04

PRECEDENT STUDIES

4.0 PRECEDENT STUDY

VILLA MAIREA

Client : Harry and Maire Gullichsen

Architect : Alvar Aalto

Location : Noormakku Finland

Year : 1937 - 1940

Motivation : This precedent study is necessary to investigate the use of a wide range of tactile materials in defining space. The building's use of material surpasses the visual realm to a haptic experience. Pallasma (1996:46) establishes that Alva Aalto's architecture exhibits a muscular and haptic presence.

Fig 4.01
Pallasma states that Villa Mairea's door handle is a reminder of the pieces of a tree branch

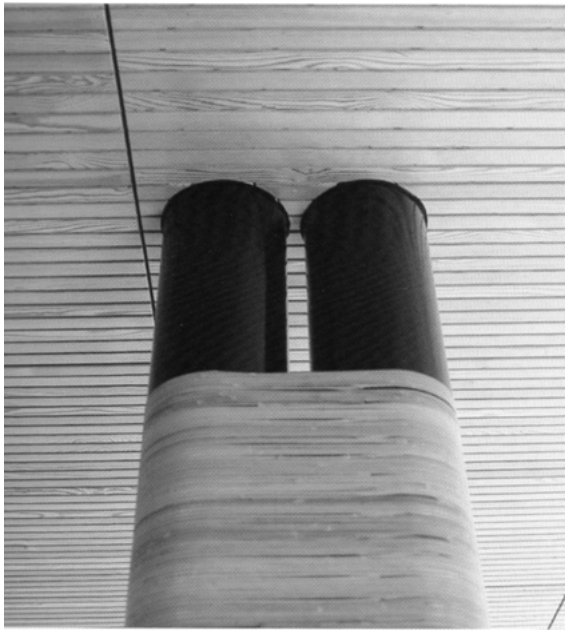


Fig 4.02
Aalto defined the junctions between different materials (architectural kiss) as a language of building.

Villa Mairea utilizes surface textures and details to arouse the sense of touch whilst enhancing intimacy and warmth. This experience generates a memory for each individual space. The architecture transcends the visual experience to a sensory realism which creates dialogue between the building and the individual. The building uses a juxtaposition of several materials which include amongst others; timber, concrete, brickwork, glazing. Apart from the use of materials, Aalto incorporates dislocations, skew confrontations and irregularities.

The building's spaces and elevations are characterised by multiple colours, forms and textures of teak, stone cladding, assorted poles, wood and metal railings, blue glazed tiles, lime-washed brickwork, weathering board and climbing plants.

Fig 4.03
The image shows the use of different materials

Fig 4.04
Entrance with climbing plants

Fig 4.05
Feature staircase

VILLA MAIREA

Alva Aalto's building responds to its contexts, and makes the context part of the architecture. He shows the exploration of the expansion of architectural space as an abstraction of the forest. This is done through the use of wooden columns and the presence of climbing plants as a feature on the main staircase. He draws the forest into the building through introducing full height glazing facing the garden and internal use of pine strips and columns. The use of different textured materials is used to define spaces.

Fig 4.06 The image shows the square in context

The house illustrates richness in the use of materials, comfort, closeness to nature, form, proportion and works of art. The house is built on opposing themes: nature and culture, the rustic and the urban, the primitive hut and the refined villa. These oppositions reflect a wide range of experiences the house offers to the occupant.

g 4.08 The image shows use of different materials

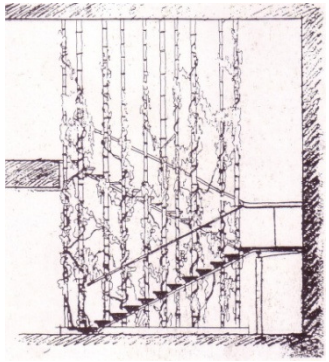


Fig 4.09 The images shows the feature staircase with the use of wooden columns

Fig 4.10

VILLA MAIREA

The ground floor shows a slightly complex plan as compared to the straightforward first floor layout. On the ground floor are more public spaces which surprisingly enough do not show continuous spaces or spaces that flow into each other which where common to modern architecture. The first floor is furnished with more private spaces and these are boldly discrete and contained. The general layout is also simple to read and understand. The clarity of such a plan can also be appealing to a blind person because it will be easy create a memory map of the layout.

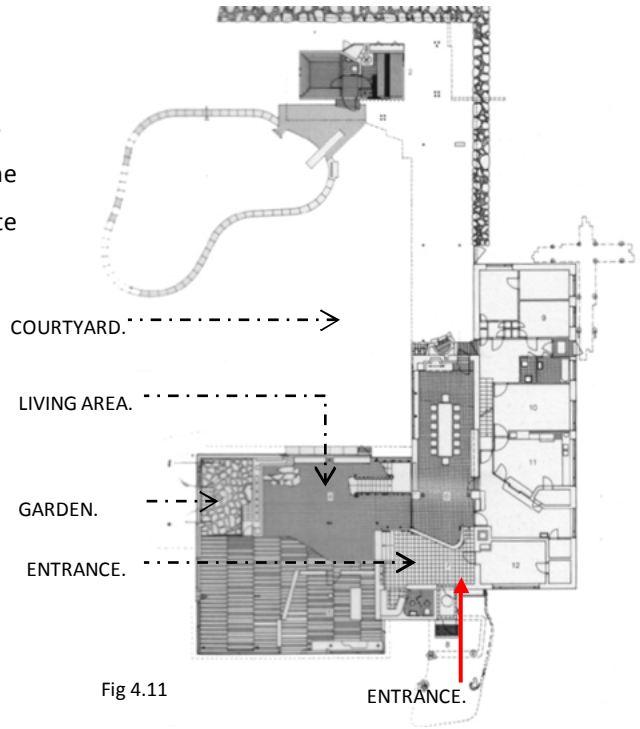
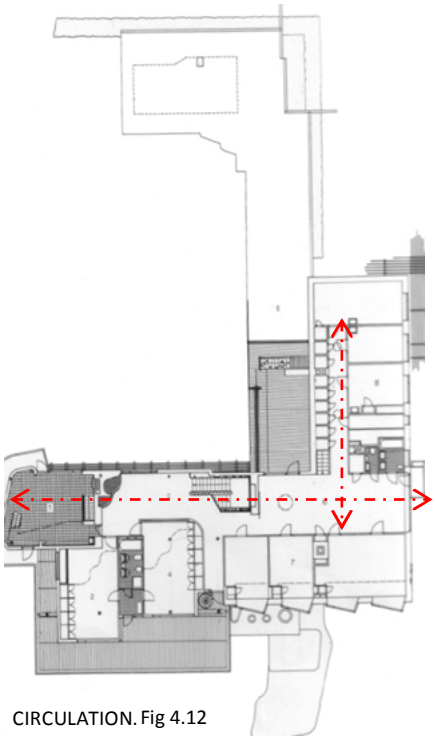


Fig 4.11

Ground Floor.



CIRCULATION. Fig 4.12

First Floor.

4.01 PRECEDENT STUDY

MARY FITZGERALD SQUARE

Client : Johannesburg Development Agency

Architect : Albonico Sack and Muzumara

Location : Newton, Johannesburg, South Africa

Year : Progressive Development since 2002

Motivation : This precedent study is necessary to create understanding of spatial ordering and hierarchy of space in a South African urban context. The square has been unsuccessful as a place for the urban user's daily rituals of living, working and playing.

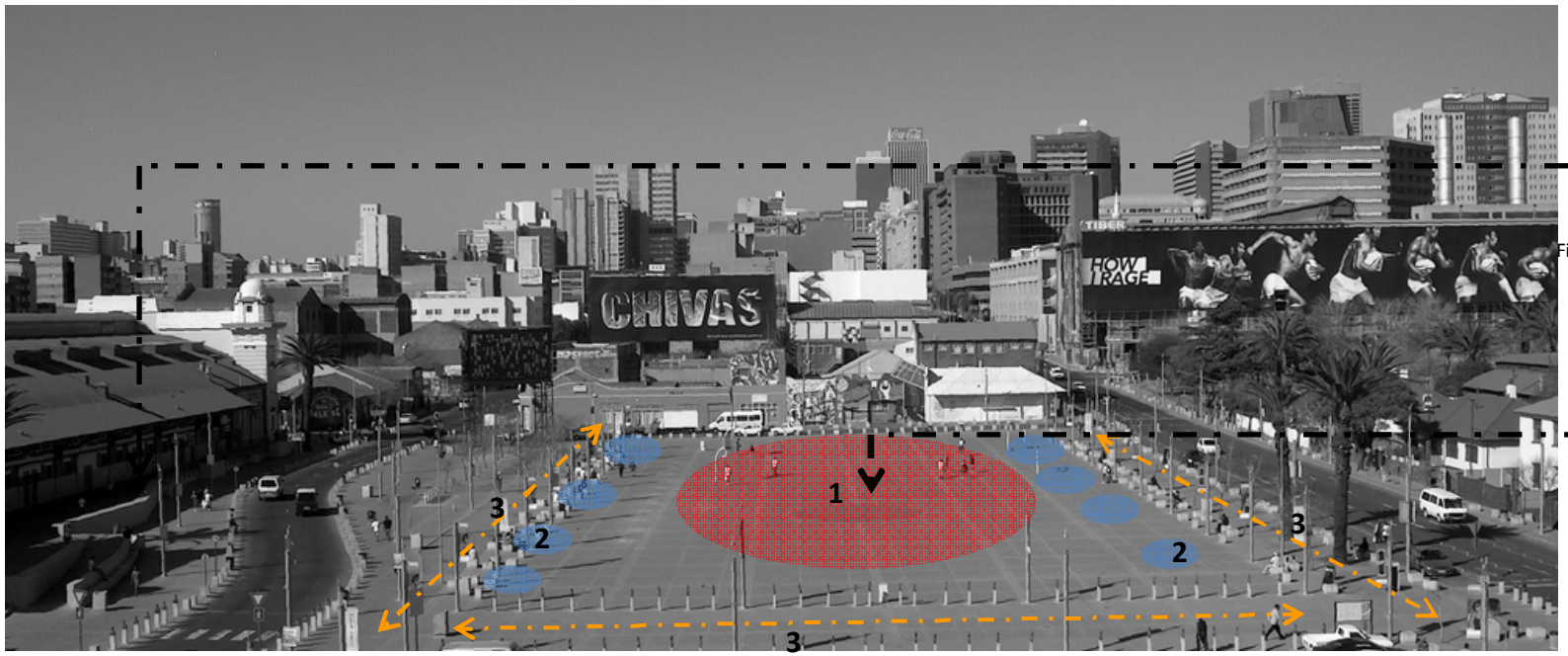


Fig 4.13 The image shows the square in context

Fig 4.14 Square with city as backdrop

Fig 4.15 Occupied square during function

1. Centre of Square often used for large events
2. Smaller gathering nodes at the periphery of the square

's around the square

MARY FITZGERALD SQUARE

Mary Fitzgerald Square has evolved into an Integrated social platform which stimulates informal and formal trade whilst assisting as a stage for expression.

The square is rectilinear as a result of the city grid. The site is constraint driven. It has two busy vehicular roads flanking it on either end. Thus, the hierarchy and privacy gradient increases towards the core or center of the square. Pedestrian circulation and urban furniture is placed next to the vehicular circulation. This often results in the square being vacant at the centre and vibrant towards its periphery. Spatial qualities result form multifunctional uses of objects for example, seating becomes a bollard and also becomes a ramp.

The square is enclosed by supporting social activities which spill out onto the square, they include amongst others, a theatre, restaurants and offices. These activities maintain the consistent vibrancy and use of the square

Fig 4.16 Image shows the use of urban furniture around the square

Restaurant facing the square
Fig 4.17

Informal trade on the periphery
Fig 4.18

Informal trade on the periphery
Fig 4.19

4.01 RELEVANCE & 4.02 APPLICATION

It is necessary to analyze the Mary Fitzgerald Square because it has shown significant success in catering for both small and large scale events. Though different in context to the dissertation proposal, it illuminates clear spatial ordering sequences and hierarchies relevant in an urban context. Analysis of circulation patterns and daily rituals in and around the square reveal the needs of the urban user. This analysis shows that the square is frequently occupied along its periphery and not the centre. This dissertation applies a similar concept in spatial ordering of the piazza. The centre of the piazza is used for circulation whilst the gathering

LUCERNCE CONGRESS CENTRE

Client : Lucerne Development Department

Architect : Jean Nouvel

Location : Lucerne, Switzerland

Year : 1995 - 2000

Motivation : The precedent study is necessary to investigate design responses in sensitive environments (heritage, scale and materiality). The building uses opposition as a theme throughout the design. These themes are as as listed below.

Fig 4.20

Image shows the harmony between the building and its environment

Fragmentation vs. Unity

The three main structures are aligned perpendicularly beneath a huge horizontal plane. The roof shelters like a vast pagola the three different volumes of the building. It was planned to harmonize the building with the horizontal expanse of the lake and it invites one to spend time outside. The facility contains a 1840-seat concert hall, a 900-seat multifunctional hall and a museum with a 300-seat conference hall.

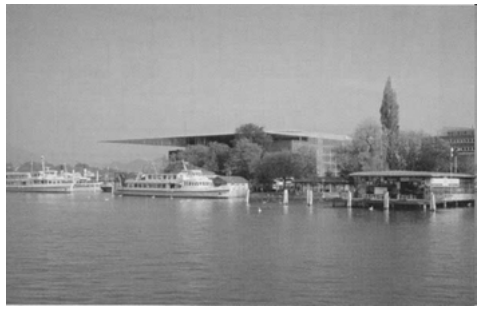


Fig 4.21 The building embraces to the lake

Image illustrates use of volume to create grandeur
Fig 4.22

Innovation vs. Respect

Standing on the edge of Lake Lucerne, the Cultural and Congress Centre looks out towards 17th-century houses, an old wooden bridge and medieval stone watch towers. Nevertheless, the building respects the existing structure of the city. Only a close look will revel the enormous overhang of the roof, the three parts of the building underneath and the traffic-free waterfront.

Harmonize vs. Dominate

The architecture and materials used harmonize with the existing, rather than dominate it. The large expanse of glazing reflects the lake and the large canopy and forming a “hat” offering protection to the building. Though the building is a dominant feature in the cultural life of Lucerne, it is not overbearing.

Reflection vs. Existence

The huge roof, with its cantilever of 45 meters, is the strongest architectural feature in this building,

Fig 4.23 Image shows play of solids and voids

Fig 4.25 Image shows the large canopy overhead

Fig 4.24 Image illustrates transparency and mass

Fig 4.26 Image illustrates the play of extrusions and intrusions

LUCERNE CULTURAL & CONGRESS CENTRE

Opacity vs. Transparency

The building houses functions that are traditionally designed as closed, non-communicating, inside worlds. The concert hall, the congress centre, and the museum are autonomous spaces, but the complex as a whole gives hints of what happens inside, playing with different levels of transparency and opacity.

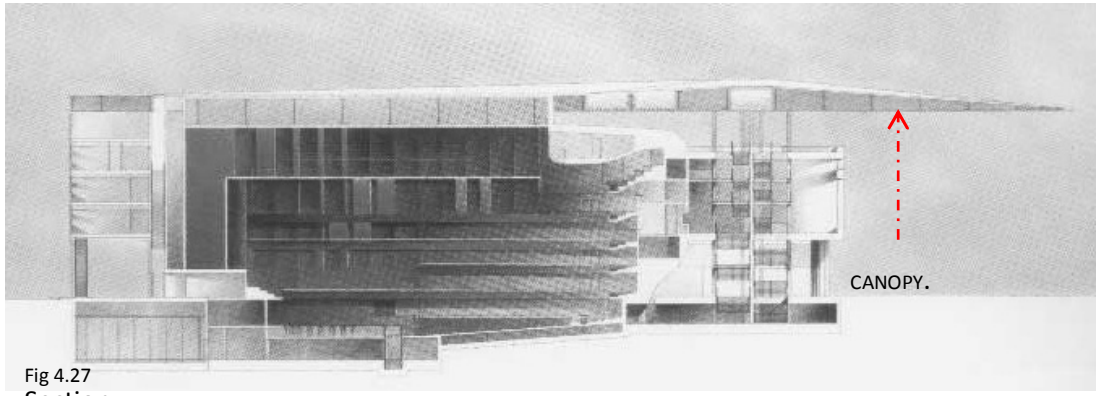


Fig 4.27
Section.

Frames vs. Panoramic view

The visual experience within the building is composed of different kinds of openings. The terrace underneath the roof covers the entire building, offering panoramic views of the landscape. The composition of the different windows offers a more controlled experience, it captures selected views and moments in the city's life and frames them for the visitors.

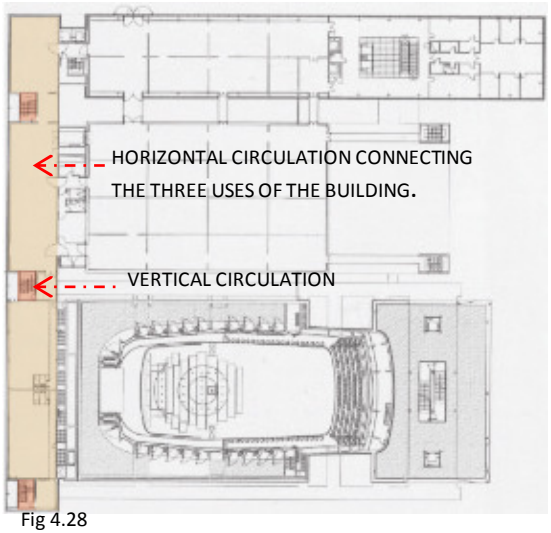


Fig 4.28
Plan.

Filter vs. Exposure

The architect created visual play using metal grills of different transparencies in different places on the facade. The impact is both internal, the grills filter light and view, as external, exposing the passer-by to the images of the people in movement and the inside world of culture.

Shore vs. Lake

The architect introduced the lake into the building, with two channels of shallow water that run through the complex and effectively separate it into the three sections.

4.0 3PRECEDENT STUDY

LUXOR THEATRE

Client : City of Rotterdam

Architect : Bolles & Wilson Atchitects

Location : Rotterdam, Netherlands

Year : 1995

Motivation : This precedent study is necessary to understand design principles and relevant programme to support a theatre. The luxor theatre has multiple orientation points to address both the Maas river and Rijn harbour on the north and south respectively. The idea of multiple orientation points is applicable to the dissertation proposal. The proposal responds to the Steenhoven Spruit canal, the park and the enclosed piazza.

Fig 4.29 The theatre has multiple orientation points

Fig 4.30 The theatre responds to the Rijn harbour and to its context

olume

Fig 4.31 The image illustrates the play of circulation patterns

LUXOR THEATRE

The multiple orientation concept is achieved by creating a single wrapping façade. An internal ramp forms a means to address circulation. This ramp is carved to determine the form of the building. The ramp is exposed in sections of the building to form an external feature of the building. The concept is to create a panoramic view of the river and harbour. The ramp roof transforms into a viewing decking facing the harbour.

Bolles and Wilson's concept was to create a theatrical experience rather than a theatre as destination. Thus, circulation across the building and the building itself offer this theatrical experience. The design links the audience both visually and physically to the harbour and river. This is achieved by creating solids and voids in the built fabric, thus animating the experience by offering alternate framed and panoramic views. The ground floor has opening sections that filter the audience to the harbour and river shores.

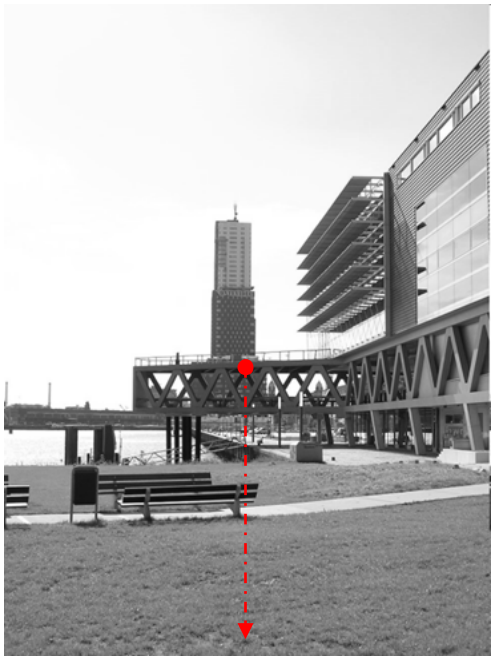


Fig 4.33 Ramp transforms into viewing deck

Fig 4.35 Theatre with multiple orientation points

Fig 4.34 Theatre with multiple orientation points

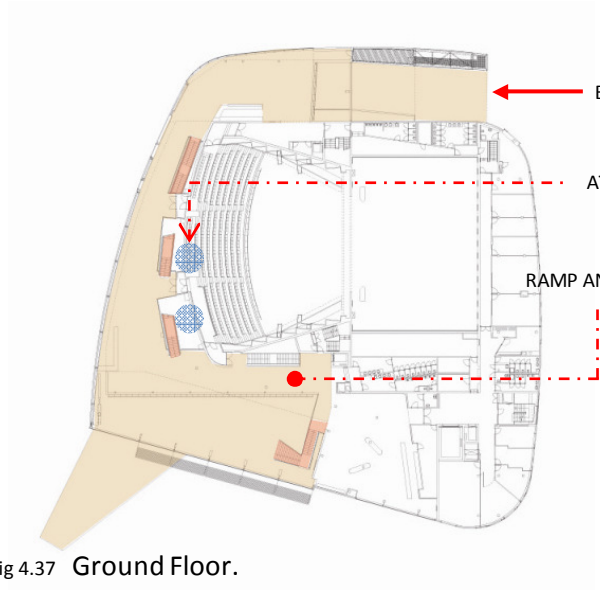


Fig 4.37 Ground Floor.

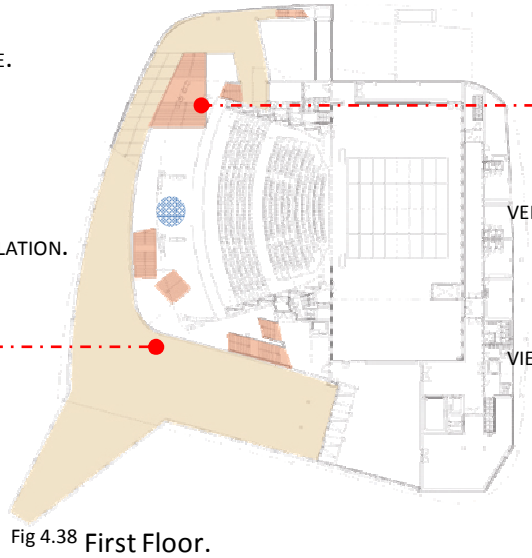


Fig 4.38 First Floor.

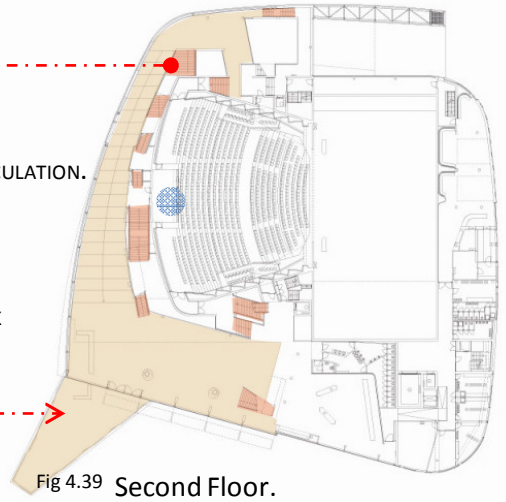


Fig 4.39 Second Floor.

The floor plans illustrate a complex circulation process which includes ramps and stairs. The theatre follows the modern concept of spaces flow into each other. The plans show a play of double volumes . This creates a spatial experience that is appealing to the audience and makes it easy to create a memory map of the layout. The second floor has the viewing deck which faces the harbour.

4.01 RELEVANCE & 4.02 APPLICATION

The precedent study illustrates how the architect embraces the environment in the design. It also illustrates design initiative in creating a playful environment appealing to the audience. This study was relevant to understand supporting programme for a theatre and to understand spatial considerations when designing such programme. The dissertation proposal will follow a similar concept of creating a playful environment. The building creates a theatrical experience, creating places of memory and embracing the Steenhoven canal, park and piazza.

4.01 PRECEDENT STUDY

DZ Bank Building

Client : DG Immobilien Management GmbH
Hines Grundstucksentwicklung GmbH

Architect : Frank Gehry

Location : Berlin, Germany

Year : 1995- 1996

Motivation : This precedent study is necessary to create understanding of of contrast in the building form. Frank Gehry follows the rigid urban grid, but creates an organic internal skin. This precedent study is relevant because the proposed concept follows a similar philosophy.

Fig 4.40 A geometric façade with punch in widows

Fig 4.41 the organic interior

Fig 4.42 Interior view behind punch in windows

The Pariser Platz 3 is a mixed-use building consisting of the Berlin Headquarters of DZ Bank and a residential component with apartments. The commercial component,that being the bank, is oriented towards Pariser Platz and the Brandenburg Gate. The residential element is orientated towards Behrenstrasse.

Both the Pariser Platz facade and the Behrenstrasse facade are fairly rectilinear. This is because FOGA had strict principles which it had to follow. The facades are clad in a buff-coloured limestone that matches the Brandenburg Gate. However the two are scaled independently from one another, so as not to disrupt the proportions of their immediate environment and context.

The façade of the Pariser Platz consists of a series of unpretentious, punched openings and deeply-recessed window bays. The rhythm of the openings allows the building to merge into the unique urban fabric which is the setting of the Brandenburg Gate. A glass canopy covers the main entry from Pariser Platz.

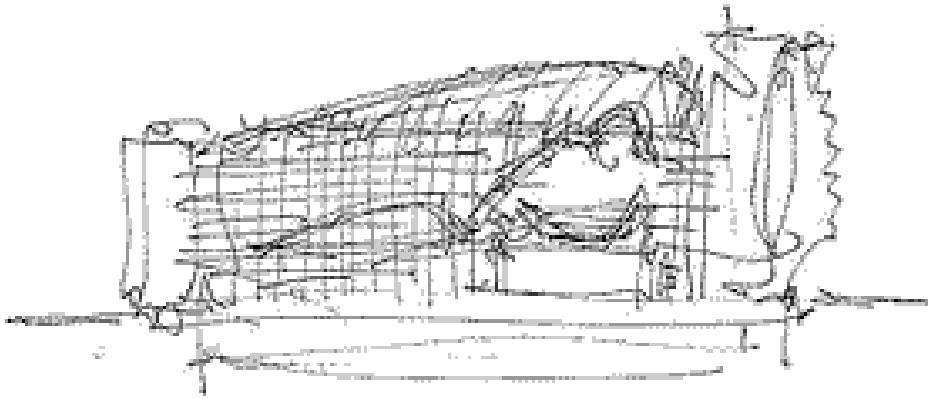


Fig 4.43 The image shows the organic interior

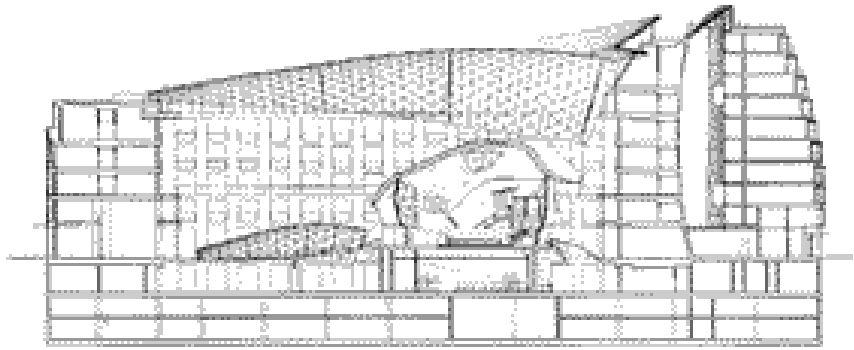


Fig 4.44 The Organic interior juxtaposed with the geometric external form

Fig 4.45 Organic interior

Fig 4.46 Juxtaposition in materials

Fig 4.47 An organic interior view of the boardroom

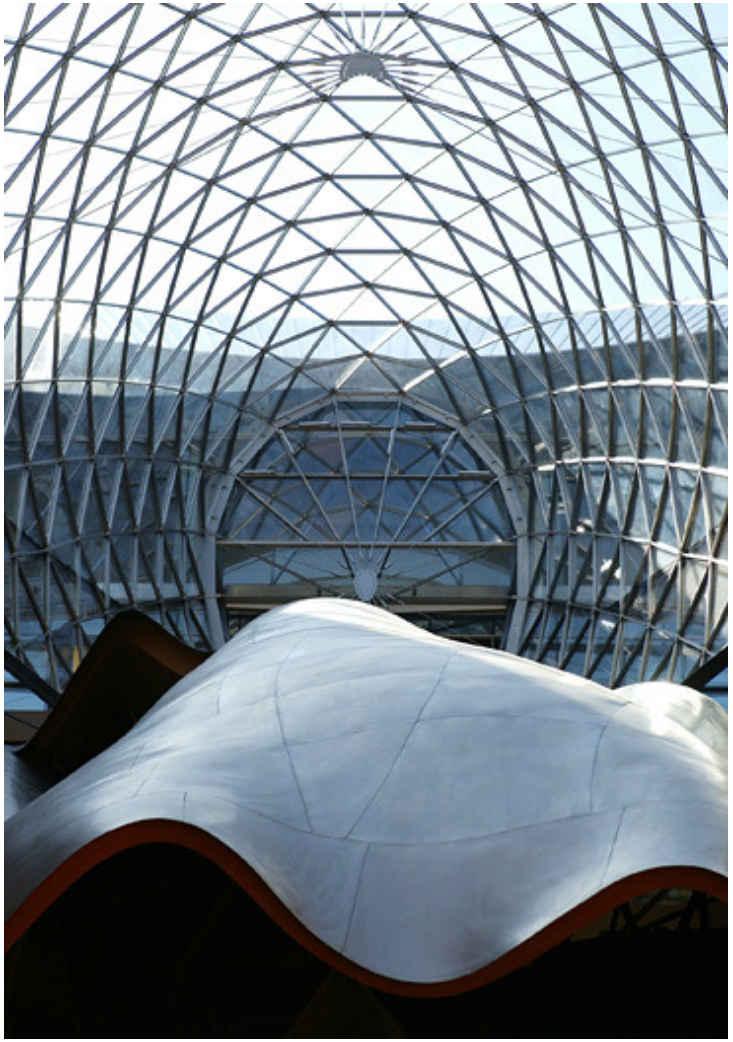


Fig 4.47 Contrast in Materiality