

T H E C L I M B

Investigating the ramp as a three-
dimensional element in architecture

„[The ramp] thrives for architectural infinity.
[...] It directs the view skywards leaving
unkown what is at the end of the road.“

AMO, Elements of Architecture

„The spiral is linear, but exists in three dimensions;
it defines space without strictly containing it“

Frank Lloyd Wright

The ramp is often perceived as a one dimensional object.

It takes you from A to B.

It is a path and - though it might take a turn - it seems linear.

It reminds us of gravity and friction.

It „wastes“ space.

It symbolizes democratic access for everybody.

It moves the people up the tower of babel toward the sky.

It is stressful to climb.

It rewards us with the moment of „reaching“.

It does not need a start or an end.

Its only characteristic is its obliqueness.



*Eadweard Muybridge's studies on the human body
and its interaction with ramping grounds*

This project breaks down the definition of the ramp as an architectural element to its core characteristics. By re-puzzling these characteristics, an attempt is made to create and define space with only the ramp and its encasing room.

The ramp therefore becomes a three-dimensional object, creating spaces on, under and inbetween itself. It encourages encounters, allows shifting perspectives on its three-dimensionality and plays with the user's perception and expectation.

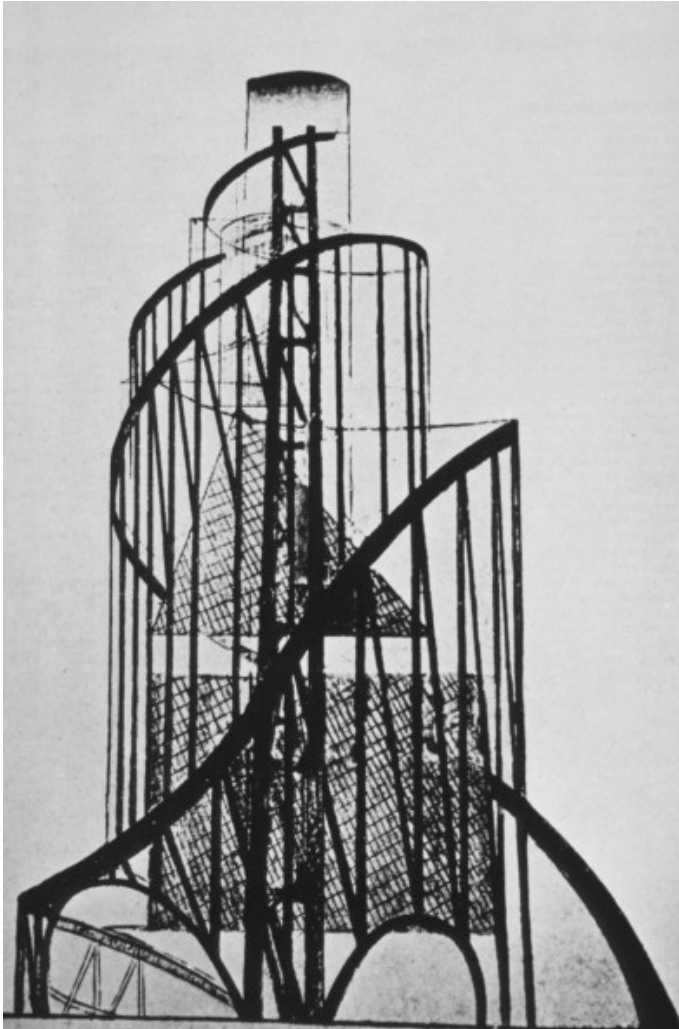
It becomes space itself.

It personifies Momentum and Velocity.

It is a symbol of lightness.

Imagine climbing it. Imagine going upwards, step by step. By the time you reach the top you might be exhausted. You have changed. You went through different encounters with other people, you gained experience on different perspectives. Moments will have passed.

The ramp becomes a symbol of time. Of time and space.



Much like Tatlin's design for his Momentum to the 3rd International (1919-1920) the ramp contains spaces. In Tatlin's design different geometric figures, containing rooms, spin at different rates. It - in a different way - symbolizes time and space.

Vacuum is all potent because all containing.
In vacuum alone motion becomes possible.

Kakuzo Okakura, The Book of Tea

The Cave

The encasing room of the ramp needed to contrast with it, in order to further emphasize the characteristics of the ramp. It needed to

be dark
be rough
be sturdy
be heavy
be calm
have hard edges
be inert

Considering this, a space was designed that resembles an underground, cave-like structure. The walls are of stone which someone seemingly made the effort for to be cleanly cut. The material extends over the ceiling. The floor is covered in sand so it makes a soft, nurturing ground for the ramp.

It is clearly a man-made space but it is left for interpretation if it ever was, still is or ever will be in use. The cave quickly became a rather un-inhabitable room, only guarding its twisting and curving intestines - the ramp.

„I kept going, and in the distance I saw a sort of light coming from the grotto. [...] I said to my wife, this is where we were born, this is where we came from.“

Paul Virilio on Lourdes and the Grotto

The Ramp

The ramp grows from the sandy ground. It twists and turns upwards and peels through a large portion of the cave. It is captured in this dark room, seeking its way out and finally breaking through the ceiling. During the design process multiple parameters for the ramps design were tested. These included:

- steepness
- width
- tilting (in axis of width)
- curving x/y axis
- curving z axis
- splitting and re-connecting
- contact with floor, roof, walls
- (visual) weight
- structural system
- material

After testing various combinations of differently set parameters a clearer vision of the design could be acquired.

Momentum and Tension

In order to adequately represent momentum and build up tension the ramp needs to incorporate certain criteria.

In order to show momentum, it needs to

- be constantly rising
- be constantly curving
- vary in steepness
- vary in width

In order to built up tension, it needs to

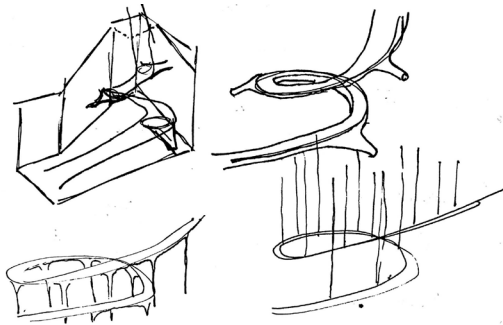
- built up strong contrasts with its surroundings
- create surreal moments
- joke about the common definition of a ramp
- create dialogue between itself and the room
- as well as *with* itself

The decision was made to form the ramp following a slingshot movement. It starts its journey, gains speed, moves through the room as it does not look for impact on the sturdy walls. It takes turns and seeks its path out of the cave. Some moments it takes up too much speed, and as it tries to swing around right before the wall, it stretches due to imitated centrifugal forces. Its aura pushes back the sturdy stone walls and creates a smooth dent in the wall. The user is confronted with the perplex situation of switched characteristics, as the sturdy wall is heavily influenced by the invisible aura of the light and instable ramp.

As the ramp constantly varies in steepness, it is free in creating different heights and spaces. It comes close to the wall, but not close enough for a user to be able to touch it. It overlaps itself and forces the user to squeeze beside it or dodge it. It offers shortcuts where the user can pull up to a higher level of the ramp. Since progressing on the ramp is the only sense of time a user can acquire, he/she at this point makes a leap in space and time. As it widens it provides space to linger or rest. It forces users to have different encounters - passing each other, waiting for each other, avoiding each other.

The Suspension

The load-bearing structure of the design was to be questioned quite early in the design-process due to its great impact on the ramps appearance.



In order to emphasize the structures lightness the loads are carried by suspensions. Slim metal rods are placed accordingly to a one meter grid. Since the suspension represents the joint between the ramp and the room it takes both roles into consideration. It orientates on the meter grid of the cave and only appears when this meets the ramp.

The appearance of the suspensions depends on a correspondence of the two. Overlapping parts of the ramp share a single rod that pierces through the top layer. Sometimes the rods will be in the middle of the ramp and block the way. Users will have to make their way around them.

The Poetry

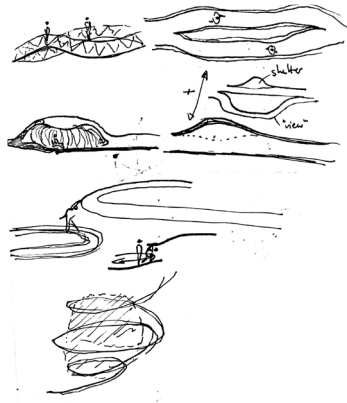
Besides creating tension and momentum during its development the ramp is a path. This path originates in the sheltering sand and rises up in a - on the first sight - undetermined way. It takes a route of lefts and rights, ups and downs, steeps and shallows. It symbolizes the path of life, starting in the mother's womb, developing with its easy and troublesome experiences and ending in the unknown that lies beyond the skylight. Right in front of the skylight the ramp becomes too steep to climb - the end becomes unreachable, it is so close and yet so far. The user cannot tell what happens on the outside, though, is intrigued by their own imagination about what to come. The idea of an after-life is being proposed. This after-life is attributed with freedom due to the absence of walls, with happiness due to the almost blinding light and with personal belief due to the sheer imagination it encourages. The ramp becomes eternal, since it is up to fantasy and dreams how long it might go on. This correlates to the concept of the ramp as a one-dimensional and - in this - infinite object.

The Process

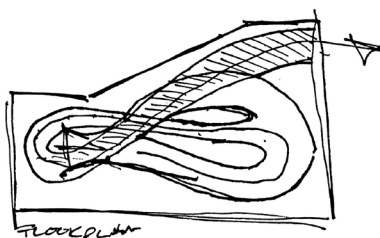
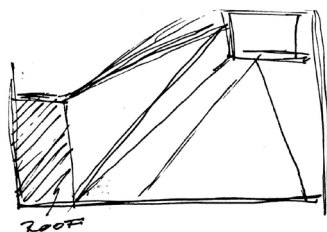
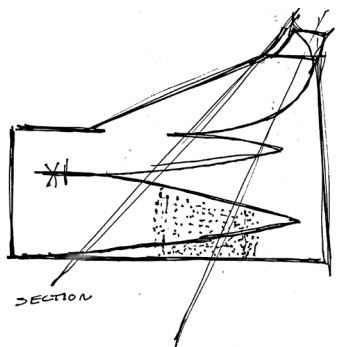


First design sketch, manifesting the concept of ramp and space. The ramp is introduced as a three-dimensional object.

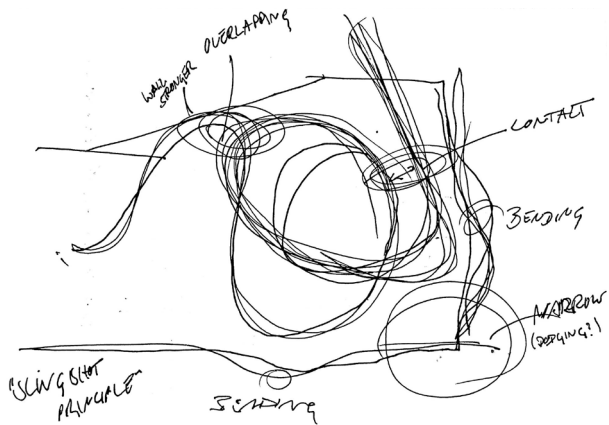
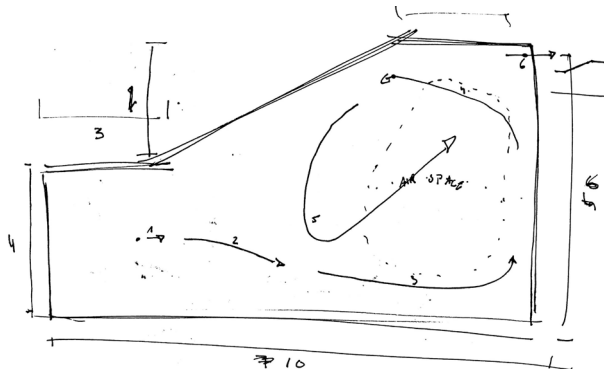
Investigation of the possibilities of shaping the ramp. What spaces can be created and how does interaction take place?



Designing the cave.
A dialogue between the
ramp and the cave is born.



Designing the path.



Justus Schaefer

Studio Cooking and Making (08-10/19)

Rotterdamse Academie van Bouwkunst

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