

## **P4 Reflection**

Architecture of production: Juárez Garment Factory  
Niek van Laere  
2016

## **Personal information**

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## **Studio**

Chair: Complex Projects  
MSc 3/4: Border Studio  
Main tutors: H. Smidihen  
Second tutor: K. Vollers  
B.O.E. delegate: S. Kurvers

## **Thesis Project**

Architecture of production: Juárez Garment Factory

### **Research question**

How to develop a model factory in Ciudad Juárez that uses the production potential of the region, but also tackles the problems that the production is facing both on a local and a global scale?

### **Ambition statement**

Design a production facility in Ciudad Juárez that shows its production process to the public, connects and contributes to the urban environment, provides pleasant work spaces and uses local (renewable) resources for its production (of which the products can be sold on various scales).

### **Introduction**

The thesis project is part of the Complex Projects: Border Studio that started in Fall 2015. The studios focus was on the international border between the United States and Mexico, that stretches for about 3100km from the Pacific Ocean to the Gulf of Mexico. During recent years this border is getting more and more militarized by the United States. New border walls and fences are being erected, check points are being built, the patrol program is being intensified and cameras and drones are being deployed to survey the area. This is a development that is not unique. Since the fall of the Berlin wall in 1989, the number of countries that have been or is erecting border fences has quadrupled. How globalisation that was supposed to tear down barriers, is actually causing more barriers to be constructed. Migration, violence and drugs are commonly given arguments to construct these border fences. In the Border Studio we see the border between the United States and Mexico as a cross-border region rather than a line separating two countries. The countries share environmental, cultural, political and economical aspects and the cross-border region act as an entity that has its own identity. The U.S. - Mexico border simultaneously attracts and divides. The possibilities of trade, production, employment and the pursuit of the American dream has caused many Mexicans to migration to the border region. Since the 1850s a whole series of cross-border twin cities has been established along the border. The U.S. - Mexico twin cities are divided by the border but dependant and inseparably from each other.

El Paso-Juarez is the most populous U.S. - Mexico twin city. It also is the biggest production cluster and the most centrally located twin city along the border. In El Paso-Juarez the border is officially defined by the centre of the Rio

Grande river. Due to the meandering of the river, that started about 150 years ago, the border between the U.S. and Mexico within the urban fabric of the cities, moved numerous times causing a long lasting border dispute. This dispute was finally settled in 1963. Hereby a concrete canal was constructed to keep the river in place. The cross-border zone where the river had been meandering is called the Chamizal Zone. Due to the meandering of the river, the Chamizal Zone has, despite its adjacency to both the city centres of El Paso and Juarez, remained relatively unbuilt. Therefore the zone nowadays functions as a green lung in the centre of the two cities. Both the U.S. and Mexican side of the Chamizal Zone are owned by the local municipalities, enabling them to control the use of the area. The Chamizal Zone nowadays mainly consists of civic functions, schools, sports facilities and parks. Due to its position, scale, proprietors and history the Chamizal Zone it is a very interesting site to develop a thesis project that could reinforce the larger cross-border region.

### **The relationship between the theme of the Complex Projects (Border Studio) and 'production and factories in the U.S. - Mexico border region' as the selected subject/case study**

The theme chosen to investigate in the thesis, 'production and factories in the U.S. - Mexico border region', fits within the broader theme of the Border Studio. The studio deals with the United States - Mexico border, it's conditions and the problems it is facing. Both the chosen topic and the studio theme deal with the conditions of the border region as a whole. In this region 'production' is and has been one of the main catalysts for the development of the region to its current state. The production in the border region has brought opportunities, urban growth and economic development but also has brought numerous downsides.

By developing a 'model' factory in the city of Juárez, an example is made, on how the local, regional and global problems related to production that are apparent in the region can be turned in to benefits. By addressing these problems a strong relationship with the theme of the studio, that focuses on cross-border problems and challenges in the El Paso - Juarez region, is being established.

### **The relationship between the methodical line of approach of the graduation lab (Complex Projects - Border Studio) and the method chosen by the student in this framework**

As Kees Kaan the head of the Complex Projects chair explained in a Complex Project introduction lecture in February 2016: "We are a research based studio. When constructing a narrative based on research, all design decisions can be based on this narrative". Another aspect of the methodical line of the Complex Projects chair is to approach projects from urgent global issues. Currently the graduation studios of the chair focus on border issues. In the coming years they will focus on water safety issues. The chair states that individual buildings rather than large long term masterplans or urban strategies should be able to provide solutions on an urban scale for these problems. These three aspects form the main element of the methodical line of the approach of the Complex Project chair and graduation studio.

Based on this approach the studio has been organized in a way that the first semester has been mainly dedicated to research. Hereafter the second semester was reserved to develop the individual design projects, based on the research and narrative as developed in the first semester. Next to this the second semester also required the development of a group strategy which

integrated the individual thesis projects of the ten students graduating under the supervision of H. Smidihen.

The research semester was started with a month of mapping various kinds of data of the project site on various scales, to get acquainted with the site and the border region. After this we went on a two week fieldtrip to the border region and El Paso-Juarez. Before and during the trip we had to develop an initial fascination and ideas on how this could result into a thesis project. On site there was a possibility to do further investigations concerning your initial fascination. After our return there was a period dedicated to select and further develop a fascination and thesis topic. After selecting a topic, a period of in dept research followed. This research was done in order to create a comprehensive understanding of the subject. Hereafter, until the P2 presentation, students had to define the research question, select a site, define the initial building program and define the initial mass of the intervention. These decisions all had to be taken based on the research carried out. During the second semester we had to develop the initial concepts presented at P2 to definite and detailed drawings at the P4 in may. All decisions during these steps must be taken based on the research and narrative developed earlier. Throughout the year we had to develop a 'Research Book' in which we documented our research and the narrative we developed.

The research based methodical approach corresponds with the way I want to work. In its essentials it also has similarities with the analytical approach that was projected on us during our Bachelors at the Delft Architecture faculty. Next to this I experienced the development of a 'Research Book' as a great tool to work with. It offers an overview of all the research carried out. Next to this it helped in constructing a narrative that functions as the base during the design process.

Hence the previous mentioned aspects I have been struggling to fit in the studio format of the graduation lab. For me it was the first time to take part in a Complex Projects design studio. Therefore I was unfamiliar with the method of approach. However I noticed that each tutor in the chair also has his own methods. Before I started the thesis project I have always had the idea that during a thesis project, students had to design their own design and research process. This was however not the case. Strict deliverables and a large amount of group work, determined the research and design process during the two semesters.

I picked my research topic almost a month later than was scheduled. Next to this selecting a site also took longer than was scheduled. This caused my project to be underdeveloped at the time of the P2 presentation. Due to fact that I was running behind schedule and my discontent about the restricted method of approach, I decided to postpone my graduation with a number of months. The extra quarter and summer break provided me with sufficient time to rethink the thesis project and the design and research process.

### **The relationship between research and design**

As just explained the methodical approach of the chair and studio was focused on research based design. This is an approach that corresponds with the way I want to work. Therefore during the design process the design decisions are based on a research based narrative, that was developed during the first semester.

The in-depth research was started after 'production and factories in the U.S.- Mexico border region' was chosen as a main topic of interest. This topic

occurred during the field trip to the border region. Here it became clear that production and trade is dominating the live, the natural environment and the built environment of the region. During the design process that started just before the second semester, decision concerning site, program, climatic principles, orientation, materials, construction method, typology, etc are all based on the research based narrative. This narrative worked as a guide throughout the whole design process.

### **The relationship between the project and the wider social context**

The primary aim the of the Complex Projects chair is to develop architecture projects that deal simultaneously with problems and conditions on a global, national, regional and local scale. The thesis project relates to the wider social context inter alia by addressing the global problem of the alienation of production. It also deals with the versatile global markets by using local resources and local labour for its production and producing mainly for the regional and national markets. By using a combination of old clothes and locally produced cotton as a resource for production, is tried to prevent the depletion the environment and to be independent of foreign forces. Waste water generated during the production process will be treated by either the adjacent 'Rio Grande Tower' of fellow thesis student Egle Briliauskaite or the 'Hueco-Mesilla Bolson Groundwater Infrastructural Hub' of fellow thesis student Maicol Cardelli. Next to this the project provides an alternative for the harsh and unhealthy working conditions, that often are apparent in production facilities that are producing for the global market. In the city of Juarez a large number of factory employees need to work under such conditions. The project also tries to resolve the issue of the creation of substandard built environment by factories producing for this same global market. The city of Juarez contains a large number of these substandard factory areas. By locating the factory, that is to be a 'model factory', with its public factory grounds close to the city centres of Juarez and El Paso, is tried reinforce the surrounding built environment.