Soft edges, Hard edges

-A spatial experiment on framing

Joe Wu

Border conditions P5 presentation
28 June 2011
Aqueduct as a urban framing machine

How private sectors “USE” the aqueduct

houses attaching to the aqueduct.

Interactivities between urban development and aqueduct creating layering of edges
**Locations for investigation:**

- **Location A**
  - theme:
    - spatial transition
    - level difference
    - framing machine

- **Location B**
  - theme:
    - spatial transition/isolation
    - layering of edges
    - framing edges
    - deformed edges by rotation

- **Location C**
  - theme:
    - layering of edges
    - layering of permeability

- **Location D**
  - theme:
    - level differences
    - trace of memory
    - deconstruction

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Collecting information
Photography
Google maps street view

Photography analysis with theme as a filter

Methodology for mapping:
Location A:
Location A:

Selected Media

Block

Framing

Edges of framing

Transparency

Vegetation

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Map of spatial transition A:
Map of spatial transition C:
to clarify the edges for framing constructed by physical barriers, this edges is a three dimensional lines in a spaces, by this mappings, this framing edges can be seen as a changing line in a space by movement.
Location C:
Location C:

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Phenomenon

Mapping

Spatial transformation

Design

C.01

Blocking

Framing

Edges of framing

Transparency

Vegetation

C.08

C.02

C.03

C.04

C.05

C.06

C.07

C.08
Location D:

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Phenomenon
Mapping
Spatial transformation
Design

Blocking
Framing
Edges of framing
Transparency
Vegetation

D.01 D.02 D.03 D.04 D.05 D.06
Location D:

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Sampling of movement:

The paths were selected with opposed direction in the same space. The understanding of a space is completely different.
Spatial fragments of movement:
A series of my mapping of framing movement, two opposite paths was selected with taken photos, the location of taking photos was marked in plan and drawing of visual accessibility of visual framing, crossing and blocking. Two paths are askew, but if I read it as an alignment, like read those photos one by one as a construction of memory to remember the spaces. This alignment immediately creates different reading of the map as trace of memory.
Case study: Sonsbeek pavilion by Gerrit Rietveld
Architectural elements:

- Wall
- Column
- Pavement
- Roof
- Glass
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Phenomenon
Mapping
Spatial transformation
Design
Phenomenon I

Mapping

Spatial transition

Edges defined by lighting

Framing

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Phenomenon
Mapping
Spatial transformation
Design

South – North framing gird

East – West framing gird

Under the roof (5m pure height)
Under corridor (2.4m pure height)
Outdoor spaces
Spatial transition
Viewing point
Conclusion of this case study:

1 Three dimension framing is not a flat frame; it is constructed by depth of spaces with compositions of physical elements.

2 Framing also relates body movement. On other hand, framing can direct movement is spaces.

3 Framing is spatial transition can be visible and invisible.
Spatial experiment:

- Lines to be physical elements in spaces.
- How can I read the spatial conditions of intersections of lines?
Study model 1: **Extrusion**
- Lines to be physical elements in spaces.
- How can I read the spatial conditions of intersections of lines?

**Spatial conditions:**
- Spaces between lines
- Intersections of lines
- Voids of intersections
- Framing of intersections
- Cut of lines and line of being cut
Minimum ➔ Maximum

**Solid model:**
Interaction of lines creating new opening:
minimum openings / maximum openings

- Minimum openings: solid
  Blocking

- Maximum openings: Framed views
  Physical accessibility – circulations
  Level differences

**Frame model:**
vertical frames / horizontal frames

- Vertical frames: Framed views
  Visual layering
  Layering of spaces
  Field conditions
  Transparency

- Horizontal frames: level different
  Looking up and down framed views
  Stepping down
  Circulations

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Capturing the spatial conditions and qualities from the physical models by tracing the photos. The first, architectural elements to be imagined attaching to the aqueduct. Translation from physical models into human scale:

- Using graphic method to strengthen spatial layering by colored dark side of every element and put the people here to capture human scale in this spatial condition.

- Transparency is experimented, spatial conditions and architectural elements are changed, and frames in some way become boxes system. Frames as a surface become spaces with depth.

- Putting the aqueduct behind to see the relationship, how is the interaction between the context, program and user.

Translation:
- Spatial conditions
- Architectural elements
- Spatial conditions / layering
- Human scale
- Perception

Form surfaces to spaces > variation
- Surface wrapping

Context
- Texture
- Relationship with the aqueduct
This series of models is trying to read lines with different readings. The logic of the series of the models is going to level form minimum to maximum, and trying to generate spatial condition by different reading.

Strategies for physical models:

Contrast

Minimum

- Lines as walls
- Lines as paths
- Lines as voids
- Lines as folds
- Other experiments

Maximum

- intersections of walls / voids
- intersections of paths
- level difference, height difference
- roles of elements
- level difference, height difference
- paths for different users
- level of interactions

Lines as walls
Lines as paths
Lines as voids
Lines as folds
Other experiments

The models of void is created from the negative space of the model of fold.

Lines with thickness

Frames and grid. Frames as continuous spatial experience is defined by residential area creating the grid perpendicular to the aqueduct. The form is created by the continuous frames and provides a dynamic spatial experience. The program in this form is imagined mainly for the tourists, and it can be inside and exterior/interior, flat/oblique surface as a new landscape.

Translation from physical models into human scale:

Using graphic method to strengthen spatial layering by colored dark side of every element and put the people here to capture human scale in this spatial condition. Transparency is experimented, spatial conditions and architectural elements are changed, and frames in some way become boxes system. Frames as a surface become spaces with depth.

Putting the aqueduct behind to see the relationship between them, how is the interaction between the context, program and user.
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Phenomenon
Mapping
Spatial transformation
Design
Translation form physical models into human scale:

Capturing the spatial conditions and qualities form the physical models by tracing the photos. The first, architectural elements to be imagined attaching to the aqueduct.

- translation
- spatial conditions
- architectural elements

Using graphic method to strengthen spatial layering by colored dark side of every element and put the people here to capture human scale in this spatial condition.

- spatial conditions / layering
- human scale
- preception
- architectural elements - frames, paths.

Transparency is experimented, spatial conditions and architectural element is changed, and frames on some way become boxes system. Frames as a surface become spaces with depth.

- spatial conditions / layering
- Transparent layering
- preception
- architectural elements
- form surfaces to spaces > variation
- surface wrapping

Putting the aqueduct behind to see the relationship them, how is the interaction between the context, program and user.

- context
- texture
- relationship with the aqueduct
Trace of houses previously attaching to the aqueduct. Public sector is making aqueduct as one of travelling recourses in Rome.

How private sectors occupy space as “flows of energy and money into its completion”.

I see the Rome periphery as resistance between public sectors and private sectors.
Collage of programming:

We will part of the experiments transcend physical worlds into virtual ones by making a collage with the site contains of mobile walking systems. In the process of these experiments we explore different types of collage and the ways they can be used to explore the possibilities of new spatial relationships.

Let us consider the case of a collage where the collage is made up of different images, texts, and sounds that are combined in different ways. The collage can be used to explore the possibilities of new spatial relationships, and can be used to create new forms of expression.

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Spatial conditions:
- Make outside/inside transparent
- Make walls
- Make earth
- Make sky

Community Patio

Outdoor Theater

Gardening units

Gardening units

Landscape

Path

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**Site location and urban structure**

**Urban context:**

**Site sections:**
- Section A
- Section B
- Section C
- Section D
- Section E

**Urbanized areas**

**Urban fragmental areas**

**Urban phenomenon:**
- **Program:** Public village, Urban camping
- **Spatial approach:**
  - (1) An emphasis on abstract, monolithic architectural form that broaches minimal direct references or resemblances and that is alien to the dominant architectural modes of a given site.
  - (2) The development of smoothing affiliation with minor organizations operating within a context that are engendered by the intrinsic geometry, topological and/or spatial qualities of the form.

**Towards a new architecture by Jeffrey Kipnis**

**Urbanized areas**

**Infrastructure**

**Urban phenomenon:**
- **Program:** The economy of historical restitution is distributed into two orders. The first is archaeological: an endless exhumation of remains, rusty bits and pieces, fragments clumsily put together in make-shift museum displays. The second is historicist: a short fiction, accessible to the tourist, is reconstructed about what should be grasped as a universal moment. There is apparently no choice other than that of conservation or that of the memorial.

**Tactical Histories: Diller + Scofidio's back to the front:**

**Tourisms of War**

**Cultural Theory**

**Urban phenomenon:**
- **Programs**
- **Spatial approach**

**“Normative” view**

**Relative truth**

**Center**

**Periphery**

**Generic city, by Ram Koolhaas**

**Category**

**Scale and configuration**

**Superimposition.** The grid systems and the edges be a critical feature and analyzed at various scales for self-similarity and repetition. For the moment, the dimension of the grid is not a decision but for the experiment level.

**Possibilities for spatial transitions and connections.** Three characteristics in the sites, one is sandwiched by the residential area and the aqueduct, completely sandwiched by the aqueduct and the area facing railway with wider visual accessibility. The arches of the aqueduct are the only physical connection between those areas.

**Tourist:**

- The grid systems is limited by three edges created by aqueduct, residential area and railway.
- 8 meters perpendicular grid to aqueduct. The grid system here is developed from the mappings of relative relationships of parallel and perpendicular to barriers of physical elements creating different levels of physical accessibility and visual accessibility in the investigation.
- 8 meters possible parallel grid to the aqueduct and the railway.
- 5 meters possible parallel grid to the aqueduct and the railway.
- 5 meters perpendicular grid to aqueduct.

**For the grid perpendicular to the aqueduct, the context is developed for a new grid system which from the mappings aligned from houses. It has a stronger relation with the context and the mappings.**

**Scale and configuration.** This diagram showing what kind of possible space defined by size, scale and configuration.

**Superimposition.** The grid systems and the edges be a critical feature and analyzed at various scales for self-similarity and repetition. For the moment, the dimension of the grid is not a decision but for the experiment level.

**Possibilities for spatial transitions and connections.** Three characteristics in the sites, one is sandwiched by the residential area and the aqueduct, completely sandwiched by the aqueduct and the area facing railway with wider visual accessibility. The arches of the aqueduct are the only physical connection between those areas.
Context of the site:

- Dynamic and continuous movement
- Sequence of framing
- Static moment
- Static framing
- Reading areas
- Library
- Swimming pool
- Swimming lane
- Bath units
- Park
- Promenade
- Resting areas
- Resting deck
- Outdoor theatre
- Community center

Programming:
- Bath units
- Sitting areas
- Resting areas
- Indoor/outdoor
- Local residents
- Tourists
- Bookshelf areas

Sketches – framing system and movement:
- Color red is movement
- Areas of red are divided by framing.
- Rotation of framing systems directs movement
- Framing systems can be intersected
- Inside/outside

Physical models:
- Dynamic and continuous movement
- Sequence of framing
- Static moment
- Static framing

Systematical readings:
- Capturing spatial conditions and qualities from physical models by tracing photos.
- First, architectural elements to imagine attaching to the aqueduct.

Translation from physical models into human scale:
- Using graphic method to strengthen spatial layering by colored dark side of every element and putting people here to capture human scale in this spatial condition.
- Transparency experimented; spatial conditions and architectural elements changed, and frames in some way become boxes.
- Frames as a surface become spaces with depth.
- Putting the aqueduct behind to see the relationship between them, how is the interaction between the context, program, and user.

Themes:
- Spatial transition
- Level difference
- Framing machine
- Spatial transition/isolation
- Layering of edges
- Framing edges
- Deformed edges by rotation
- Layering of edges
- Layering of permeability
- Level differences
- Trace of memory
- Deconstruction
visual accessibilities for the site-path A:

Selected photos:

Framed aqueduct:
visual accessibilities for the site-path B:
visual accessibilities for the site-path C:
visual accessibilities for the site:
Rhythm of the aqueduct in the selected photos:
Rhythm of the aqueduct:

Visual division by the rhythm of arches of the aqueduct.
Interventions for the site:
Extrusion of the lines:
Visual accessibilities of urban level:
Intersection:
Voids and openings defined visual accessibilities of urban level:
Spatial conditions:
Building as part of framing:
Spatial conditions:

Selected photos:
Framed aqueduct:
Visual division by the rhythm of the arches of the aqueduct:
Intersections:

Spatial conditions:
Programatic level:

- Walking on the path seeing the aqueduct
- At theatre seeing the aqueduct
- In library seeing the aqueduct
Intersections:
Scale and configuration to define program:
Path:

- connecting all the programs
- providing travelling experiences to the aqueduct
- experiencing spatial conditions
master plan:
Three levels of visual accessibilities:

**Visual accessibility of Urban level**
- Void
- Solid

**Visual accessibility of Programatic level**
- Visual continuities / Movements
- Dynamic movements / Static situations

**Coincidental / accidental framing**
- Spatial surprises
- Movements
- Level differences
Section AA:
Sectional perspective:
Bird eye view perspective:
Perspective in the Library:
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Phenomenon  Mapping  Spatial transformation  Design
Section BB:
Frame system - steel frame:
- Water pipes
- Heating system
- Lighting system
- Air conditioning
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Mapping
Spatial transformation
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