Reflection
Michael de Beer

Positions in Practice: Constructing the Commons in the Latin American Metropolis
Graduation Studio (Msc 3 | Msc 4)

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A Sonic
The sonic act as a tool and epistome for architectural development

Introduction
The architecture graduation project in Valparaiso, Chile, stems from a year long research led process. The project consists of an urban framework of a learning centre, school and public space intervention with an architectural focus on the library and school. The site is situated on a central site within the city that climbs a steep slope between the old historical neighbourhood of Cordillera and Sotomayor square. The focus of the project has been on how sound is critical to how we understand and interact with our built environment. The methodology has used varied techniques to understand normative principles of sound - how form, materiality and programming is able to create intended sonic landscapes and situations as well as understanding the unique specific situation in which the project is situated. This methodologically-led research approach has informed the project through various tools that have explored different dynamics and thus given form to the project.

Theme of the graduation lab/ chair
The Chair of Methods and Analysis - positioned amongst several studios at TUDelft - aims to form a critical body of knowledge on how architecture is formulated. The position is concerned with the quasi-autonomy (Standford, 2011) of architecture, which acknowledges that external knowledge bases influence architectural practice and theory. This however, positions a critical need to develop and understand those aspects that make up architectures internal knowledge base1. In doing so, the chair holds a particular fascination with the design attitudes, methods and instruments in practice and theory. Following the chairs focus and inquiry, the graduation project has been focused on the tools utilised in developing the research and design, while exploring the theme of the sonic city.

A second focus to the chair is the “idea that the city should be understood as the ultimate common socio-spatial resource” (Havik, 2018). The position that is drawn forward in the graduation project moves away from the socio-economic issues of the commons and focuses on collective action, or otherwise stated the commons as a space of mediation – space of appearance. Where the public realm is thought of as verb, an act occurring between a collective. In line with this focus the graduations exploration into sound has explored the act of sound. Sound permeates the public realm and in so doing is an action that draws attention to the commons as a space of sonic mediation between many actors. The projects intent is to acknowledge this dynamic and position the notion of advocacy as being a means for the community to engage sonically with the city. This deliberate intervention aims to give a voice to the community so to speak.

Research & design
The research process has been critical to the development of the architectural project. Three key research approach’s have been used: the development of normative principles; the use of tools such as drawing and model making; and experiential techniques such as visualisation. These tools and techniques of enquiry have stemmed from the epistemological approaches of praxeology and phenomenology discourses. The two theoretical frames foci are on situating man within the world; as phenomenology studies experience and praxeology studies human action. The focus on these epistemologies has been informed by the architectural Chilean schools focus on the act , and how this forms an alternative mechanism for architectural understanding and design.

1: External bodies of knowledge; are bodies of thought that have occurred external to architectural theory and practice and have had an impact on the field.

2: Internal bodies of knowledge are those developments and theories that have occurred within the field. Examples of this range from the works of Palladio’s to positons, theories and methodologies such as the 5 pillars of architecture developed by Le Corbusier.
The critical stance by the Chilean school introduces the notion of observation and experimentation (also critical to the intentions of the Msc), as design is led not by intended outcomes but rather a process of exploration. The research process is not dictated by programmatic outcomes, but rather a research process of Acts that inform a design. Although the research processes undertaken by the Chilean school in developing architectural projects are not suited to a TUDelft graduation project, due to time frame constraints and their collaborative aspects, the underpinning intent of observation and experimentation remains a core approach that the graduation project has utilised.

The initial P2 presentation, situated a research question: In the Cultural Capital of Valparaiso, how does sound contribute to a sense of place and how could an understanding of sound in the city develop an architecture that is situated and affective as well as forms a deliberate intervention enabling various sonic acts to occur harmoniously?

In answering the research question, the research has used model making and drawing exercises, to inform the design process. These inquiries each exploring alternative aspects of sonic relations to the site have given form to the design outcome (please refer to figures 2-6). These exercises, not defined by programmatic intentions but rather an iterative process of observation and experimentation at various scales have enabled a research methodology that underpins a technical design process. In order to situate these exercises in the context of the project, the development of normative principles have formed in parallel to the exercises - informed through an iterative feedback process. Experiments inform principles from which further experiments are conducted. In order to give guidance to this process and remain speculative.

2. Folding paper - initial exercise to explore form intentions.
3. Mapping Sonic movement on the Site
4. Response to sonic situation and forming intentions for the urban framework
5. Drawing translating sound directional movement into a plan to inform the architectural development.
6. Visualization of a man listening to the city.
The combination of tools and techniques as part of the research has highlighted the importance of research as a mechanism for design. True to the Chilean school philosophy, failures within the process offer opportunities for the project to evolve and continue. In this sense research and design are one in the same as a symbiotic process of observation and exploration. This stand point reflects the intentions of the chair but also has enabled a fruitful exploration in remaining aware and of the importance of the process over that of the product.

**Project development**

Since the p2 presentation, the project has gone through three dominant design stages. Each of these informing the design stage to follow. Each stage reached a resolution at a 1:200 level. The critical mark defining the three stages where the foci underwhich each stage was informed, and thus the experiments, which had been undertaken to evolve the design.

**1st stage**

The first stage was primarily defined by two primary tasks, resolving the program of the building and exploring its resolution of the difficult site.

**2nd stage**

The second stage was marked by a return the sonic qualities of the site with development of a series of model explorations (figure 3 and 4). In parallel visual representations of the site and further iterations of the sonic principles that underpinned the project saw a complete review of the proposed design. This second stage to the project followed an intensive design process that saw a detailed design of the entire project – resolved in plans and sections. This stage culminated in the P3 presentation. Critically the outcomes of the P3 presentation highlighted several issues, namely the scale of the project and the ability to represent and convey the qualities of the project.
7. Four square sonic diagram developed for P2
8. The application of the sonic situation and programming of the project onto the for square diagram.
3rd Stage
Following the P3 presentation, it became clear that the project needed an element that bound the logic and the spatial design together. This third iteration saw the resolution of the design as being a route of sonic experience that altered the approach of the project. Rather than singular moments with a large project, the sonic experience would form a binding element to the entire project. The third phase also situated the project focus would be on the lower library and shared working spaces of the school with the intention of reaching a detailed design. In doing so the design was split into 2 components - that of the larger framework in which the route is situated and then the architectural resolution of a part of the framework. The 3rd phase of the project also took a step into the detailed material resolution of the design. This third stage saw not only the architectural resolution of the building but explored how materiality would be critical to achieve intended sonic situations.

9. The render was part of an exploration of the articulation of a brick wall which is the facade of the library. This wall has a dual function of mediating light as well as acting as a sonic refraction surface to the auditorium below.

10. This is a render of a small courtyard of the cafe and entrance to the library. The intention of render was primarily to get a feeling for the space being created.

11. This render was of the top of the long staircase along the public circulation route. In the back there is a rough representation of the programmed school environment, the top half of the school.

12. The axonometric view shown aims to highlight the development of two routes through the project. The public route and the internal route.
Reflection
The process undertaken has been particularly fruitful, as it has allowed for continuous exploration and refinement. With the guidance of the tutors, the development of the project has enabled an articulate response to the initial question and allowed for the development of a theoretical frame that would not have been possible in many of the other studios offered in the faculty. The methodologically led research process that has culminated in the proposal has been integral to the design process and critically positioned HOW something is done as to the final product as being fundamental to both architectural design as well as research processes.

In hindsight the scale of the project and the difficulty of the extreme slope of the site had been a key challenge throughout the project's development. However, in many ways the varied qualities imbedded in this difficult terrain has enabled the articulation of a project that is highly varied and diverse. This multifaceted result would not have been possible without the continuous iterations during the design process. However, reflecting on the process and the project: The first phase of the project had prematurely developed a design response which although offered meaningful inputs, it may have better been spent through sonic exploration that had begun only in the second phase. The approach to the scale of the project had also for both stages 1 and 2 positioned that the entire project would and should be fully articulated into detail. It became clear that this was not only a massive task but in the short period of a presentation given to graduation projects, the scale and multifaceted design is difficult to convey. Had this been identified earlier in the project timeline, the focus and articulation of the design may have enabled an in-depth inquiry into the specificity of a single location and alternative solutions of material application. However, the path the project has taken has successfully worked at the various scales and given a holistic view of the intentions of the project. In this sense the project has successfully developed a multifaceted design that speaks to the intentions of the initial project at the P2 stage.

Ethics
Having only had short period of onsite research, the ethical issues of the project relate to the socio spatial qualities of the site and being able to draw conclusions from a brief onsite research phase. These ethical issues have been acknowledged as being due to the manner in which the studio operates, however in a practice scenario, community and stakeholder engagement as well as further observation would be critical to the development of the project and its research.

Graduation Plan
Following the P4 presentation the aim of the upcoming weeks would be to respond to and resolve key issues identified in the presentation. The second objective will be to critically reflect on best way to convey the narrative of the research and the design into a holistic presentation. The third would be to focus on the construction of models and drawing of the final building outcome and its representation.

References

Havik, Klaske (2018) THE COMMONS OF VALPARAÍSO Positions in Practice: Constructing the Commons in the Latin American Metropolis. TUDelft pg 4-5