

ACADEMY FOR THE PERFORMING ARTS

the migration of well-being

Complex Projects Studio
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INTRODUCTION

1. project introduction

Over the last century, Rotterdam has become one of the world's key port cities and will continue to broaden its horizons. Feijenpoort area, located in the city district Feijenoord, became one of the migrant labourers' residential areas during this period. Since, it has been regarded as a socio-economically challenged, deteriorated

and underprivileged part of Rotterdam. Today's multi-cultural population's well-being is considered one of Rotterdam's lowest and the municipality seeks to remedy this in a sustainable way. An approved urban waterfront development strategy based on gentrification and targeting mid- to high-income groups however, might lead to even

more urban anxiety and socio-economic related stress for the existing community. By acknowledging that well-being must be defined as a system of interconnected dimensions of physical, mental and social well-being the project investigates how this might be used to improve the poor conditions of Feijenpoort through architecture. How can spaces oriented at well-being let city residents flourish in a context of sustainable city development? The project targets mental well-being as the way to enhance multiple dimensions of well-being. It aims to achieve this through its educational and cultural program and concept as the Performing arts academy for youngsters. The design integrates biophilic design principles with art education. With the premise of combining biophilic design principles with lessons learned from educational typologies, the Performing arts academy aims to enhance the community's mental well-being. The project gathers neighborhood and urban goals by harmonizing the boundaries between nature and spaces that encourage physical activity, are socially stimulating and mentally rewarding to its users. The design aims to enhance encounters and encourages inclusive interaction by creating an abundance of informal setting where spontaneous public performances may take place.

To understand the urban repercussion an art academy has on its immediate surroundings it is vital to consider the typology of schools. The spatial typology for a school building is hardly seen as an extravert character towards its context. In fact, it is often even closed from it and acts as a safe haven. More often than not its spatial organization is driven by the ideas of safety to strengthen the educational program. Similarly, the inclusive character of the park's natural elements embodies the sense of safe exploration and should enhance the educational function.

2. design brief analyses

For the creation of the design brief suggests the following modifications and considerations.

As the main goal is to get middle school students (VMBO, HAVO or VWO) into higher

education at vocational bachelor's level, the higher education programs can be continued elsewhere. The envisioned number of users is therefore set to 600 students and 50.000 annual visitors (half of first recommendation). In accordance with this user size the required area for the program is determined.

The park functions as a buffer zone for the housing projects against the continuous train noise. By placing the building on an offset from the mapped train noise contours acoustic hinder is limited. The facade requires attention to soundproofing for maintaining a safe environment for learning and experimentation.

For Hillesluis, the unique urban oasis of West-Varkenoordsepark potentially poses promising characteristics for a new way of learning. Existing natural elements (body of water, flora and fauna) are taken into account and invited into the building's interior experience by means of green inlets. Landscaping is necessary to enhance the synergy between park and education and performing arts program.

3. program concept

The program is constructed around the concept of an edifice that expands into the park and with the art related and collective spaces as the main functional elements.

The organisation of the program is determined by use, required lighting conditions and the core function: performing arts education. Forming the heart of the program, the performing arts are grounded into the neighbourhood and extend up towards the trees where art education takes place.

The auditorium and black box are North and East oriented and have closed facades as they require little and no light respectively. A public foyer which can also be transformed into an event space is placed on the ground floor. To guarantee a safe learning environment, the educational spaces are placed on the upper levels. Corridor's large sizes form informal meeting places.

Performing arts academy

4. site concept

Main approaches to the site from the Westvarkenoordse park and the residential neighbourhood to the West form the FOH whilst the Breeweg on the South forms the BOH. Where these axes intersect the building is anchored onto the site.

To respect its context, the building is elevated from the site to the level of neighbouring housing projects (12 meters) and in the tree canopies (between 4 – 12 meters).

The site's borders defined by the residential neighbourhood to the West, the park on the North and South side, invite the orientation of educational spaces towards them. The site's favourable sun conditions allow for a consistent growth of vegetation which is to guide the biophilic design.

By integrating the ditches and ponds in the design as environments where performances can take place, the relation with nature is strengthened.

The overall concept is based on the building being an expanding receptacle for public life that turns the typical introvert art education program from the inside outwards; as to invite the neighbourhood and city to participate, making the park landscape a performing art landscape.

6. Design development

The project is developed from a radial distribution of the program and respecting the park. By developing the project around a central garden and inviting existing vegetation into the building the program will always relate to nature. Also by orienting views to all sides of the park the project aims to express its function to the neighbourhood. The facade provides flexibility in showcasing the interior activities or creating intimate learning spaces by wooden louvers.

The fixed program elements relate to the age of the user and therefore compartmentalisation of it provides clear sense of the function and belonging.

7. routing and program

In Feijenpoort, the access ways to the Westvarkenoordse Park take the visitor through the neighbourhood, the park itself and

from the Colosseumweg into the Westvarkenoordse park. Therefore the entry to the site is configured by the idea of serving all these directions. They are enhanced by a passage through the park environment. The aim is to let the visitor create a sense of relief from the urban fabric and adhere to the place.

In the interior, the routing is determined by modes of public, collective and private life and the idea of free choice. Public life takes place on the ground floor mostly, where people are invited to explore the performing arts in relation to pockets of vegetation inside.

The routing on the ground floor revolves around a circular atrium, with two revolving staircases that go up towards the light. Both the black box and the auditorium are accessible from the 1st floor. The South of the ground floor hosts leisure and education programs with facilities that most of the Feijenpoort inhabitants can not find at home such as public reading and studying facilities with desks and computers.

The building's structure is a hybrid of materials. The concrete elevator cores provide rigidity to the structure. Columns, beams and trusses are made out of steel. Steel trusses of 24 meters and 1.2m meters high are used to enable 8 meter cantilevers of the 1st floor and roof. The cantilever's dimension reminds of a canopy that allows for performances and experimenting with the arts to take place and give a sense of seclusion. The structural elements not only make the building float, they also form an integral part of the auditorium's structure.

The ideas of experiencing nature in the space and nature of the space are brought back in the organization of the spaces. From the ground floor, the presence of water, diffuse and dynamic light, complexity and order and a sense of mystery are experienced by the water, the central courtyard that evokes the sense of a park and the choice of tactile materials.

Prospect, refuge, visual and non-visual connections with nature are strongly present in the organization of the art rehearsal spaces

on the first floor. The first floor connects to its immediate surroundings by configuring educational and art rehearsal spaces along an offset circular routing. The art rehearsal spaces also, through their size and form, provide the desired prerequisites for art exploration and rehearsing.

10. Materials and facade

Bright facade materials reflect sunlight from the water deeper into the building. The ground floor facade consists of glass, light stone tiling while interior finishes combine wood with light stone. These materials let natural light find its way through the building. From they provide the desired prerequisites for art exploration and rehearsing.

11. programmatic requirements

Daycare

each space requires openable windows except for sleeping area. This sleeping area needs to be situated in a fireproof area/compartment. At least 2 bathrooms must be available. soft and hard surfaces. Creche needs multipurpose room for eating, storytelling, relaxing and playing, art performing. Teacher's offices will be made available for staff and parent talks. The children have children's books available to them in built-in cabinets.

Rather than steps or stairs, slopes define vertical circulation to stimulate physical exercise and play.

REFLECTION

This year's graduation studio of Complex Projects, an open design assignment at an urban district of Rotterdam was provided. From the start, through steady encouragement of the tutors, a design topic within the migration of ideas studio theme evolved from an initial hunch.

I based the topic on my personal interest in holistic well-being of people. Due to its broad definition, it quickly became apparent that I had to define a definition of the term well-being that could provide research outcomes related to architecture.

1 The relationship between research and design

Research and design are inseparable and occur simultaneously. The designer researches in what is called the laboratory (which in the last covid-19 year has been my desk at home). The research started the first half year by forming a comprehensive body of knowledge about Rotterdam and specifically the region Feijenpoort. Although extensive, I learned that this approach was essential to discovering my ambition for the research site and laying the foundation for a thesis. What started as a hunch became a hypothesis. A hypothesis forms a suspicion which explains a theory; a projection of how a concept works before a study is done. Although it will not be true before receiving proof, there will be several reasons to believe it will become proved through the research. According to Koskinen et al (2011) the aim of the hypothesis is to expose the relationships between the factors of a causal system. It is through researching the impact of variables that effects and the validity of the suspicion are captured.

And yet, the relationship between research and design is dependent on the architect's way of working. The two should happen in a free way but of course stay in touch with reality by basing decisions on facts and interpreted findings. And through this approach, designing checks and challenges research findings and hypotheses.

Although this can lead to diverging methods and results, these were very much prescribed and guided during the graduation studio. The topic I chose for example gives so many ways to look at it that the studio method luckily provided a direction to address it.

In my ambition it was important to relate how urban development affect human well-being and how nature inspired architecture could overcome

negative relations. And so, while the effect of nature in the space is not possible to prove in a virtual laboratory context, the hypothesis that biophilic design combined with an inclusive cultural program enhances well-being is based on literature findings. Where it is already clear that the presence of and a visual perception of nature invokes a higher state of well-being, the idea of nature of the space is explored in designing the routing and routinely used shared spaces. Though in terms of designing the project in relation to the context's scale, the studio's approach considers the need for large projects within cities. This means that certain subjects of the design are given more priority than others. In my case, this has resulted in trying to mediate between making intuitive design choices and the studio's need for vast amounts of systemic experimentation on which design decisions can be based. At times it has led to frustrating results such as with determining the building's shape and circular structure. Through this process I have learned that while designing, experimentation is always needed to test intuitive thinking.

2 Relationship between graduation topic and studio topic

The aim of complex projects studio is to comprehend the dynamics and forces that form our cities so that it can learn students how to react and intervene in them with urban design strategies and architectural design. As multiple cultures manifest in our cities, the studio approach asks for an open view of the world from its students and encourages them to explore the perpetual changes in what is perceived as the city and our lives in society. This provides an opportunity to abstract and apply knowledge from various fields of science. Finding trends, historic developments and seeking patterns in phenomena provides insight into how our societies have grown so fast and yet so small, interdependent and stimulated by migrating our ideas through a super connected world. With increasing global anxieties about technological, economic and urban development the project finds its roots in the UN's Sustainable Development Goals's ambitions. By narrowing down the wider studio topic through the SDG lense the site analysis became more specific. This helped a lot to form the contours for the design brief.

My graduation project deals with multiple themes that relate to personal health, social inclusiveness and awareness of our relation to nature. It questions how to shift society's notion of well-being which has increasingly become a relevant

global topic globally, especially this year due to how global warming and the Covid-19 pandemic have put vast amounts of stress onto our societies worldwide. How can architecture and designed spaces increase people's well-being? The centre for the arts addresses these aspects in Rotterdam.

3 Research method in relation to the graduation studio

The research methods were based on analysis of the site through mapping and drawing based on literature findings; a needed start. Through mapping I came to understand the relation between green zones, cultural and educational amenities or lack thereof, neighbourhood's poverty rates and overall happiness.

Complex Projects studio's method for designing in urban contexts instigated these outcomes as these drove my research. The studio's social, historic, economic and trend-investigative lenses gave rich insights in research methods and gave layered information of which I could draw conclusion from. However, due to complex project's data driven approach the studio research can sometimes also provide an outcome that becomes a mere statistic. To prevent that that information and time would become lost, the narrative of the research expands by trying to find relations and patterns. Over the course of the research period, this method proved beneficial to finding a historical relation between urban sprawl and the need for future urban green zones that link neighbourhoods together.

The mapping method demonstrated how the border between residential areas and the future developments aimed at gentrification have less priority to be developed by the municipality anytime soon. This provided the insight that this border could become a possible breeding ground for the project's ambition for a more durable and lively Feijenpoort. By overlaying the information the project location was determined at the West Varkenoordsepark.

Due to its scale, the design of the project's functional layout was a trial and error process. In the end the studio's systematic thinking provided a clear way to compartmentalize the educational and art programs and still relate the users to being in contact with nature.

4 Relation between the graduation project and the wider social, professional and scientific relevance

the graduation project focuses on the interplay between social integration, art and experiences of nature, which is increasingly changing the idea of how we should design our environments. The growth of migration population diversifies our cities but forms a root of socio-economic injustice

when it does not go along with existing society. The design questions how art education should create social but also economic value.

The project questions what our understanding of good public and communal places and spaces are through the implications for the spatial layout of the program. How can public interests be related to individual interests and personal growth? how can we keep these interests from harming our world? Who would have to be the ones to use the project most? It emphasizes the need for a public place but mediates to priorities for education of younger individuals also.

In the last century, a context of preservation and new developments has existed but municipal plans for the future indicate a desire for sustainable city development. The design makes the point of re-prioritizing underappreciated park environment to announce the local need for a natural intermediate as a neighbour rather than high to mid-income urban areas. By letting vegetation purify the indoor climate and contribute to cooling the urban block the project aims to reduce heat stress.

Also in the use of large spans, the configuration of the interior spaces can be altered more freely as there are less vertical boundaries. The proportions of the blackbox theatre and auditorium also allow for other uses than education or art performances such lecturing.

Ethical issues and dilemmas during graduation

During the graduation process the dilemma of balancing academic and statistical truth with the realities of the individual became apparent. This presented itself in two ways.

Firstly, although having high ambitions for sustainability, the ambition and the structure requirements are hard to align. This is a result of choosing the massing shape as the basis for the structural concept, before having considered programmatic requirements or the routing and distribution of the program. But the shape's language was preferred so that the more social and environmental designer inside of me had to deal with the more realistic engineer. Thus through it's structural soundness I hope it may contribute to a more sustainable evolving neighbourhood.

Secondly, while the project wants to play a positive role for the city of Rotterdam, its true impact and added value to the neighbourhood communities' lives will not be measured through this academic proposal. This became very evident to me when conducting an interview with a local community worker on site. He expressed his concerns about

the marginal involvement of and collaboration with the migrant community in the creation of academic and professional research policies which translate into spatial interventions.

I realized once more that the components of well-being concern foremost personal interpretations of (urban) life, captured by statistical data and figures. I had to face this dilemma I had read about in all the researched documents. Though having witnessed a critical personal story it actually became an affirmation of the validity of the sources that form the basis for my thesis topic. Even though personal experiences and beliefs must contribute to a research proposal they certainly must not be the factual argumentation only for academic research. But, after seeing how enthusiastic the community worker became about my academic design proposal and the good such an idea could do for the younger generation, I was strengthened in the hypothesis that the project of the art academy in the end might have a beneficial outcome.



initial impression