

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Personal information	
Name	Stanislaus Anatol Berengar Ruff
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Studio		
Name / Theme	Urban Architecture – Exploring Nijmegen	
Main mentor	Mechthild Stuhlmacher	Design
Second mentor	Mauro Parravicini	Building Technology
Argumentation of choice of the studio	<p>The Urban Architecture studio offers me the possibility to work in the urban environment of the city-center Nijmegen. This provides me with the possibility to engage with architecture ranging from the Medieval period to present-day architecture. That opens up an important architectural discourse and it addresses the urgent question on how to densify our cities in times of growing demand of space.</p>	

Graduation project	
Title of the graduation project	Transformation & Expansion Canisius Basisschool

Goal	
Location:	Nijmegen, city center
The posed problem,	<p>For my graduation project I wanted to choose a site with inherent problems regarding density, architectural quality, urbanity and mix of use to propose an architectural intervention that can showcase and make the best out of those concepts and qualities. The site should be close to the heart of the city and its urban life and it should preferably contain both great architectural qualities as well as bad ones, asking for a revitalization and rebuilding of its elements. With the western part of the perimeter block around the St. Stevenskerk, occupying one of the high points in the topography of Nijmegen, I found the site I was looking for. Heavily damaged in the bombing as well as the battle fights, both in 1944, followed by the removal of rubble and the teardown of a few buildings, this part of the city center was left empty for decades, seeing no new development till the end of the 1970s. The structures now replacing the historic building block, built in the in 70s and 80s lack much of the qualities their predecessors possessed. The exception perhaps being the <i>Canisius primary school</i> with its attached public sports hall, here architectural intent and the intricate façade are justifying a refit rather than a tear-down. The</p>

	<p>school's body of pupils stayed unchanged since 1981 at around 200 and the school sees no possibility to expand further. But certain underused areas and underutilized building heights suggest otherwise. But how to increase the school in a dense urban environment like Nijmegen whilst dealing with a complex overcome structure from the 80's?</p>
research questions and	<ul style="list-style-type: none"> - How to transform, expand, build upon an existing concrete structure sensibly? - How should access be organized? - What are the benefits of mixed use and how to integrate it? - How can the school interact with the neighborhood more closely, acting as real cultural center of the area? - What should be the ratio between spaces of retreat, privacy and spaces of pupils and communal gathering? - How should the needs for porosity and delimitation be addressed? - What kind of architectural implications do new forms on learning have on a contemporary school buildings? - How can the social interaction within the school be intensified by architectural means?
design assignment in which these result.	<p>Answering those questions lead to a new block consisting of the school itself, as well as other public and private functions rendered revitalized, densified and urbanized. Concretely the aim is to double the school in size to around 400 pupils, using potential spaces to its sides as well as using top-up benefit. This should be achieved without losing any outdoor space and general amenities, in fact I aim at maximizing the schoolyard, appropriating public space, thus bringing the school into the city and the city into the school.</p>
Process	
Method description	
<p>Regarding the analysis of the site itself I plan to analyze the present uses and practices in mappings and photographs. The mappings should make clear certain deficiencies in urban and/or architectural quality on a neighborhood scale, this analysis can then fuel and inform the exact definition of the different programs and uses I want to implement into the newly designed building block. Two focuses are important here: firstly, the uses of the buildings themselves, vertically</p>	

and horizontally, and secondly the public urban space and its uses and appropriations by Nijmegen's citizens.

Drawing the existing situation in plan, section and perspective as well as learning about the history of the site and its people should further provide a solid base for a well-informed architectural intervention. As another method of analysis, I plan to make a physical model of the site, showcasing its remarkable topography as well as showing the most decisive changes in the urban form over the course of the last hundred years. This research by modelmaking can later be continued to discover different possibilities on how building volumes can or should be defined on this particularly site.

Further I analyze relevant schools as well as mixed-use buildings to learn how to execute a design that does justice to contemporary learning, living and working. Additionally, a good understanding of what constitutes a conducive learning environment and how learning is done or should be done in the 21st century is essential.

Literature and general practical preference

Coupland, Andy. *Reclaiming the City : Mixed Use Development*. London: E & FN Spon, 1997.

Hönig, Roderick, and Laure, Nashed. *Grundrissfibel Schulbauten : 30 Architekturwettbewerbe in Der Schweiz 2001-2015*. Zürich: Edition Hochparterre, 2015.

Herzberger, Herman. *Space and Learning*. Rotterdam: 010 Publishers, 2008.

Jacobs, Jane. *The Death and Life of Great American Cities*. Vintage Books, 241. New York: Random House, 1961.

Lederer, Arno, Barbara Pampe, and Wüstenrot Stiftung. *Raumpilot Lernen. Raumpilot, 3*. Stuttgart: Kraemer. 2010.

Narvaez, L. and Penn, A. *The Architecture of Mixed Uses*. In *Journal of Space Syntax*. Vol. 7 (1), p.107-136. 2016.

Sitte, Camillo, Siegfried Sitte, and Heinrich Sitte. *Der Städtebau Nach Seinen Künstlerischen Grundsätzen*. 4. Aufled. Braunschweig: F. Vieweg, 1983

Building precedents:

Vogelsangschule Stuttgart, 1961, Behnisch & Partner

Apollo Schools Amsterdam, 1983, Herman Hertzberger

Hessenwaldschule Darmstadt, 2015, wulf architekten

Kalkbreite, Zürich, 2014, Müller Sigrist Architekten

Reflection

The growing need for housing in the Netherlands comes with a new set of challenges for planners and designers on how to design new buildings in a country that already has every square inch planned out and dedicated. This lack of building land naturally leaves us with the question on how to increase the density in the city without overburden its citizens and infrastructures. In this regard the town and city-centers should be given especially careful attention in seeking out potential spaces that plug into the existing infrastructures and building cultures. Filling up vacant lots and adding top stories to existing buildings is a particularly sustainable and non-destructive way of increasing the density in the city. Another way is the refitting or removal of existing building blocks and structures in order to enhance them with structures that offer more space and opportunities for the citizens of the city in question.

As the studio focusses on public programs and on the revitalization of neglected urban fabric in Nijmegen, I think the graduation project fits into that framework with its focus on dealing with overcome architecture, the questions of what to keep and what to replace, thus transforming parts of the city into places more urban and vital than they used to be.