxation”
— Sigfried Giedion, 1948
Site selection is according to the height, the elevation, the distribution of hot spring, the slope, the aspect and, the last but not the least, the view corridor - Viewshed.
Chapter 3
On Site

“To bathe is to fall in step with your biological rhythms”
— Leonard Koren, 1996
How I define a great bathing environment?

...A place that awakens me to my intrinsic earthy, sensual and paganly reverential nature...

Leonard Koren
Water flows along the ramp. From hot pools to cold pools, the same from high to low, water-flow follows the ramp. The ramp is designed according to the topography. In order to maintain the whole gravitation networks, one pumping system as external power is required to transport the hot water from the lower land.

To provide ramps wherever stairs obstruct the free passage of pedestrians, mainly wheelchair users and people with mobility problems.

<table>
<thead>
<tr>
<th>Maximum slope</th>
<th>Maximum length</th>
<th>Maximum rise</th>
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</thead>
<tbody>
<tr>
<td>1:20 i.e. 5%</td>
<td>8 m</td>
<td>0.5 m</td>
</tr>
<tr>
<td>1:18 i.e. 6%</td>
<td>8 m</td>
<td>0.5 m</td>
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<tr>
<td>1:16 i.e. 7%</td>
<td>5 m</td>
<td>0.35 m</td>
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<tr>
<td>1:14 i.e. 8%</td>
<td>2 m</td>
<td>0.15 m</td>
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<tr>
<td>1:12 i.e. 10%</td>
<td>1.25 m</td>
<td>0.12 m</td>
</tr>
<tr>
<td>1:10 i.e. 12%</td>
<td>0.5 m</td>
<td>0.06 m</td>
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Bath/Path
Gravity flow water distribution system is designed together with the heat distribution system.

From hot pools to cold pools, the same from high to low, water-flow follows the ramp. The ramp is designed according to the topography. In order to maintain the whole gravitation networks, one pumping system as external power is required to transport the hot water from the lower land.
The depth of the pool is designed from 0.1 meter to 1.6 meter according to different function and position. For example, the sitting pool is designed as 0.5 meter.
The width of the pool is designed from 1 meter to 1.5 meters according to the slope.

There are ten bath areas designed along the path on the terrain. Each group offers a special scenery. The distance between each group is considered by the view.

A reservation system is needed.
With the help of the heat, some vegetation can be invited to the bath. Along the ramp, the higher temperature brings the vitality for specific trees. In spring, some trees will bloom earlier. On the contrary, some trees can't tolerate the frozen will dead in winter. In short, there will be a special vegetation layer along the ramp and the pools.

The heat source locate on lower land. There will be some greenhouse nearby to attract more visitors in winter. Some cold water can be pumped for shower use.

Vegetation is selected by color, blooming time, fruit, texture, aroma and herb as well. The new vegetation is along the ramp, it also helpful to block the view from the others. When people soaking in the pools, they are also enjoy the atmosphere that created by the vegetation.
Bath Stories

_ An experience between Ice and Fire_

The project aims to design a bath as spiritual renewal as physical cleansing. Slower pleasure in waters help us to reconnect us to nature in an increasingly water-stressed era.

Nudity companions as a catalyst for creating community.

Ergonomics and topography fit into the pools, thus creating a unique temperature-scape that heals.
Story 01 - Breathe Soaking

Shinrin-Yoku
Health benefits of walking
- forest-bathing
- the calming,
- restorative power of simply being in a forest or among trees

“In 1982, the Forest Agency of Japan first proposed a new movement called ‘forest bathing trip’ (shinrin-yoku) to promote a healthy lifestyle,” Li explained. “Now it has become a recognized relaxation and stress management activity in Japan.”
Story 02- Green Box

Shining Box

The greenhouses are distributed at the corner of the path. According to height difference of the slope, they are designed in different height. The taller ones are for trees and the shorter ones are for flowers. Besides, the visitors can go inside the garage greenhouse to take a rest. They will offer a fresh color in the white winter.

Even though you are not here for a bath, you can also enjoy a new scenery that benefit from the heat source.
Story 03- Feet Pools

Relax in the climbing.

At the specific aspect and height, the feet pools are offered. The seats are towards to the waterfall.

The feet pools are also for the normal visitors. They can enjoy a different view upper into the valley.
Story 04 - Shower with Plants

Eco-friendly

Closets are designed as changing rooms. In order to offer some place for the vegetation, the shower place is designed in a circle shape. Shower/conditional are strictly controled here in the shower room.

Waste water collector is underneath, it also works as a structure.
Story 05 - Alternate Inside and Outside

Cave/Inside

There is a tropical garden in the top cave. It is designed as a hot water tank. The hot spring was pumped to here and then distributed to the bath along the path by gravity.

Platform/Outside

The platform offers a feeling that soaking into the air, surrounded by the forest.

View on the platform
"In and out breathing, the speed of blood couring through your veins, the slowness of tiredness...
The mechanical world of objective time—seconds, minutes, hours—is irrelevant here. Taking a bath properly requires being able to guiltlessly linger, hang out, or do nothing whatsoever.”

— Leonard Koren