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Cultural Sustainability through Architecture

MIXED-USE BUILDING
M Street between 22nd and 23rd Street, Washington D.C.
Cultural Sustainability through Architecture

by Mosska Adeil

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Abstract

Cultural Sustainability through Architecture

Looking at Washington D.C.’s Downtown and observing its domination by office blocks, which contribute little to street life on weekends, my thesis is dealing with the broad topic of cultural sustainability.

I began my thesis thinking about a project dealing with ecological sustainability, but not long after starting to research, I gained the knowledge that the cultural aspect is often forgotten or minor.
Thus the design got inspired through the idea of reviving a site in D.C. and to give the different occupants of the building the chance to sense, hear, see and eventually interact with each other.
The project is giving an opportunity for architecture to get involved in people’s life, not just as a room to live, work and study but to lead their interaction with each other and with the city itself.

To create such a mixed used building I decided to connect three main characters of a city in one building: Work Space, which includes retail and office space, Living Space for students and professors and Education, which is a literature department library.
A labour intensive model making process helped me to develop the design for a mixed used building where the different programs penetrate into each other’s realm and where the city is not excluded from the building but takes part in it.
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The Title contents the term `Cultural Sustainability`, which is often used, but does not have a definition. From my understanding it is about serving the human well being, giving him an opportunity to live in a vital environment, rather than in an environment ruled by only one type of buildings. Nowadays, more than ever before, architectural space is divided into unattached areas. There are malls, residential areas and business districts. A vital environment in a modern American city is hard to find. But how can architects try to evoke such an environment to generate a mixed and vital district? One answer would be building mixed-use buildings. That would create a realm for different people from different social classes as well as a realm for different actions and tasks of humans.

But to explore Cultural Sustainability in a deeper way, the building itself should provide a quality to sustain. Architecture should create a space that people remember, identify with and want to remain for the future. To build something, which sustains and is wanted to be sustained by people is what architecture contributes to culture and history. Scaling down the above mentioned to one single building needs a more detailed explanation. Culture is not a definite thing, it is more a collection of different ideas. In my proposal for the mixed-use building I want the building to serve the culture of daily life. It is about what you experience while walking to the library or while going to the gym, work and your apartment door. People of one group should interact with each other as well as with people of other groups to reconstitute culture, which promotes community. For this aim the building’s occupants need to experience each other with their senses. They should feel, hear, see and therefore interact with each other.
URBAN SETTING

The site is located in the West End District of Washington D.C.. It is known by its many hotels and new condominiums, but even more through the George Washington University and its nearby medical Center (left plan: light shaded buildings). The metro station Foggy Bottom is reachable in minutes by walking. Also the Rock Creek Park, which is sited in the West is only 3 blocks away. The popular location in the area is therefore home of hotels like the Ritz Carlton (right in front of the Site) and new expensive condominiums.

Even though in this district the development of housing building is increasing, the atmosphere of a mixed-use district and a character is still missing.
The model served as a base for studies of dimensions and building types in the surrounding area.

Between Washington Circle in the South and Dupont Circle in the North-East, the site is located just in front of the Ritz Carlton Hotel. The study demonstrated very well that the site is located in a relatively new developed area of the city and that the life of an area is dependent on their building types, thus architecture. The nearby Dupont Circle and Georgetown district are divided into smaller sections, buildings are scaled smaller. More diversity of building types exist and therefore diversity in the area’s utilization. Whereas the direct surroundings of the site are filled with heavy block development and have less complexity, which results into monotony. One proposal is to connect this part of M Street with the lively part of Georgetown’s M Street across the Rock Creek Park. In addition the site should bring the life from the nearby Dupont Circle in direction to Washington Circle. Achieving this would create an area with more character and recognition value in an triangle of Georgetown, Washington Circle and Dupont Circle.
The East side of the block is now in construction for a new hotel. Next to the fire station on the West corner the middle building offers office space. In my theoretical proposal the site is not built up and ready for new development.

Sun study

Providing information on how buildings let the sun shine on the site, the sun study demonstrates that the sun’s potential in environmental issues can not be utilized to the fullest, because buildings in the surroundings shade the site. But to align the design to the sun’s directions is still important for light and outdoor areas.
First conceptual model

Books are lighthouses erected in the great sea of time. - Edwin Percy Whipple (1)

A library of wisdom, then, is more precious than all wealth, and all things that are desirable cannot be compared to it. - Richard de Bury (2)

Books are the ever burning lamps of accumulated wisdom. - George William Curtis (3)

To add a library to a house is to give the house a soul. - Cicero

Inspired by the quotes above the library got into the focus of the design. When reading or talking about libraries the connection of wisdom and light is always evident. Therefore, the library is designed to be the glowing middle part of the building. With its angles, light construction and its material, the library will appear bright and enlightened.

The base of the building consists of heavy brick construction proposed with retail space in the first floor and office space in the second and third floor. The three parts of the building Office/Retail, Library and Housing are stacked in order of privacy levels. Retail is the most public area which can be utilized by everyone. Above that, the library is semi-private, since it is the library for the literature department of the George Washington University. The last level is the housing part. Housing is a fully private area and therefore has the most distance from the street.

First conceptual model

In this model built with cardboard and plexiglass sticks, the three parts of the building are not only stacked horizontally but intervene each other vertically. Here the parts of the library penetrate into the realm of retail and housing areas. Necessary for people to interact with each other is an architecture, which provides the space to let them do so.
First conceptual model

Outdoor and Indoor Space are assembled with lots of little niches. Interesting terraces and platforms let the building play with the city, let the city happen in the building and in coherence give the city itself back.
The courtyard is one central idea in this first model. With the courtyard a great inner space is developed. Every room of the building gets fresh air and natural light through the idea of a courtyard. Further the courtyard means communication. Not only can the public use the courtyard as a resting place or short cut, but the inner facade can penetrate into the space of the courtyard and allow people to interact through viewing the surrounded facades.
Inspiration Calvino

Inspired by the Idea of a literature library, for the next step or model I read Italo Calvino’s “If on a winter’s night a traveller”. The Intertextuality and the Metafiction used in the book were a good Inspiration and indiction for further design ideas. Different layers of stories are narrated in the book. Calvino worked and connect those different stories with unpredictable and interesting transitions. This is what I try to imply in my design. Shadows, lights, connections, bridges, galleries, openings, materials and constructions need to be tightly interwoven.

Some quotes of the book were in particular inspiring:

All quotes are from the book ‘If on a winter’s night a traveler’ by Italo Calvino. Harcourt, Inc.: Orlando 1981

“You spend a restless night, your sleep is an intermittent, jammed flow, like the reading of the novel, with dreams that seem to you the repetition of one dream always the same, You fight with the dreamy as with formless and meaningless life, seeking a pattern, a route that must surely be there, as when you begin to read a book and you don’t yet know in which direction it will carry you.”

“... you wander bewildered among those austere walls which students hands have arabesqued with outsize capital writing and detailed graffiti, just as the cavemen felt the need to decorate the cold walls of their caves to become masters of the tormenting mineral alienness, to make them familiar, empty them into their own inner space, annex them to the physical reality of living.”

“´Reading´, he says, ´is always this: there is a thing that is there, a thing made of writing, a solid, material object, which cannot be changed, and through this thing we measure ourselves against something else that is not present, something else that belongs to the immaterial, invisible world, because it can only be thought, imagined, or because it was once and is no longer, past, lost, unattainable, in the land of the dead. ...´”

“´The novel I would most like to read at this moment,´ Ludmilla explains, ´should have as its driving force only the desire to narrate, to pile stories upon stories, without trying to impose a philosophy of life on you, simply allowing you to observe its own growth, like a tree, an entangling, as if of branches and leaves...´”

“...leaving out the main narration, I see something like a forest that extends in all directions and is so thick that it doesn’t allow light to pass_ a material, in other words, much richer than what I have chosen to put in the foreground this time, so it is not impossible that the person who follows my story may feel himself a bit cheated, seeing that the stream is dispersed into so many trickles, and that of the essential events only the last echoes and reverberations arrive at him; ...”

“And so Marana proposes to the Sultan a stratagem prompted by the literary tradition of the Orient: he will break off this translations at the moment of greatest suspense and will start translating another novel, inserting it into the first through some rudimentary expedient; for example, a character in the first novel opens a book and starts reading. The second novel will also break off to yield to a third, which will not proceed very far before opening into a fourth, and so on...”

“Everything has already begun before, the first line of the first page of every novel refers to something that has already happened outside the book. Or else the real story is the one that begins ten or hundred pages further on, and everything that precedes it is only a prologue.“

“I would like all the details that I am writing down to concur in creating the impression of a high-precision mechanism, but at the same time of a succession of dazzles that reflect something that remains out of the eyeshot.”

“She explains that she believes she has understood this: the truth of literature consists only in the physicality of the act of writing.“

“Walking along the great Prospect of our city, I mentally erase the elements I have decided not to take into consideration. I pass a ministry building, whose facade is laden with caryatids, columns, balustrades, plinths, brackets, metopes; and I feel the need to reduce it to a smooth vertical surface, a slab of opaque glass, a partition that defines space without imposing itself on one’s sight.“

“If a book truly interests me, I cannot follow it for more than a few lines before my mind, having seized on a thought that the text suggests to it, or a feeling, or a question, or an image, goes off on a tangent and springs from thought to thought, from image to image, in an itinerary of reasonings and fantasies that I feel the need to pursue to the end, moving away from the book until I have lost the sight of it.“
Inspiration Calvino

“Passing again beneath the ginkgo, I said to Mr., Okeda that in the contemplation of the shower of leaves the fundamental thing was not so much the perception of each of the leaves as of the distance between one leaf and another, the empty air that separated them.“ (12)

(12) Calvino, Page 202
Second Model

After different tries of model making further progress in the initial program coupled with volume massing was made. The space in between and the gingko leaf study led the design for the second model. The courtyard is developed and has different terraces, aligned to the abstract idea of gingko leaves that line the courtyard. Access from the street into the building is very diverse. The base Retail/Office consists of several unconnected realms. Some offices have their entrance right on M Street, whereas to enter other complexes you have to go through the courtyard to enter. The library has its main entrance on the east side. Inspired by the book, a side entrance is something not so obvious as if the entrance would be on M Street and helps to develop a certain character for the library. Further it is still a library for the literature department and thus does not need the attraction it would get on M Street, which would be appropriate for a public library. Another smaller entrance is located in the courtyard. An important concept for the library is besides its interconnections with Housing and Retail/Office, the concept of differentiating the library by a ‘Loud’ and ‘Quiet’ area. Connecting those two areas through ramps, the ‘Quiet’ area located in the northern part has lower ceilings and hold the main collections while the ‘Loud’ area is sitting in the southern part and has higher ceilings. Those ramps in the East and West serve as connection and transition paths. Housing being the highest stacked part has its entrance right on M Street. In the first few floors common rooms are planned. Apartments begin from the third floor, so that a certain level of privacy is given. Through the lower ceilings there are 11 floors for the vertical apartment complex and 9 for all other parts of the building.
Second Model Floors
Second Model
The construction site is dug out in a ring form. Thus, earth for trees are left in the center and patios around it can be used as outdoor rooms, which provide light and fresh air for the basement floor.
Trees and water basins form the center. Enrooted in the underlying earth, the trees are separated spatially from the paved courtyard. This contributes to a very urban courtyard. Three entrances forward the street’s atmosphere inside the courtyard. People can use the courtyard for shortcuts, too. Benches on the patio’s heightened sidewalls invite people to rest or spend their break there. Entrances for the library are marked light yellow and the entrance for the apartments light violet.
Open office areas with vertical access from the first floor are joined together for a very open floor plan. Interesting paths occur when bridging a courtyard entrance. Balconies and terraces let the interior communicate with the courtyard and the city. The main library entrance in the East is designed with broad stairs, which create open space and galleries on each floor.
Inspired by the gingko leaf, triangular shaped terraces compose outdoor space for the upper floors. Two of the three main terraces with a glass and steel construction are accessible from the third floor.
The first floor of the library is accessible through a circular movement. The lower ceilings in the North contribute to the „Quiet“ area of the library with the main collections and quiet study areas. The „loud“ area has much higher ceilings and include group study rooms as well as the information desk and loan desk staff. Terraces due south provide outdoor space for reading, studying and taking a break.
Through ceiling height differentiation from the lower floor, ramps in the West and East overcome the difference and connect the “Quiet” and “Loud” area. Also the ramps serve as galleries and provide a vertical open space.

The cafeteria in the South is heightened and accessible with stairs due to the ceiling height of the underneath group study rooms. A secret study room in the South-East corner has also a higher ceiling with double the height.
Several openings allow to communicate between the three floors of the library or at least experience each other. All parts of the library are accessible through a circular motion. That way it is simple and easy for visitors to orientate themselves. The bridge along the apartment tower (light violet) allow people in the library and residents to communicate with each other.
Through the ceiling height difference between the two parts of the library the second apartment story in the North is on the level of the first in the South. Connected by ramps occupants can reach the first apartment floor from the main entrance. For the second story in the North there are bridges connecting them to the main entrance.

Large-scale skylights from the library provide light and create a special experience for the inhabitants of the apartment when they are using the outdoor area and can look down to the library. The two glass-boxes in the South even enhance the skylight idea to a double height ceiling for the library.
The apartments and their balconies align mostly to the South, whereas corridors and entrances are due north. Corridors in the West and East have cut outs for lightness and communication to upper or lower floors.
Every apartment is featured with a balcony regardless of the apartment’s size. It is considered that people not only have a need for a private indoor space, but also for private outdoor areas.
The roof is designed to be a semi private terrace or garden. Several skylights provide light for the beneath apartments and are surrounded by native plants and herbages. The three yellow marked glass pavilions are best for reading or just enjoying the winter sun.

There are three main accesses to the roof, one from the apartment complex and two from the library.
This is a section cutting through the main library entrance. Wooden bookshelves welcome the visitor, who can see the shelves from the outside and experience them in the inside of the building. The entrance with broad staircases gives the visitor the chance to sense upper floors and the basement archive, which leads to more communication between each floor. The library sky light enlightens the outdoor area of the apartment outdoor area and allow the inhabitants a look inside the library.
In this section the gallery character of the library’s ramps are demonstrated. Balconies and terraces as well as the basement patios enhance the spatial experience of the building. As a way to sense the character of the Office/Retail part in the Library and vice versa, the bearing construction elements are going all the way through, so that occupants see the bearing brick wall in the library and the white concrete columns in the Office/Retail part.
Shown again, the brick construction goes through different floors. Especially visible in the south wing of the library the brick construction is continued until the apartments begin. The walls of the library full of books are due north to prevent any damage through sunlight. Walls due south are all glazed.
A special communication area is designed where the library corridor is attached to the apartment tower. Inhabitants and library visitors can see and hear each other.
Cantilever and the angles of the library part create a play with light and shadows.
The main library entrance has a facade, which shows bookshelves and books due that the facade is east facing and cannot harm the books through sunlight.
The solid block is an attached remaining building on the site. Further, the north facade is more closed and includes the apartment corridors.
Materials of the building are like the building itself divided into three parts. The Office/Retail part contains a heavy brick construction, whereas the Library is bearing its load either on the heightened brick elements from the lower floors or on white concrete columns and bearing walls. Housing is built with standard concrete and uses support from the beneath construction.
Since the ‘Quiet’ area of the library has lower ceilings than the ‘Loud’ area, four stories of apartment floors instead of three are possible to build on this wing of the building.
Elevation
Courtyard West
Perspective

Courtyard
Perspective

Library 5th Floor / Westside
Perspective

South-East
Perspective

Library 5th Floor / Southside
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