

 TU Delft

Architecture & Dwelling

TU DELFT | FACULTY OF ARCHITECTURE AND THE BUILT ENVIRONMENT
DEPARTMENT OF ARCHITECTURE | CHAIR OF ARCHITECTURE & DWELLING

GRADUATION PLAN

Master of Architecture, Urbanism & Building Sciences

A - Personal information

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**Global Housing Graduation Studio:
Addis Ababa Living Lab
Creating Resilient Dwelling Cluster for Urban Resettlement**

b) Tutors:

Design and Research Tutors:

Dr. Nelson Mota

Ir. Harald Mooij (

Building Technology Tutor:

Ir. Frank Schnater

Delegate Examiners:

Tanja Herdt

c) Argumentation of choice of the studio:

When I just started studying architecture, my first encounter with an architectural project assignment was to create a dwelling unit for a single-family. There I have learnt how architecture, planning, and psychology acts as the key aspects to analyse the living conditions of human beings. From Jan Gehl's books, I learnt how significant small things in everyday life can be. Simple things, that define behaviour and devote to our well-being. The day of a person starts in his bedroom and continues in other architectural forms and spaces around him; his community; his city. I believe that architecture has the power to change the life of a single human, inspire him, create desires and "wants". Therefore, I feel that my purpose is to translate the everyday life practices of humans into the language of architecture, define their culture and traditions through it. I chose the Global Housing studio as my MSc3 to keep changing the lives of urban poor of the developing countries in the Global South. I believe, that learning the ways of developing and planning strategies in emerging territories would contribute to solving the problems of overpopulation and poor housing and would contribute towards my future career. I wish to create a meaningful architecture that would inspire people even if it would not be visible simply by eye.

C - Graduation Project

The new transitional city: Defining the cultural character of Addis Ababa by its urban habitants and rural newcomers

Location: Kolfe, Addis Ababa, Ethiopia

C.1 _ Goal

Problem Statement

Over the past six decades, the planet has experienced vast urbanization: in 1950, more than 70 percent of people worldwide lived in rural settlements. In 2007, for the first time in history, the global urban population exceeded the global rural population. (Heisel et al., 2016) Ethiopia alone is one of the most rapidly growing countries not only in the continent of Africa but also in the whole world. The country is populated by almost 110 million inhabitants and only 20% of the whole population is living in the cities. A pattern of movement is occurring as a developing country like Ethiopia is switching from agricultural to industrial sectors. Over 65% of the population from rural areas have started to follow the migration patterns from rural countryside to the urban settlements. (Casacchia et al., 2001) Especially, to one of the biggest urban cities of Africa: Addis Ababa.

The creation of Addis Ababa and its former structural division to *sefers* for royal families, lead the working class to expand around it and build uncontrollably and unsupervised. This resulted in city expansion horizontally, rather than vertically and barely providing any infrastructure. 1980s famine also pushed rural settlers to move to the urbanities, for the search of new job opportunities. Besides the high percentage of migrants moving due to the transfer of a family member, there are considerable flows for reasons related to the celebration or the dissolving of a marriage, as well as nowadays education or just living with relatives. (Casacchia et al., 2001)

Since the establishment of Addis Ababa, the city has become a destination for the most rural-to-urban migrations within the country. (Davison, 2014) Therefore, the capital city could be labelled as an Arrival City for many - a place where everything changes, and new opportunities occur. Arrival cities share optimism, encourage business start-ups, social networking, provide educational possibilities and give spontaneity that is the key to the new and brighter growth of the upcoming generations. The arrival city of Addis Ababa is where the social development of the rural migrant changes. It will be the last human movement of this size and scope; the changes it makes to family life, from large agrarian families to small urban ones, will put an end to the major theme of human history, continuous population growth. (Saunders, 2010)

Even if, Addis Ababa as arrival city has a positive connotation, to shelter the rapid urbanization, the city is confronted by unimaginable challenges in providing infrastructure, housing, education, public areas and services for the rural migrants. Rural migrants are confronted by demanding task of finding even momentary accommodation. The problem is the lack of approximately 700 000 housing units resulting in the illegal framework of the building, leading to undignified living conditions in the informal settlements. The consequent stress on the housing system manifests itself in the continued informal occupation of dilapidated structures, the construction of meagre shelters, extreme overcrowding, the occupation of dangerous sites and the invasion of public land. (Fransen et al., 2010)

Another challenge the rural migrants must face is the social and spatial segregation. The new investments and developments symbolize Addis Ababa's aspirations to become a hyper-modern metropolis. (Bhan, 2013) However, the informal settlements are being torn down to create space for these new private investments, leading urban poor to be pushed away from their shelter communities. As self-made settlements are usually not registered in the municipality's records, the migrants are often not informed about the relocation processes.

This lack of information cause anxiety and fear among people living in slums; inaccurate information, rumours, and gossip further exacerbate these feelings. (Heisel et al., 2016, 67)

Next to the problem of segregation, migrants have a lack of understanding of the urban lifestyle. In the rural villages, for many decades people lived in rural shelter models, so-called *tukuls*. Nowadays, in cities, the urban poor live in the one-room expansions in someone's backyard, which would present an urban shelter model. The description of the shelter could be understood as a place of usually no differences between functions: animals and humans live together, sleeping and living take place in the same small space. *The shelter* serves to meet the basic needs of the human being. On the other hand, *the house* does not only serve the basic needs, but it also starts to maintain desires and "wants", which leads to personalization and some sort of appreciation. The urban pattern of informal settlements are shelters. And therefore, Addis Ababa experiences the ruralization of its urban centre. Rural migrants bring the past lives, traditional and cultural living patterns as their luggage. Their values and traditions do not change overnight simply because of a change in location. Migrants bring their rural life into the cities - and in such high numbers that as a result, the cities begin to change, rather than migrants. (Heisel et al., 2016)

An additional struggle the newcomers confront is the discouraged traditional living patterns. The modernized city designs created by private investment developments do not acknowledge the social and cultural context of Addis Ababa. The international style of globalized architectural approaches and standardized solutions have little to do with the traditional and cultural dwelling patterns of Ethiopians, where the urban lifestyle ignores almost completely the understanding of different uses of spaces: as if all the cultures would be same and could be applied same design principles. Developing standardized architecture, projects neglect social networking, where people are sustaining a community lifestyle. Knowing your neighbour and the exchange of knowledge, manpower, skills, and goods are the key aspects of survival for many rural inhabitants. (Heisel et al., 2016) Therefore, the Integrated Housing Development Programme created by the government, that offers standardized solutions to inhabit as much urban poor as possible fails, as new condominium housing schemes do not sustain traditional living patterns.

The last migration of the late eighteen and the early twentieth century had a direct effect on the reinvention of human thought, governance, technology, and welfare. Mass urbanization changed politics and social governance. Yet, the city-bound migration and the rise of new, transitional urban enclaves was a story largely unknown to the people directly affected by it. (Saunders, 2010) The mismanaged urbanization processes created riots and sometimes wars, where the newcomers became trapped, excluded or resentful in the informal settlements. Therefore, growing cities urgently need a change in creating spaces of transition for migrants, that would sustain their common rural lifestyle, but also offer a flexible way to adapt towards the lifestyle of the city by providing flexible housing arrangements. Offering the possibilities for temporary housing would become a safe option for these migrants not only to start adapting to the new lifestyle but also would offer dignified living conditions and new social possibilities. As migrants now live in informal settlements they are rarely surrounded by middle- or middle-higher-income group people, however, the approach of mixity would help them to develop social networks. The existing heterogeneity of the city and its geopolitical importance could be starting points for such an endeavour, in which formal city planning, influences by effective (informal) elements of the local city fabric, would depart from the standardized city approach in favour of slower yet more resilient development methods. (Heisel et al., 2016)

Research Question

What kind of urban neighbourhoods and housing types can accommodate a different variety of social structures of newcomers and city dwellers, helping them transit towards the lifestyle of the urban city, that would sustain their traditional (cultural) living and dwelling patterns but also deal with urban conditions of certain density in a constant growing megapolis of Addis Ababa, in exchange providing the environmental and social sustainability for the capital city itself?

Incorporating all aspects of the design requires triggering the complexity of urban planning and even more specifically housing. Finding the best way to mix not only the different income but also social groups, that would preserve and sustain a cultural lifestyle, as well as provide learning and adapting possibilities towards the lifestyle of the city is the main task of my future design.

Design Assignment

The Design Assignment aims to create an example of a co-existing housing scheme between two lifestyle groups of urban dwellers and rural newcomers, as well as different income groups of middle- and middle-higher-income people, in a required middle-rise housing unit. The mixity of different social groups would create a possibility to maintain social networks through the years, that would provide adaption period and social security for the newcomers, in exchange for providing community lifestyle for the urban dwellers as well as services. The location of the Kolfe site in the city of Addis Ababa would serve as a prototype, this would not only help to create the identity of the site itself, as now it is lacking but would improve the lifestyle of current inhabitants too. This model would give a different perspective of the migration and would provide a feasible vision for the middle-rise housing developments.

C.2 _ Process

a) Method description

The method of research that is being used is ethnographic praxeology. Ethnographic praxeology is the study of the nature of human actions, which takes into consideration the built environment as an everyday practice. The approach was used to gather information by interviewing inhabitants of the area, introducing the participatory game of the dream house design and analysing the visual recordings later. The series of drawings were conducted during the visit, which helped to understand the spatial qualities and living patterns better.

The analysis of the ethnographical research tackles a couple of questions: what the cultural and traditional lifestyle of rural migrants and urban dwellers is and how the mixity of the different lifestyles could be presented in the urban neighbourhood as well as house typology. Therefore, two different approaches would be used: analysis of the spatial design practices of affordable housing in the worldwide context as well as the observations of the life of migrants (what they eat, what sort of appliances they use, where they shop, etc.).

The analysis of the design approaches worldwide would give the idea of how opportunities can be created for the urban poor. Planning scenarios would be an approach to help and conduct the research conclusions better.

b) Literature and general practical preference

In order to understand, how different social groups of people could co-exist together in the same housing unit, I focus on analysis on different housing projects from all over the world. In the beginning, I analysed the social housing project from New Bombay, India - *CIDCO housing*. The design for many dwelling units is fragmented into smaller aggregations enclosing a variety of spaces, which can be cohesively arranged on the sloping site of a hillock and strung together with pedestrian pathways. (Rewal, 2000) In this project, different variations of streets were proposed, that created a variety of private and public spaces. By creating a prototype and applying different variations of it in the neighbourhood, the architects combined different lifestyles of people successfully into one.

Another two examples, that acknowledged the importance of collaboration, while creating housing units are from the architecture office ELEMENTAL. The example of *Quinta Monroy* and *Villa Verde* housing schemes offer a possibility for residents themselves expand the dwelling units as they wished and have resources to. In this case, the architects provided a frame for future possibilities. By developing a new typology of social housing, architects

created incremental housing and allowed residents to develop needs themselves, leading to a successful implementation of the project.

The reference of *Le Serre* by the Dutch architectural office MVRDV proves that the need for internal vertical and horizontal connections is the essential feature of planning the future urban environment. The ground floor serves facilities not only for the residents but also for the city itself. The housing project is the urban sanctuary, the place of shelter, where people can gather and communicate through the internal streets between dwelling units. The project challenges architecture to become a catalyst for different lifestyles of different groups of people.

All the practical preferences took into consideration the need to cherish traditions and culture. However, another key take-aways would be that mixing a different dwelling typologies result in a better social mix of the residents; streets in between buildings act as social facilitator and provide opportunities to develop social network; including amenities in the ground floor could generate income for some residents, but also have a positive impact on the neighbourhood and the city.

Used literature:

Bhan Gautam, "The real life of urban fantasies." *Environment and Urbanization*, 26(2) (December 2013), 232-235, <https://doi.org/10.1177/0956247813514305>

Cain Allan, "African Urban Fantasies: past lessons and emerging realities." *Environment and Urbanization*, 26(2) (April 2014), 561-567, <https://doi.org/10.1177/0956247814526544>

Davison William, "Addis Ababa Doubling in Size Gives Africa Another Hub," *Bloomberg Business*, August 1, 2014, <https://www.bloomberg.com/news/articles/2014-08-01/addis-ababa-doubling-in-size-gives-africa-another-hub>

Fransen Jan, Samson Kaasachun and Meine Pieter van Dijk, *Formalization and Informalization Processes in Urban Ethiopia: Incorporating Informality*, (Maastricht: Shaker Publishing, 2010)

Hamdi Nabeel, *Housing without houses*, (Intermediate Technology Publications Ltd, 1995)

Heisel Felix, Bisrat Kifle, *Lessons of Informality. Architecture and Urban planning for Emerging territories - concepts from Ethiopia*. (Birkhäuser Verlag GmbH, 2016)

Rewal Raj, *Humane Habitat at low cost*. (Tulika, New Delhi, 2000)

Saunders Doug, *Arrival City: How the largest migration in history is reshaping our world*. (Cornerstone, 2011)

Sennett Richard, *Building and Dwelling: Ethics for the city*. (Penguin Books Ltd, 2018)

Sim David, *Soft City. Building Density for Everyday Life*. (Island Press, Washington, 2019)

C.3 _ Relevance

The main aim of the future design project of graduation studio is to create a prototype model of the housing units, that would accommodate rural migrants in a safe and comfortable living conditions. The new flexible and affordable dwellings would secure them from the biggest struggle of finding accommodation and allowing them to build the foundation as the citizens of the city. The research will help to create the best possible scenario and housing units' variations, that would be integrated into the structure of the urban neighbourhood Kolfe and in the city of Addis Ababa. The experimental prototype model, if working positively, would be then implemented in more neighbourhoods of redevelopment in whole Ethiopia.

Offering secure dwelling conditions would lead rural migrants to focus on job opportunities. The simple solutions to apartment variations would help to live comfortably. Furthermore, the dwellings would be integrated into the fabric of housing blocks, where citizens of the

city live already, suggesting possibilities for co-existence. By supporting the connections with middle-income social groups, the rural newcomers would have better access to information about job possibilities. Standardizing the occupancy of rural migrants in the city, would explain their role and lead to acceptance and citizenship and reduce disapproval by other social groups. By preserving the cultural and traditional living patterns, the city would find its identity again and would become African Hub, where the modernized solutions of the 21st century are being combined with traditions.

When the whole world is being pushed towards the rapid urbanization, rural migrants must receive essential guidance to the life of the city. These transitional spaces - arrival cities - are the places where the next great economic and cultural boom will be born, or where the next great explosion of violence will occur. (Saunders, 2010) Many migrants come to the city by sacrificing a lot in pursuit of a better life. Therefore, cities must stop destroying the aspirations and start acting upon them.

C.4 _ Time planning

2019

SEP
01

1 AR3AD030 Research Seminar Global Housing introduction to case studies in Rotterdam. Introduction to Graduation Studio Phase 1: Design Research and Projective Mapping.

2 Case study research: Kleiwegkwartier/Design research and projective mapping

3 Case study research: Kleiwegkwartier/Design research and projective mapping

4 Case study research: Kleiwegkwartier/Design research and projective mapping

5 Case study research: Kleiwegkwartier/Design research and projective mapping

6 Case study research: Kleiwegkwartier/Design research and projective mapping

7 Case study research: Kleiwegkwartier/Design research and projective mapping

8 22nd: Draft version of the graphic novel "Dwelling in Rotterdam"

25th: Final presentaon of Phase 1: design research and projective mapping

9 29th: Final version of the Graphic Novel "Dwelling in Rotterdam"

2nd: Flying to Ethiopia

OCT
02

NOV
03

10 Field trip

11 Field trip

12 18th: Flying back from Ethiopia/19th: Introduction to p1 & p2 assignments

13 Working on problem statement, research question and design hypothesis.

26th: Draft version of Problem Statement/ 2nd: Submit Problem Statement

DEC
04

14 3rd: P1 presentation

15 10th: Final version of screen presentation of Global Housing Tutorial

12th: Methods and Analysis essay submission.

16 Preliminary design for P2

Preliminary design for P2 17

15th: P2 presentation/18th: Retake of Methods and Analysis essay 18

Re-evaluating preliminary design if necessary 19

31st: P2 retake if necessary/31st:Final version of the Graphic Novel "Dwelling in

Addis Ababa" 20

JAN
05

2020

Further development of the design 21

Further development of the design 22

Further development of the design 23

FEB
06

Further development of the design 24

Technical and architectural development of the project, draft drawings, model 25

Technical and architectural development of the project, draft drawings, model 26

Technical and architectural development of the project, draft drawings, model 27

Technical and architectural development of the project, draft drawings, model 28

MAR
07

3rd: P3 presentation 29

Technical and architectural development of the project, draft drawings, model 30

Technical and architectural development of the project, draft drawings, model 31

Technical and architectural development of the project, draft drawings, model 32

APR
08

Technical and architectural development of the project, draft drawings, model 33

Final design booklet, draft drawings and final model 34

Final design booklet, draft drawings and final model 35

25-29th: P4 presentation 36

MAY
09

Final design booklet, drawings and model 37

Final design booklet, drawings and model 38

Final design booklet, drawings and model 39

22nd-3rd: P5 presentation 40

JUN
10

22nd-3rd: P5 presentation 41

42

JUL
11

GRADUATION

C.5_List of References

Bhan Gautam, "The real life of urban fantasies." *Environment and Urbanization*, 26(2) (December 2013), 232-235, <https://doi.org/10.1177/0956247813514305>

Casacchia Oliviero, Crisci Massimiliano, Reynaud Cecilia, *Internal Migration in Ethiopia*, (Department of Demographic Sciences, University of Roma "La Sapienza", 2001)

Davison William, "Addis Ababa Doubling in Size Gives Africa Another Hub," *Bloomberg Business*, August 1, 2014, <https://www.bloomberg.com/news/articles/2014-08-01/addis-ababa-doubling-in-size-gives-africa-another-hub>

Fransen Jan, Samson Kaasachun and Meine Pieter van Dijk, *Formalization and Informalization Processes in Urban Ethiopia: Incorporating Informality*, (Maastricht: Shaker Publishing, 2010)

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Rewal Raj, *Humane Habitat at low cost*. (Tulika, New Delhi, 2000)

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