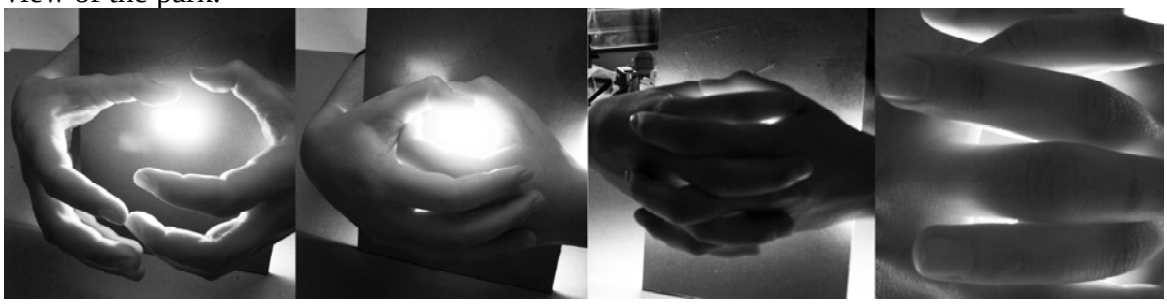
Concept – Design Principles

Urban Cell

The objective of the proposed building is to connect to the city and communicate with it through an interior atrium. This atrium aspires to be the center of the cultural life of the city and becomes a conceivable street, an axis, that connects the grand theatre, which at present is been rebuilt, with the new “cell” of arts and culture. It is a “protected” public street that opens itself to its environment by turning towards the view of the park.



.

The initial idea was to group and organize related functions in zones (enclosed by long walls/bands) woven in a gesture to embrace and protect the cultural core – atrium. A continuous helical movement around the atrium connects these functional units, that are been organized around it, on multiple levels. The three bands of the shell shape various relations between open and closed spaces, from complete isolation to semi-open and open air spaces, that are directed some towards the city and some towards the internal atrium. in. The walls/bands are used as “filters” between the city and the building, As they go around the building, they are interrupted on the axis of the atrium and their ends are turned inwards, so that the city can penetrate inside the atrium. They also define the degree of communication with the environment through vertical slots – openings on their surface.

Function

Handling of the atrium as a public space – or a square was a principal aim. Thus, it assembles public functions and protects them from weather conditions (such as direct sun or excessive heat), while it aspires to be more an outdoor space rather than a closed internal space. The atrium is where all the internal routes (ramps towards the other levels) begin, where the entrances to the theatres are shaped, where the shop and the cafeteria are and a public square is formed, viewing the park.

The two performance halls share a common foyer that views the city and the atrium. The theatre room can host both usual but also experimental functions, as the rows of seats in both performance halls are collapsible (they lay on the floor) and the position of the scene and the viewers can change positions (circular theatre).

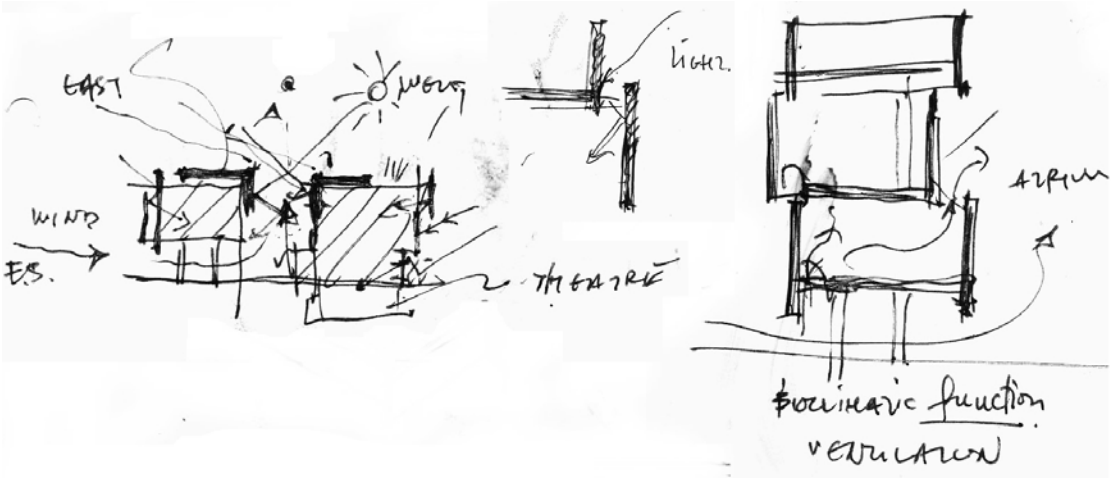
The west side holds all activities that relate to spectacles (spaces with no need for natural light), while on the other side all activities that relate to visual arts and information (documentation). All spaces were designed to be flexible, able to be organised on different interior layouts (open plan).

Directly accessed from the atrium, at the ending of the ramp-stairs, is placed the exhibition space. Oblong, with large free height, it can easily be divided to smaller spaces and have lofts. Light comes mostly through the roof, as the above “filter” wall is rotated, and through the glass openings of the atrium ramp. A semi closed ramp, beginning on the level of entrance of the exhibition space, at the top of the square, leads to the first level of the workshops. Workshops and training rooms occupy three levels, and can be connected with the technicians’ booths (large performance hall), the library (documentation), as well as, with the cinematique related spaces (through the perimetric gallery). The library (documentation) is a single free space, where more “quiet” and “private” functions (study room and closed book holders) are organized in the endings of the space.

On the last level, at the top of the building, there is the administration, the cinema and the restaurant. The cinema can be easily turned into open air by using movable parts in the ceiling and the walls (at the loft level). The terrase is designed to be used as a lively open space of the city – a garden, which is protected by the city’s noise by the perimetric strip/wall, while it frames the views of the city through narrow vertical openings.

Construction materials

The building’s structural frame is made of reinforced concrete. The exterior “filter» walls (zones) are hanged by the beams of the building and are made of reinforced concrete as well, covered with a thermo-isolating layer (light stone concrete). The vertical slots/ openings on the shell have partially opened windows for the control of air movement. The inside moving partitions are to be made of light materials to serve their function best.



Bioclimatic function

The atrium creates a pleasant microclimate for the visitors of the buiding. The openings on the axis of north – south and the semi-open air space of the atrium by the eastern pedestrian street, control the climate and offer the desired amount of sun and cooling in the summer.

The narrow vertical slots – openings in the exterior shell function as sun blocks while the openings at the ceiling in combination with special openings in the floors offer natural airing and cooling.

The open and semi-closed spaces have a very important role concerning bioclimatic function of the building. The shell is made of concrete panels, with an exterior layer

of a special insulating light stone based material, which has great insulating abilities. Combined with the possibility to control the airing and sun of the spaces through opening and closing the windows, the external shell of the building can absorb or offer energy when needed.

The open-air spaces of the roof of the building are been planted (using 50 cm of earth). The lower temperatures, achieved by the plants, are directed through the atrium and the intermediary semi closed spaces to all the levels of the building, improving air quality throughout all spaces. The open ceiling of the cinema is covered with solar panels that can cover all energy needs of the building on sunny days, and complete the geothermic system that will be used for air conditioning.

The floor of the square in the atrium is also covered by earth.