Writing a reflection on a project that is not yet completely finished allows the student to further consolidate it’s taken design direction and viewpoint on the given assignment.

The Aspects that the graduation manual asks covering for have been answered in the current order:

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REFLECTION PER ASPECT
DESIRED LOCATION

A piece of wasteland between a small river and a 60,000 houses condominium project
ASPECT 1: THE RELATIONSHIP BETWEEN THE THEME OF THE GRADUATION LAB AND THE SUBJECT/CASE STUDY CHOSEN BY THE STUDENT WITHIN THIS FRAMEWORK (LOCATION/OBJECT) AND THE STUDENT MOTIVATION ON WHY THIS SUBJECT HAS BEEN CHOSEN.

As stated in the graduation plan before, choosing the global housing studio and thus its field of research has for me been a clear decision. In April 2014 I had talked with one of the tutors of the studio to gain knowledge about the potential subjects within its field of research, and if it would match my field of interest, namely the technical and systematical side of designing dwellings. My interest lied in developing a potential technique, a system, a method for creating houses, outside of the trodden path of dwelling design for somewhat rundown neighbourhoods in the Netherlands. I wanted to provide a solution for housing in a country desperately in need for one, not to provide a solution for a place where housing is already fine, but where it could be a bit finer. The Global Housing studio has provided me with such an assignment where I could try to develop this method, or system, in a city where at least 80% of the its housing stock was composed of informal (or slum) housing (UN-Habitat, 2011), thus a city dealing with the problem of having only a small amount of houses actually suited for properly living in.

Of course I am being somewhat provocative here, but I think the design assignment that lies in Addis Ababa (or Ethiopia, or Africa for that matter) for providing good housing is a serious and glaring issue. My motivation for choosing this studio and my interest for the technique and the system of building houses has lead me to my design assignment; to find a way to make (mass producible) housing that is a potential answer Ethiopia’s housing needs and provide for its communal way of living.

The studio’s aim was exactly this, to come up with a potential solution to deal with the enormous Ethiopian housing shortage, with a solution dealing outside the known European context, to develop other positions, approaches and techniques as a response to particular cultural, social, environmental, political and economical conditions (Mota, 2014). My proposal has, I guess, somehow been a pretty modernist one. My interest lied in how new techniques of fabricating (construction) material and new construction techniques could benefit a housing design in the Ethiopian Context, how it could provide housing on a large scale without losing human scale. This approach lies within the studio’s aim to develop a collective knowledge base and investigate design methods and strategies to provide housing in the developing territory of Addis Ababa (Mota, 2014). It is thus an approach -among many other developed in the studio- that focusses particularly on providing payable mass housing through a systematic, technique and material focussed approach, but also dealing with the needs and necessities of the Ethiopian ‘way of living’.

The design proposal is projected on a desolate piece of land on the southern periphery of an Ethiopian attempt to provide payable mass housing (60.000 dwellings built in one year on one site (UN-Habitat, 2011)). By positioning the design here, it deals with a complex context shaped by a river, existing infrastructure and the presence of the mass housing project. It also The site thus deals with irregular geological and human made context, and makes the project easily comparable with the Ethiopian attempt to deal with mass housing, to see how improvements could be made.
CREATING CONCRETE BLOCKS
A visit to a concrete block factory to understand how these blocks are created

INTERVIEWING THE CONDOMINIUMS INHABITANTS
Interviews in the condominiums (with help from some Ethiopian students) gave new insights in how the people would actually like to live in a condominium
THE RELATIONSHIP BETWEEN RESEARCH AND DESIGN

My research can be split into three different main subjects.

1: To see how the Ethiopian government had dealt with the huge housing shortage through the construction of condominiums; 5-storey high blocks of 30 dwellings accessible by a gallery.

2: Finding social, economic and cultural patterns of habitation in the typology of the Kebele, the informal housing where most of Addis Ababa housing stock consists of.

3: To analyse and draw lessons from projects that deal with low cost housing in developing country’s attempted throughout the world.

The research was mostly done from September 2014 to January 2015, with a site visit of three weeks in November 2014. Research done in the Netherlands was mostly done by consulting books, reports, documentary’s and websites connected to the subject, while within the site visit, interview, photographing, filming, interviewing and sketching played a large role in analysing the subjects.

The figure of the condominium was extensively researched before going on the site visit; it showed how the Ethiopian government tried to deal with the huge housing shortage. They too had tried to come up with a housing strategy (with a little help from the GTZ, the German Technique Corporation (UN-Habitat, 2011)) that was mass producible, using local and new techniques and materials, and on top of that was payable for Ethiopians.

My analysis concentrated on this scheme’s performance, in other words how “good” it was in providing housing for the masses. I found that their strategy had many shortcomings; analysis showed that it was monotonous and invariable, it performed poorly with existing and geographical context, it was vast in the sense that human scale was reduced to a small cubicle inside a block, it created poor public space, did not allow for expansion or alteration of the dwelling, and most importantly; did not seem to meet with the Ethiopian (communal) culture, way of living and livelihood. It was however pretty easy to construct, cheap and straight forward and allowed every family living in an apartment to have their own kitchen and bathroom, quite a luxury in a city where only 4% of the people owns their own private toilet (Central Statistical Agency, 2012). The way in which condominiums are constructed is cheap but labour intensive; it for it to be cheap it relies heavily on cheap labour and the use of the most basic of materials. It can be concluded that it performed well in quantity (180.000 units in 5 years in Ethiopia (UN-Habitat, 2011)) but performed poorly in quality.

To understand what where Ethiopia’s characteristic ways of living, their patterns of inhabitation, I turned towards the Kebele housing. There I found that people live in one-storey small houses made mostly of corrugated plates and mud, sharing toilet facilities and kitchens with many, while being poorly connected to infrastructure. Analysis showed quality of the Kebele houses and living environment could be considered lower than what is considered to be a humans most basic rights (Commission on Human Rights, 1948). Research however also showed that people in the Kebeles relied heavily on one anther; thus creating networks of people belonging to the same tribe, family or former village. These social networks seemed vital in making the Kebele a liveable place, and were strongly connected to peoples livelihoods, social life / security, and allowing newcomers to the city to find a place to live. The physical form of these networks established themselves in compounds or even neighbourhoods, small shops and places where there could be worked.
URBAN PLAN

The proposed urban plan on the south border of the Jemo condominium neighborhood.
Doing interviews during the field research I found out that there was a strange and unexpected discrepancy between the Kebele housing and the Condominium. Where in the Kebele people were deprived of clean water, toilets, privacy, a house of good quality they enjoyed the self-regulatory and communal way of living around a courtyard where you really know and rely on your neighbours. People that had moved from the Kebeles to the condominium mostly said that they were happy having privacy and their own facilities, however really missing the network and the social cohesion that took place in the Kebele. Some of them even talked of moving back. This ambivalence lead me to further compare the condominium with the Kebele to figure out why it was that the condominium seemed to perform so poorly on the social aspects even though the housing itself was of higher quality.

By comparing the two housing figures I could pinpoint on what levels the condominium worked and on what levels it didn’t. In short it can be concluded that the condominium’s size (too large), it’s lack in variance and malleability, it’s poor connection to the outside and it’s context, it’s incapability of making public /communal spaces and to allow for small stores or workshops to be fit inside the building makes it rather unsuited to deal with the Ethiopian preferred communal way of living –especially in a culture where having a shared private outside space is a vital aspect of communal living- and where work (and thus income) is often connected to the house. Again, the condominium allowed for quantity, not quality.

By doing research on projects that deal with low cost housing in developing country’s attempted throughout the world helped me in formulating my own point of view on what would and would not work to create cheap mass housing in Ethiopia. Researching two projects, Alejandro Aravena’s Elemental Housing scheme, and Aldo van Eyck’s proposal for the PREVI contest in Lima in 1968, have played a crucial role. From these projects I learned how to deal with the accommodation of expansion of the house, what were the minima required for a most basic unit, how local and cheap fabrication processes and materials could be used in a design, how a design could be malleable and how it could create variation even when depending on only one housing type, and how functional (semi) public space was created through the position of the houses. Furthermore, the work of Fernand Pouillon has been of great importance for me, for in his architecture it shows how to deal with privacy and public space, how to deal with (local) ornament and aesthetics, and how to create housing on a mass scale. Looking carefully at a lot of other projects (to name a few; Aranya, Dar Lamane Housing Community, Shushtar New Town and Cité Al Ahmadi, La Marsa) helped me on my way as well.

From the research I established a set of design principles (or rationale if you like) that would translate my research findings in to a system that could be an improvement to the condominium housing scheme. Like the condominium, my approach would be a systematic one, rooted in the construction techniques that are available in Addis Abeba. Again, the design principles can roughly be grouped in to three categories which of course are all connected to one another:

1. The technical: How can a mass producible condominium design benefit from (new) local construction and fabrication methods/materials?

2. Cultural: How can Ethiopia’s culture and it’s communal way of living be translated in to a condominium-design?

3. Malleability: How can variety, adaptability and growth be achieved in a condominium design?
PROPOSED DESIGN

A fragment of the proposed improved version of the condominium
The technical: By studying the condominiums construction technique and its material use precisely I could come up with a construction system that is an improved version. I visited construction sites, took a lot of detail pictures of construction, visited a factory for construction materials, and determined what the price of construction materials was to see what was most suited for cheap mass construction. From this information I synthesised a new construction technique that uses all the good aspects of the current construction technique for condominiums. From my research I found that formwork was a complicated and expensive part of the project and often leading to poor structural quality. By adding two new type of structural prefabricated concrete blocks buildings can be constructed cheaper, more precise and quicker because of the elimination of formwork. Also, walls and structure now form in to one system, instead of a concrete structure where then concrete blocks where used as an infill. Research done on the van Eyck and the Aravena project helped me in finding the ideal sizes for these concrete blocks (the smallest of modules), and to create a system where these elements would fit together.

The shortcomings of the condominiums on a social, cultural and economic level (to have stores and workshops connected to the dwelling) and to see how communal living had taken place in the Kebele has been translated to a set of principles or requirements for an improved condominium typology. From this analysis I determined what set of public, semi-public, semi-private and private spaces and types I needed, what size they had and what sort of functions needed to be incorporated in or available to these spaces. Again here, lessons learned from the Aravane and van Eyck project helped me further determine the parameters and form for these space. From researches on density and clustering of houses and in the condominium and Kebele I came to an approach whereby houses are clustered around courtyards in numbers ranging from 20-50 houses per courtyard. These courtyards are further subdivided in semi-private spaces through terraces, stairs and corners so that sets of 2-4 houses would be connected through these outside spaces. Blocks are positioned in such a way that different kinds of public spaces are created; pedestrian and car streets, alleys and openings, courtyards, parks, parking pockets, corner stores and terraces etc. The size and order of these spaces was based on results coming from the research. The floor plans and accessibility of the dwellings is also a derivative of the good aspects of the condominium and Kebele typology and could have been only achieved through the precise study of these two types.

From the research of the condominium it was concluded that it was not variable and malleable enough, and of too vast a scale to be work properly as a housing scheme within the Ethiopian (or any) context. I took this conclusion to come up with a set of modules (on the level of the room, the house, the house cluster and the block) which could make smaller, more variable and more malleable housing. These modules can be stacked and positioned in different ways to create blocks of houses that are more variable than the current condominium blocks and that are capable of adapting to complex contextual situations. Houses on the top floor of the block can expand vertically on top of the building, while houses on the ground floor can allow for a store or small workshop to be incorporated within the house, or a house can be split in two so that two families can share one apartment or duplex.

This in short, without describing the entire project, is how the research, especially on the condominium and the Kebele Housing, has lead me to a set of principles and rules, towards a system that could be considered as an improvement to the current condominium housing.
because of stalling during the P3 the urban plan had still be heavily underdesigned
THE RELATIONSHIP BETWEEN THE METHODICAL LINE OF APPROACH OF THE GRADUATION LAB AND THE METHOD CHOSEN BY THE STUDENT IN THIS FRAMEWORK

The lab or studio has from the beginning on offered quite a strict framework for the students to follow, especially in the first half year. The studio in the first half year has focussed on creating a common knowledge base wherein students have taken their own preferred subjects to study to which later research results would be communicated to other students. A student has thus been expert on certain subjects of their own interest within the studio’s broader framework but had gained knowledge in all subjects the studio has been dealing with. Furthermore the studio allowed me to analyse the projects of Aravena and van Eyck in their attempt to make affordable housing in developing countries and to draw lessons from these projects to use in my own.

For me from the beginning on the subject of the condominium and it’s construction techniques has been a main focus. Later on in the studio I briefly focussed on migration towards Addis Ababa and it’s physical manifestation inside of the city, namely the Kebele Housing. From here I realised that combining the best aspects of these two housing typologies I could improve the condominium and offer an improved alternative. Tutors from the studio have encouraged me to focus on a mass – housing scheme, the technical and social/cultural values that should be embedded in the design. My strategy has become a strategy amongst many in the studio that each deal with specific aspects of the studio’s main goal: to come up with alternatives to provide (affordable) housing in Addis Abeba. It seems however that my approach to this assignment has been unique, by focussing the project on a piece of wasteland on the edge of large scale peripheral neighbourhood in Addis Abeba.

Presentations and sub-presentations set by the studio have pushed me to further my design. Without these presentation moments I would have probably for a longer time been designing and analysing without any coming towards any tangible design. Thus the Studio’s methodology or set out path has greatly pushed and furthered my design.
CONDOMINIUMS THEN AND NOW
The European mass housing model will probably not work on a long term in Ethiopia
Providing affordable housing on a mass scale has been attempted worldwide over the course of history. Especially the first and second world war have caused a flux on the creation of mass housing in Europe and America in the twentieth century due to housing shortages created by these wars. Furthermore mass industrialisation has further increased the affordability and mass predictability of these projects.

Most of these mass created housing projects that have been created (especially after the second world war) have the negative stigma's of unconnectedness, an abundance of undefined public space, the loss of the human scale and the poor quality of the houses connected to it. Everywhere in Europe these neighbourhoods are being torn down or heavily renovated to deal with their shortcomings, they have become the Ghettoes of our time.

Ethiopia stands on the fortnight of mass industrialisation and has a housing shortage and population/economic growth that (from a relative point of view) greatly exceeds that of post-world-war Europe. Just like Europe it too implements housing on a mass scale based on only few typologies. Even more so, it repeats mistakes made in Europe on an even more dramatic scale. The mass housing schemes lack to connect people and cater for their culture and livelihoods, it’s large undefined public spaces, it’s poor structural quality and it’s lack in variation can only lead to Ghettoization. The mass housing scheme might deal with the housing shortage on a short-term, but is social time-bomb waiting to happen in the long run.

By offering an alternative to the current condominium typology hopefully the long-run quality of the houses and the neighbourhoods and communities that they form can be consolidated. By offering a house that is mass producible and affordable, yet that can cater for Ethiopia’s communal way of living, it’s use and need of outside and public space, it’s dwellers’ needs to expand and alter a house and ability to connect their dwelling to their work can make a more durable and “Ethiopian tailored” project than the current condominium housing scheme. It hopefully deals and prevents the problems that Europe deals with now with their modernist version of the condominium housing typology.

SOURCES


