

Relationship between the contextual framework and the case study

Cities will have to “house” all future population, which is expected to peak at ten billion in 2050. This means that urban population is growing faster than actual cities can absorb, resulting in a deficit of housing accommodation for people.

Ethiopia is ranked as one of the poorest countries in the world and is facing an annual growth of 2.6%. Addis Abeba, the capital of the country, is characterised by slum areas, called Sefers, covering 80% of the town extension, that developed starting from the city foundation in 1886. Thus, Addis Ababa alone has a deficit of 300.000 units.

At the beginning of the 2000s the Ethiopian Government, in partnership with Germany, developed a high-density prototype: the Condominium Block. This was then extended to a full-scale project. While facing the issue of density, the Condominium blocks cannot be considered as the best solution to approach the problem of affordable housing in Addis Ababa. Three main problems can be highlighted: production cost, building configuration and finally, the lack of flexibility. Condominium blocks were conceived with Western countries technologies and materials. This brought the Ethiopian economy to strongly depend on first matters importation from European countries, increasing the project production costs. As a consequence, low-income people were unable to afford either the rent costs or the maintenance costs of the apartments. More, the high-rise condominium blocks did not match with poor people life style, characterised by simple habits that take place within the community space. The low-rise informal buildings are too small to accommodate the daily activities and, for instance, cooking takes place outside. On the contrary, condominium blocks were designed in accordance to the European life style providing modern kitchens and toilets within each apartment. Hence, people appropriated of the provided outdoor public spaces for their own needs. More, the condominium blocks provided basic small units that lack in flexibility. People could not extend according to their needs and situations.

The most striking consequence is that the lowest-income groups, to whom the condominium blocks are addressed to, rent out their units to middle-class people and move to cheaper informal houses in other areas of the city. Thus, slums turn to be even more crowded throughout the time.

So, from one hand the typological transfer of Western models in the city of Addis Ababa must be considered as a success, since it has been able to reach a high-density in a fast building process; from the other hand, the construction cost and the dependence on materials importation, does not allow to implement the economy of a growing country.

We decided to focus our design research in one of those slum areas that have not been targeted by the Government yet: the Sefer Menen.

The place assumed its name from the Empress Menen Asfaw, the wife of the Emperor Haile Selassie who reigned Ethiopia from 1916 till 1930.

The Sefer is located between the Entoto Mountains and the Old Palace and it is intimately associated with the foundation of Addis Ababa. Because of this, early neighborhoods of non-planned spontaneous settlements raised since the origin of the city.

Its position next to so called Magnets such as the University, the Meeting Hall and the United States Embassy made this area an interesting place that densified throughout the years, hosting a variety of typological buildings. Indeed, in the Sefer it is possible to find informal settlements as well big and beautiful villas.

Its particular location next to those magnets protected the site from the rapid urbanization of the city. Indeed, through a morphological analysis of the evolution of the site it is possible to understand that the site did not undergo drastic changes in the last twenty years.

Research and design challenge

The first research phase focused on the study of the transformation of the site. In particular, the way it transformed and evolved from the foundation of the city till now. We tried to understand its characteristics and if events, such as the Italian Colonization or the rapid urban expansion, influenced the

growth of this place. During this first step, we investigated the different housing typologies that varied from the circular local hut till the last interventions built in the late 1990s.

This first research helped us to become more familiar with the periods and events that contributed in the transformation of the capital city. Moreover, as already mentioned above, a morphological analysis, allowed us to understand that the site was not involved in the rapid urbanization promoted by the government. More, the housing typologies analysis showed us that different types of dwellings still coexist nowadays.

A second research phase focused on a deeper analysis of the site, trying to understand the reasons why this place was not involved in the fast urbanization of Addis Ababa.

Indeed, we analysed the surroundings getting to know that the presence of magnets gave this place the chance to develop and improve with time. This was confirmed by the presence of activities and public spaces around and within the Menen.

At the same time, we investigated the intervention made by the NGO Redd Barna during the 1990s. This helped us to understand the potentials of the project and the reasons why this prototype did not completely succeed in its purpose.

The third research phase was the field trip. During this time, we got the chance to truly investigate the suggestions and wonderings we had before leaving. The site survey was indispensable to deeper our research and understand the architectonic elements that characterize the Menen Sefer. Interviews and the exercise of re-drawing compound spaces of the site helped us to understand the way people live and what they really need.

The visit of the capital as well as the new interventions gave us the opportunity to get to know to what extent the full-scale project of the condominium blocks is spreading around the city.

The final phase of the research was the analysis of the material collected during the field trip.

Since the site survey, we were interested in the socio-spatial layers that characterized the Menen Sefer and enabled people, from different social classes, to coexist. We questioned ourselves to what extent a high-density project could be able to reinterpret the sequence of spaces that, according to us, was the main characteristic of the Sefer.

We know, that sooner or later the Menen will be the targeted by the government for building full-scale projects. We challenged ourselves trying to find a valuable alternative able to preserve the richness of this place as well as to reach the same density of the condominium blocks.

Indeed, the design research phase brought us to the formulation of a clear research question.

How can the different socio-spatial layers, that characterize the fabric of the Menen, be reinterpreted into a low-rise project able to reach the same density of the Condominium blocks? How can the project be feasible and promote itself as flexible standardized system?

Hence, we challenged ourselves in designing a “system” able to reinterpret the hierarchy of spaces of the site, as well as a project that has embedded the flexibility to be standardized.

The methodological approach and benefits of team working

Since the beginning of the preliminary concept, our project aimed at deepening themes that influenced the outcome in different scales.

Surely, the study of Belapur project, designed by Charles Correa, helped us in the definition of a hierarchy of spaces. The blueprint scheme utilizes a cluster arrangement around small community spaces. At the smaller scale, units are grouped around an intimate courtyard; few clusters combined form a larger module surrounding a bigger open space. The spatial hierarchy continues until neighborhood spaces are formed where schools and other public-use buildings are located.

As the architect did, we defined a strategy that starting from the private space of the compound, shared by a maximum of twenty families, was able to define bigger buffering spaces till the definition of neighbourhood blocks.

Whereas our compound system strategy was not able to tackle the urban scale, Michel Ecochard approach for Casablanca helped us in defining a hierarchy of streets. Indeed, our project reacts in different ways according to the street it is facing to.

Moreover, we also investigated the concept of flexibility within each dwelling. This brought us to focus on the theme of incremental housing. We wanted to address to different social classes, but most important, we wanted people to be free to modify and enlarge their apartments without affecting fundamental elements of the initial project. Hence, the Superloft concept designed by Marc Kohler Architects showed us another way of thinking about incremental housing.

Superlofts are buildings with lofts six meters high in which residents are free to choose their own layout, size and design.

To us, those references were essentials to understand how different scale elements can interconnect in defining a rooted and contextualized project.

In our opinion, the project succeeded in addressing the different themes we aimed at and it is able to answer the research question we developed during the preliminary concept phase.

Working in team surely allowed us to step forward from the typical academic graduation project giving us the chance to design a project which has a strong concept, but is also feasible.

Our project is not only a statement that tries to give a valuable solution to the problem of affordable housing in Ethiopia, but it is a feasible project. It truly tries to compete with the condominium blocks in matters such as design, costs, time, labor and skills.

Indeed, while designing our project we also analyzed the material costs, building construction time, and labor and skills requirements in order to compare our design solution to the governmental prototype.

During the design phase this allowed us to integrate and modify the project making it as flexible as possible. For example, this brought us to the proposal of two construction methods able to address the issue of affordable housing from two different point of views: the project could be standardized and be built fast using concrete, while it could be cheaper and more sustainable if built in rammed earth. The former requires material importation, technological structure and specialized skills while the latter can be found in situ and can involve the population in the building process.

Moreover, team working gave us the chance to deepen the architectural discussion with the professors. We had the precious opportunity to discuss and share our opinions between two of us before the tutoring and improve design argument while talking to them. This inevitably enriched the outcome and the choices we made in our project.

Furthermore, in our opinion, working in team also helped and enhanced the work of individual fellow students giving the entire studio the opportunity to relate to different level projects.

The project in a wider social context

The Global Housing graduation project challenges us to think in a different way that implements the western technologies into local techniques and materials. This means that, it is giving us the chance to apply what we learnt adapting it in a completely different context, such as Africa.

This could surely bring to new solutions able to compete with top-down projects that are spreading around the capitals of developing countries.

The statistics shows that there is the need to build one million-person city per week with ten-thousand dollars per family, during the next fifteen years.

Our graduation project could surely contribute in getting people more aware of this pressing issue and be inserted in the international debate. More, it could give another valuable point of view from which tackle the problem of housing demand.

Moreover, the intent of our research was to design a feasible project that truly shows its potential to compete with the governmental prototype. Reflecting on issues about cost and time surely influenced the outcome of our project and the method we designed it.

We hope that our work will inspire future students in reflecting also on those important matters.

The affordable housing graduation studio could surely reach greater achievements if students could be able to deepen not only the theoretical aspect of the project, but also the overall issues that make a project a win-win solution compared to the governmental prototypes.