THE TALLINN QUARRY THEME PARK

Architecture of deception

Research and Design Report

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TU Delft Faculty of Architecture Methods of Analysis & Imagination A Matter of Scale [2023-2024]

P5 21st June 2024

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ARCHITECTURE OF DECEPTION | DECEPTION IN ARCHITECTURE

In the immersive environments of theme parks nothing is what it appears to be. The architecture of such places relies on architectural manipulation, new technologies and vibrant scenes to create a pleasurescape that would prolong the visitor's stay and consumption. Reflecting on the touristification and disneyfication of Tallinn's Medieval city centre, 'The Quarry Theme Park' is a theoretical and design exploration of deceit in architecture, questioning normative understandings of value, beauty and honesty. The project argues for the preservation of a depleted guarry in the avoided and rather unattractive residential area of Lasnamae and its transformation into a theme park. Taking limestone as its central theme, the project aims to bring awareness of the value, beauty and temporality of limestone through the architecture and the landscape of the quarry by transforming it into an imaginative landscape celebrating the properties and uses of limestone. It argues for the value of deceit in architecture by re-considers the importance of deceitful spaces by bringing out the qualities of these to immerse, instill imagination and make us suspend our habits and beliefs. In the context of honesty and dishonesty in the architecture debate, the project shows the value of dishonesty, allowing architecture to surprise and make us wonder.

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REFLECTION

01

TALLINN AS A THEME PARK ANALYSIS

Located on the Tompea Hill, Tallinn, the capital of Estonia emerged as a typical Haseatic medieval city, protected by fortification walls. Today, it is a city of contrasts in scale, materiality and influences. As we walked through the city, we observed that the changing of expressions is most noticeable on the facades, when looking at the materiality and specific architectural elements and details used.





Tallinn felt like a medieval theme park with carefully preserved colourful facades and a high concentration of as shops, bars, shopping malls, theatres and restaurants, whereas other parts of Tallinn lack quality leisure architecture for the locals.







As part of the group analysis of the Old Town, we observed how Tallinn felt like a medieval theme park with carefully preserved colourful facades and a high concentration of as shops, bars, shopping malls, theatres and restaurants, whereas other parts of Tallinn lack quality leisure architecture for the locals. The city centre silhouette is distinguished by the spires of the many churches, whose height dominates the skyline. The largest public buildings in Tallinn - Linnahall, the National Library and the Stadium also stand out due to their enormous forms in comparison to the small-scale residential area composed of wooden and Tallinn houses. Boundaries such as the railway, and outdoor public spaces such as the Green Belt, Freedom Square and Tuvi Park are also clearly discernible, each having a unique character or expressing its public function in a different way for different people.







we also observed how the approach to architecture in the old town results in disnayfication and theatricality and while some buildings are renovated, many others are left to decay







14 A strikingly ornamented brick facade appears between the plastered series as we walk along the street.







15 Here we encountered a building which was undergoing a facade reconstruction.

16 Another building in the Old Town displayed patches in its plaster, revealing the original stonework beneath.







02

A MATERIAL STORY RESEARCH

Bea niassimi, sum eum faccatem nonsed ut offici quamus mi, si blaciet iduci doloritae cusa nobitatiis dolla placcum aliquat endandae non parchicte cus maior a voluptat. Volescid maxim ni rehendia sintio cori aut eiuscide esequaecus et quibusdantin nisqui dolores sequid unt, quatur, ute dus adios corem volupicatint quatia Upon the field trip to Tallinn, I got fascinated by its limestone materiality which is fundamental to the atmosphere of the city. Geologically Tallinn is a city of limestone, siting on a limestone klint and through the ages and this condition used to be taken as an expression of local context in the past. Following the approach by Jane Hutton, I wanted to considering the other side of the story, the place where limestone comes from. I wanted to explore the gap between the city's architecture and histories, processes and labour behind the development of this highly spectacular limestone architecture, that is far from the tourist eye.





I looked into fragments on building scale, which were found as , walls, materials, ornaments, signs of decay, ground, greenery. These fragments are patches of limestone, hiding beneath a plastered surface, ruins from a limestone building. While the old town is built from limestone, it is rarely visible, which made me wonder if this it an ethical approach to the preservation of the town? At the same time from the catalogue we made, we made more visible, how present limestone is in the city in different fragments, buildings across the neighbourhoods.





flooring



balustrade



stairs



garden walls

wind linte



Catalogues of limestone uses

The Lost Traditon Of Limestone Carving

Fragments signify for the lost tradition of stonecarving, whose cultural importance has been now undermined by the shifting ideological, economic, architectural and technological values, as seen in Tallinn's contemporary architecture projects. Stone-carving has played an important role for Tallinn in the past and there used to be a very influential stonemason guild that also worked on projects abroad. Today, the art of working with limestone is almost forgotten, as the material is mainly used as aggregate due to its susceptibility to decay in outside conditions. Examples of local master-pieces of stone-carving art are preserved in the carved stone museum.







Preservation Practices And Disneyfication

However, while Tallinn is a popular tourist destination precisely because of its heterogeneous architecture, this factor has led to the Disneyfication of the Old Town, which feels like a 'medieval theme park' with carefully preserved colourful facades





Limestone decay

Then I moved to explore the properties of the material.. the art of working with limestone is almost forgotten, as the material is mainly used as aggregate due to its susceptibility to decay in outside conditions under local climate. As cracks cillest water, they gradually expand and fragment the stone. Algae grown as result of water. And black crust occurs from the air pollution. Once extracted the stone is melting.





extracted block of carbonate rock / limestone

black crust of Cu, Pb, Sb, Sn and Zn as result of air pollution

fracturing due to thermal and humidity variations of local climate

effect of wind direction

leaching due to water deposition and drainage

Limestone decay processes and causes

Problem statement



The lost traditon of limestone carving



Preservation practices leading to the disneyfication effect in the centre



The fetishisation of decay in the old town



The softness of limestone - decay due to local climate and pollution

The other side of the problem

The biggest active quarry in Tallinn, the Väo quarry, is unique because of its location within the city. For 80 years, the ground has undergone intense carving, exploding, blasting filtering, crushing, moving, and cleaning, by machines fragmenting the landscape into aggregates.

In 2 years, the deposits will be depleted. The city administration has developed alternative plan for its 'return to the city' - by filling it to the original elevation, erasing it from the landscape and the memories of the people, making space for a new technological park. With my project, I explore the problem of how could be could be done otherwise to make the guarry a place that responds to the diverse local needs and tourist motivations. How could the guarry be returned and re-integrated into the city in a more creative, ethical, and sensitive way that celebrates the history and value of limestone and the spaces associated with its formation, extraction and decay.





Excavations of the Vao Quarry in the period 1985-2022



























2008



2014



2018



' By 2039 at the latest, the entire area should be tidied up, backfilled and ready to be handed over to technology parks and also to the intermediate corridor.'

> Kuldar Õunapuu, managing director of OÜ Paekivipörtiður for Pealinn.ee



Problem statement

How could a post-industrial landscape of a quarry be reintegrated into the city in a creative and sensitive way that celebrates the history and value of its materiality?



03

THE PROBLEM OF DECEIT IN ARCHITECTURE

Theme parks have been a hot topic for debate in architecture, but also sociology, psychology, landscape design, management and geography. On the negative side, they are seen as 'antigeographical spaces' that rely on 'architecture of deception', control, surveillance, and simulations that ignores the real need and traditions and relies purely on achieving spectacle.'The opposing views of Rem Koolhaas has observed the potential of such spaces for experimentation - architectural and in social behaviour. It is a place that functions 'above the conflict between mechanical and natural surface [...]as a breeding ground for revolutionary architectural prototypes.' Through my design I want to emphasise the importance of theme parks as spaces that bring people together and respond to practical economic, leisure and cultural needs, as educational spaces, but also ones with important social and out-of-home leisure functions, that instil pride and relate to local traditions.

The Theme Park Debate

'This is the meaning of the theme park, the place that embodies in all, the ageographia, the **surveillance and control, the simulations without end.** The theme park presents its happy **regulated vision of pleasure** - all those artfully hoodwinking forms - as a substitute for the democratic public realm'

'an architecture of deception, which in its happy-face familiarity, constantly distances itself from the most fundamental realities. The architecture of this city is almost purely semiotic, playing the game of grafted signification, theme-park building [...] such desgin is based in the same calculus as advertising, the idea of pure imageability, oblivious to the real needs and traditions of those who inhabit it' /xv

'Television and Disneyland operate similarly, by means of extraction, reduction, and recombination, to create and entirely new, antigeographical space.'

'an architectue of spectacle' / 208

'Oblivious to the contest for the middle, literally rising above the conflict between mechanical and natural surface, is the circular silhouette of a phantom structure that proves - if nothing else - Coney's continuing **fertility as a breeding ground for revolutionary**

architectural prototypes.' /71

'The isolation of luna Park within Coney makes it an

ideal architectural testing ground, but also Insulates the results of any tests from direct confrontation with

reality.' /43

Michael Sorkin, ed., Variations on a Theme Park. The New American City and the Death of Public Space (New York: Hill and Wang, 1992). Rem Koolhaas, Delirious New York. A Retroactive Manifesto for Manhattan (New York: The Monacelli Press, 1994).

03

TOWARDS A THEORY OF DECEPTION

The main discoveries that I have made through the process of working on this project helped me derive a theory of deceitful and theme park architecture.

The theme park as a series of thresholds

Based on my experience of theme park and study of precedents, I came to understand theme parks and their individual components to be organised as a series of threshold spaces that the visitors go through before the actual 'attraction'. This creates anticipation and a moment of revelation and wonder once they see the attraction.





Architectural Principles

'What the guest sees within the theme park, even when they see buildings, is often not real architecture: the vast majority of buildings being soundstages and warehouses clad with themed facades.'

'if it wasn't unique to take a photo of, we shouldn't be building it.'

Theme park designer Eddy de Soto



Themed facade





Symbolica attraction in Efteling- view from above and themed facade


Disney Snow White



Disney Tomorrowland California



Disney Dinosaur Ride / Ground floor

Techniques

- > Disorientation -> feeling of exploration
- > Stratification
- > False portals, tunnels .. expanding world
- > Forced Perspective
- > Avoid parallel and perpendicular walls
- Spaghetti layout'
- > regular space overall cheaper construction

Isolation



Water buffer









Accelerated pespective



F. Borromini, Palazzo Spada, 1540





Stratification



The Tallinn Quarry Theme Park | Gergana Negovanska



Circulatory deceit



Structural deceit









Opposition



Contradiction



Piranesi, The Staircase with Trophies



Theming



1.60++44.80 +3.50++43.50

1300......

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Deceitful Architecture Theory

- A theme park is a series of immersive thresholds
- Thresholds are key spaces/devices for immersion and dislocation, serving as a bridge between two worlds
- Theme parks achieve immersion thorugh deception, it is necessary to disordient, confuse and induce wonder
- Theme parks design relies on inefficiency of circulation and regulation of vision
- Theme parks are essentially dishonest and staged architectures
- Theme parks distort architecture to provide a synthesised version of cultural expressions of architecture and provide a new, different understanding of locality, tradiions and leisure through fragmentation
- Deceit in architecture has value for it produces wonder and makes one question reality and the architecture that had shaped it
- Deceit is achieved through even small manipulations of architectural elements by exaggerating the way of perception
- Fragmentation can be taken advantage of to produce disorientation and induce curiosity
- Deceit makes one question the scale, limits and dimensions of a space

04

THE TALLINN QUARRY THEME PARK

Taking limestone as its central theme, the project aims to bring awareness of the value, beauty and temporality of limestone through the architecture and the landscape of the quarry by transforming it into an imaginative landscape celebrating the properties and uses of limestone. The park will allow the people of Tallinn and tourists to learn, experience and reconnect to the city's unique materiality and landscape in a fun way. The project's developed area is the central area of the quarry with the idea that it sets a model for the expansion of the theme park to the rest of the quarry. The theme park is conceived as a sequence of thresholds, whose purpose is to immerse people into the world of the quarry. It has three main parts (thresholds): the parking, the main entrance, and a typical attraction entrance. The latter is devised as a type of threshold that can be replicated and plugged into all the attractions on the site, both outdoor roller coasters and warehouses. Stemming from the contextual, theoretical and disciplinary analysis, the design uses several techniques to achieve structural, organisational, and surface deceit.





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SOUTH ELEVATION, 1:100

Existing Warehouse

New Warehouse Roller Coaster

Attraction Entrance Plug-In

- Queue 1.
- 2. Entrance
- Bags 3.
- 4. Scene 1 fake tunnels
- 5. Scene 2 pre-show
- 6. Backstage
- 7. Loading
- 8. Control room
- Attraction 9.
- 10. Unloading
- 11. Scene XX post-show
- 12. Bag and photo pick-up
- 13. Souvenir shop
- 14. Storage

Attraction Threshold Plan 1:50

Attraction Wall Fragment Section 1:20

1 Roof

U 0.235 W/m²K | R 4,263 m²K/W 1000x2500x150 mm SAB sandwich panel with membrane and 150 mm insulation 700 mm steel truss roof structure with IPE 100 beams anchors for suspended ceiling galvanised steel mesh sheet 8-10 mm plastering mortar

2

3

150 mm concrete block

Concrete base

Wall

U 0,228 W/m²K | R 4,377 m²K/W structural stone panels 2500x1500x500 mm breather membrane 100 mm wool insulation in between 150 mm steel I beams vapour control memrane 40x40x2 mm galvanised steel supporting structure screwed to I beam galvanised steel mesh sheet 8-10 mm plastering mortar

Floor

4

| U 0,383 W/m²K | R 2,610 m²K/W 30 mm limestone flooring 60x60 cm on mortar bed 80 mm cement screed PE foil 50 mm sound insulation breather membrane 400 mm concrete slab

Souvenir Shop Wall Fragments 1:20

U 0.235 W/m²K | R 4,263 m²K/W 1000x2500x150 mm SAB sandwich panel with membrane and 150 mm insulation 700 mm steel truss roof structure suspended ceiling on anchors and steel substructure 50 mm acoustic insulations 22 mm plasterboard

Wall

2)

3

U 0,228 W/m²K | R 4,377 m²K/W 2500x1500x500 mm structural stone panels breather membrane 150 mm wool insulation in between 150 mm steel I beams vapour control membrane 22 mm plaster board

Floor

| U 0,383 W/m²K | R 2,610 m²K/W 30 mm limestone flooring on mortar bed 80 mm cement screed 50 mm heat flooring pipes within PIR insulation PE foil 50 mm sound insulation breather membrane 400 mm concrete slab

67

V2 Roof Detail 1:5

V3 Window Detail 1:5

C prolife 150 mm stainless steel bolted to stone wall on 20 mm PIR insulation

Window U 1.2 W/m²K aluminium frame, double glazing

Window stool 50 mm polished limestone

4

1

Wall 2500x1500x500 mm structural stone panel breather membrane 90 mm wool insulation 150 mm wool insulation in between 150 mm steel I beams vapour control membrane WINDOW DETAIL, 1:5

H1 Wall Corner Detail 1:5

Attraction Threshold Section A-A 1:50
05

REFLECTIONS

While not claiming to have mastered deceit in architecture, the project has provided me with an opportunity to explore in great depth this topic and experiment with it in a productive way that would contribute to my professional development. The project achieves a tradition-oriented theme park through modern means to provide people with an experience of the atmosphere, materiality and scale of Tallinn and inspire further bold architectural proposals for the city.

On the value of deceit

The project responds to the immediate needs of the local community for diverse leisure spaces, including hotels, restaurants, theatres, bars, and cafes on the outskirts/of Lasnamae, which also opens up many job opportunities for the community there. It provides a valuable addition to the city as a different type of leisure space, attracting diverse social groups - locals from all generations, tourists, disabled are allowed by design. At the same time, the project is deliberately unethical in the sense that it uses deceitful techniques to manipulate circulation and one perception of architecture to provide a pleasurable experience. Based on my findings and experience from the project, this topic proved very extensive and opened up opportunities for further academic research.

Similar strategies as used by theme parks are used by other immersive architectures such as museums, casinos, pleasure gardens, shopping malls, and theatres, where one is required to suspend their disbelief to enjoy a play or go through a carefully manipulated path to pass through the greatest number of shops, or to spend more and more on gambling, losing track of time. In this way, the design techniques I learned by designing a theme park are highly transferable to the design of other spaces for leisure. The project also re-considers the importance of deceitful and escapist spaces and their architecture for the context of Tallinn, which are currently a point of debate in architectural discourse by bringing out the qualities of disorienting spaces to immerse, instill imagination and provide a space to suspend our habits and belief. In the context of honesty and dishonesty in the architecture debate, the project makes a case for the value of dishonesty, allowing architecture to surprise and make us wonder.

Theme parks are valuable spaces for escape that provide an imaginative alternative to reality, which in turn can make people critical and want to change the outside reality.

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