BUILDING CULTURE BOMANI

" In what way does culture influence the built
environment of Bomani?"

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PREFACE

Presented here is the research paper 'Building Culture Bomani'. This research paper is written on behalf of the Academy of Architecture in Groningen as a part of the master Architecture program and is part of the long-time research agenda of the Academy. The findings of this research and the subsequent design studio will be bundled to expand the body of knowledge of the Academy.

All students are divided into research themes, drawn up by the academy. This research addresses the theme: 'culture' and the results of this research will form the basis for the subsequent design studio and follow-up research and cooperation with the Hanze University Foundation in the coming years.

The research was carried out as a group and the paper was written by Denise Oost and Yasmin Michèlle Veenstra. The other group members, who among other things, translated the research into maps and figures and who presented our research to the teaching team, are Marijn Wals, Marjolein Tolsma and Midas de Jong.

First of all we would like to thank the architects Jackson Kariuki and Jaime Velasco Perez, the students and staff of the North Coast Medical training college and Marianne Darwinkel, for their cooperation in this research. Especially now that the study trip to Kenya could not take place, we could not have completed this research without their cooperation. Also, we would like to thank our teaching team for their guidance and support during this research.

Denise Oost and Yasmin Michèlle Veenstra
Groningen, March 10th 2022.
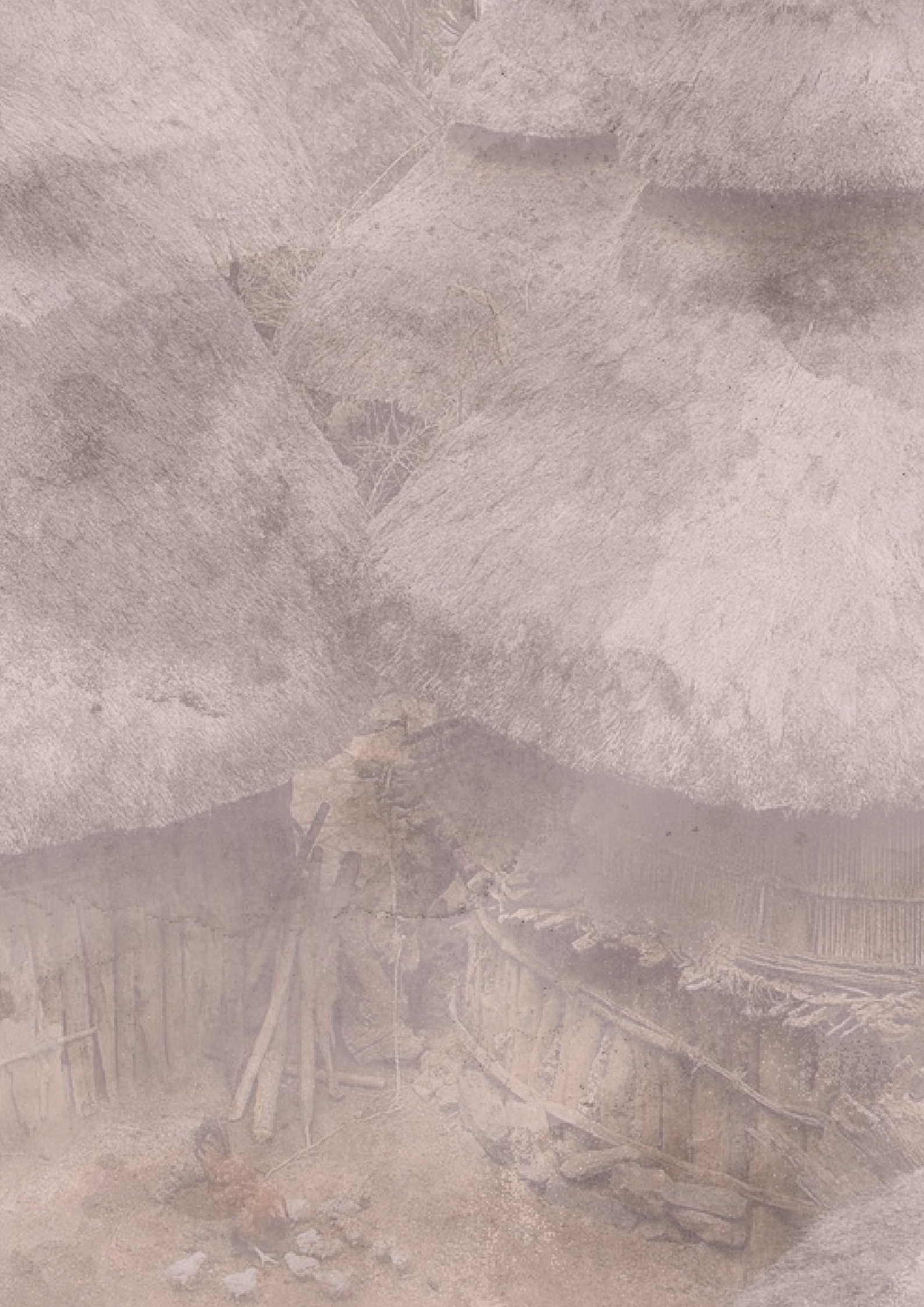
ABSTRACT

Culture is the whole of norms and habits of a specific group of people, of a specific location. To be able as architects, to make an appropriate design intervention, this research addresses the question how culture influences the built environment, specifically in Bomani.

Although many different explorers and migrants have entered Kenya, the British migrants have influenced the whole of Kenya the most by setting up a parliament, making the inland better accessible and introducing national rule systems.

The Swahili and Mijikenda cultures are predominant on the south-east coast of Kenya. The Mijikenda culture is established in the Hinterland, while the Swahili culture is established near the coast. Due to the settling of Arab traders from the 6th century onwards, the Swahili culture was heavily influenced by Arabs. These influences are clearly visible in the culture in terms of religion, urbanplanning and architectural characteristics of the built environment.

Bomani lies in between the coast and the inland, on the border of these two cultures. Yet, the analyzed street, the B8 (highway from Mombasa to Giriama), shows more visible Swahili influences with sporadic Mijikenda influences. The further away from the highway, the more Mijikenda characteristics become visible. However, due to the introduction of new materials, that do not originate from either culture, traditional characteristics are fading away even though underlaying cultural norms and values remain.

The main reason behind these fading characteristics, is the building code, introduced in 1926, and the economic wealth of the inhabitants. These two factors caused a dichotomy in the built environment of Bomani. The building code dictates whether an architect is needed and what materials can be used to build a permanent building. This causes people with a low economic wealth not to be permitted to build with more durable/new materials such as concrete. They are forced to live in semi-permanent dwellings made from traditional materials such as wattle-and-daub walls.

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INTRODUCTION.

According to Ensie (2011), Culture is that which man creates and is opposed to nature, that which has arisen spontaneously and without human intervention. It includes the habits and customs that people have in their own country or that they bring from their country of origin. Culture includes the set of norms and values, eating habits, clothing, religion, music and dance but also, maybe the most important one for architecture students, building culture. That is why we as architecture students will focus on culture in relation to the built environment.

Objective
In order to be able to make an appropriate design intervention in Bomani in the subsequent designstudio, it is important to analyse Bomani's environment. This researchpaper therefore focuses on an analysis of Bomani from the cultural point of view.

Research question
The research question that is being adressed in this paper is:
"In what way does culture influences the built environment of Bomani?"

- What has been the most influential timeperiod in Kenya's history?
- What cultures are the most prominent on the south-east coast of Kenya?
- How does the current built environment of Bomani reflect culture?
- What causes the changes in the building culture?

Research setup
To answer the research question, a qualitative study was conducted using both desk-research (collecting specific literature) and field research (interviews and analyses). Regarding the field research, one group member was supposed to travel to Kenya to conduct the interviews and analyse the current built environment of Bomani. However, due to the threat of terrorism, this trip was cancelled and the information had to be obtained in another way. For this purpose, contact was initiated with residents of Bomani and architects who work in this area.

Reading guide
The chapter that follows describes the qualitative research and its results. Starting with a summary of Kenyan history and its most influential time period, thereafter the (architectural) characteristics of the cultures which are dominant on the south-east coast of Kenya are highlighted. Based on these (architectural) features, the following paragraph analyses the (building) culture in Bomani and looks at how the (building) culture, as described in the paragraph above, is reflected in Bomani. The last section discusses the reasons behind the changes in the (building) culture and finally, in the last chapter, a conclusion is presented.

RESULTS AND FINDINGS.

What have been the most influential time periods in Kenyan history?

Over the years, many explorers and migrants settled in Kenya, all of whom in turn have had an impact on the development of the country.

The timeline below (Fig. 01) highlights the most influential periods in Kenya's history. In the pages that follow, these periods are described in more details. Starting with the indigenous inhabitants, followed by the Arab and Portuguese traders, then the British who played a major role in the accessibility of the inland areas and finally the Chinese who have a great influence on the current development of Kenya.
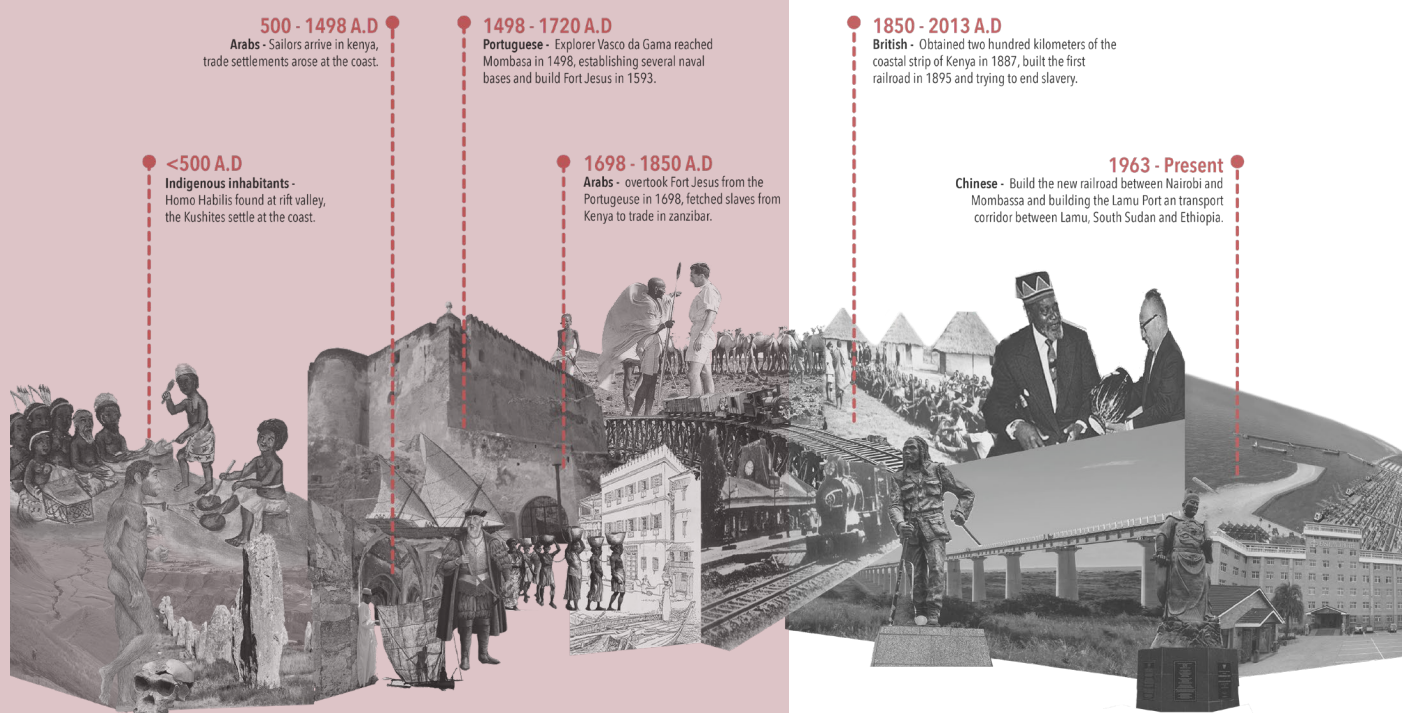
500 - 1498 A.D
Arabs - Sailors arrive in kenya, trade settlements arose at the coast.

1498 - 1720 A.D
Portuguese - Explorer Vasco da Gama reached Mombasa in 1498, establishing several naval bases and build Fort Jesus in 1593.

1850 - 2013 A.D
British - Obtained two hundred kilometers of the coastal strip of Kenya in 1887, built the first railroad in 1895 and trying to end slavery.

<500 A.D
Indigenous inhabitants - Homo Habilis found at rift valley, the Kushites settle at the coast.

1698 - 1850 A.D
Arabs - overtook Fort Jesus from the Portugeuse in 1698, fetched slaves from Kenya to trade in zanzibar.

1963 - Present
Chinese - Build the new railroad between Nairobi and Mombassa and building the Lamu Port an transport corridor between Lamu, South Sudan and Ethiopia.

Fig. 01 Timeline most influential time periods Kenya

Up to 500 A.D. | Indigenous inhabitants

According to palaeontologists, the Rift Valley, which runs through Kenya, is the 'cradle of humanity'. Fossils (Fig 02.) found around Lake Turkana indicate that there were already human-like creatures here 2.5 million years ago, descended from homo habilis (an outdated species of man). [1]

Later, due to the fertile soil in this part of Africa, Kenya became a migratory country. The first group of migrants was the nomadic Kushite people from Ethiopia. According to archealogical dating of artefacts and skeleton material, the Kushites settled in the lowlands of Kenya between 3,200 and 1,300 BCE (Fig 03). [2] Due to climate changes that negatively affected the landscape, these herdsman communities then moved southwards to the highlands of Kenya and Tanzania around 1,300 BC. This population is assumed to have been responsible for megaliths, stone fences, irrigation systems and related prehistoric cultural remains found in East Africa.

Bantu ancestors are thought to have begun to move into the Central African rainforest around 1000 BC, probably along the major rivers. From there they would have reached the area of Lake Victoria, which became a secondary centre from which they later spread over a large part of East Africa in the first centuries of our era. Meanwhile, the proto-Bantu had also learned the craft of preparing and smithing iron. [3]
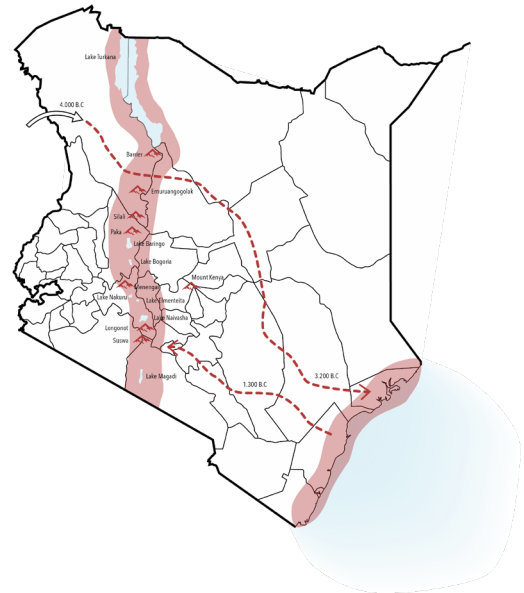
1. landenweb, z.d. 2. Wikipedia-bijdragers, 2021b 3. Wikipedia-bijdragers, 2021d

Fig. 03 Indigenous inhabitants

2.500.000 years ago
Fossils - found from that time around Lake Turkana that came from Homo Habilis (extinct)

4.000 years ago
Khosian - relatives of southern African peoples populate Kenya.

3200 B.C.
First immigrants - the nomadic Kushitic people from Ethiopia migrate to Kenya for its fertile soil.

2000 B.C.
Kushite people - move to the coast for the fertile land, soon this land turns out to be not so fertile

1300 B.C.
Kushite people - migrate from the coast to the highlands heading towards Rift Valley because of the fertile soil.

1000 B.C.
Bantu - settled near Lake Victoria. They took over Kushitic cattle herding, which would from then on play a major role in the Bantu economy of East and Southeast Africa.
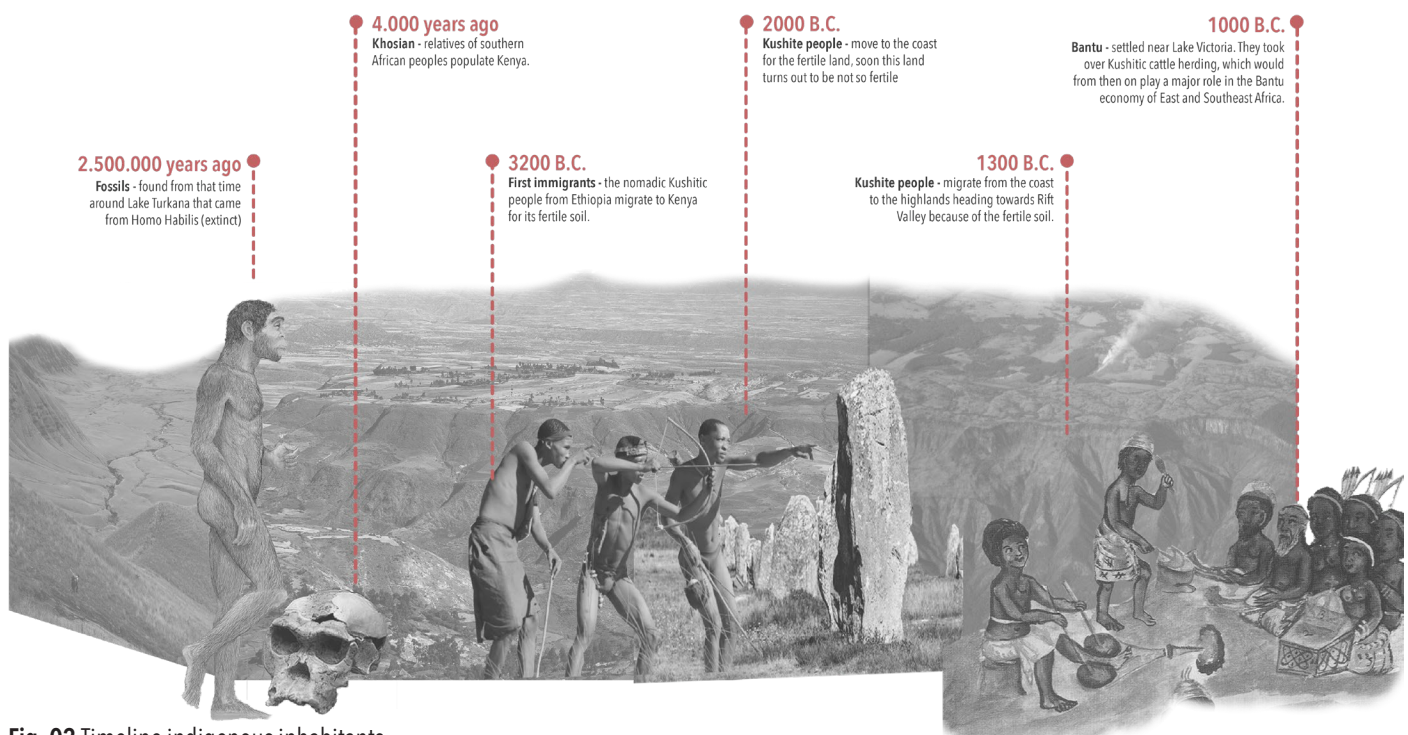
Fig. 02 Timeline indigenous inhabitants

500 A.D. - 1850 A.D. | Arabs and Portugese

Around the year 500, sailors began to cross the Persian Gulf, which led to the establishment of a number of commercial trading settlements.

From the 8th century onwards, the coastal region of Kenya was visited by Muslims from the Arabian peninsula. There was no other intention than starting up tradeposts. Many settled permanently and blended in with the African population.[4] This created a series of coastal cities along the East African coast from Somalia to Mozambique (Fig. 04), mostly used as warehouses to supply ships on the Indian trade routes. Although there was inevitable rivalry between these towns, it was a reasonably peaceful area until the 16th century. This was brutally disrupted by the arrival of the Portuguese explorers and traders.

The Portuguese explorer Vasco da Gama reached Mombasa in 1498 (Fig. 05). The aim of the Portuguese was to establish several marine bases in order to gain control over the Indian Ocean and to ensure access to the sea routes. From 1505 onwards, the Portuguese were attacked by Dom Francisco de Almeida's armada. Sofala was plundered and burned to the ground, Kilwa was occupied and Mombasa was taken after bombardments from ships and street combats. [5]

Despite the attempts of the Ottoman Turks in 1585 and 1589 to regain control of the area, the Arab monopoly on the Indian trade routes was definitively ended. After this violent time, two centuries of strict colonial rule began for Kenya. Taxes were imposed and all non-Portuguese ships had to pay to enter the ports.

In 1593 Fort Jesus (Fig. 06) was built, making Mombasa the most important Portuguese outpost. It soon became obvious that Portugal was too a small country to govern such an enormous empire. The end of Portuguese rule in East Africa was fast approaching when the Arabs took Fort Jesus in 1698. Around 1720, the Portuguese left the east coast of Kenya for good.

The destruction of the Portuguese period took a heavy toll and the constant wrangling between Arab governors reduced trade and prosperity. During the 18th century, several dynasties from Oman settled along the east coast of Africa. Although instantly they were under the control of the Sultan of Oman, but this did not work out very well and it was not until the reign of Sayyid Sa'id in 1805 that things got under control.
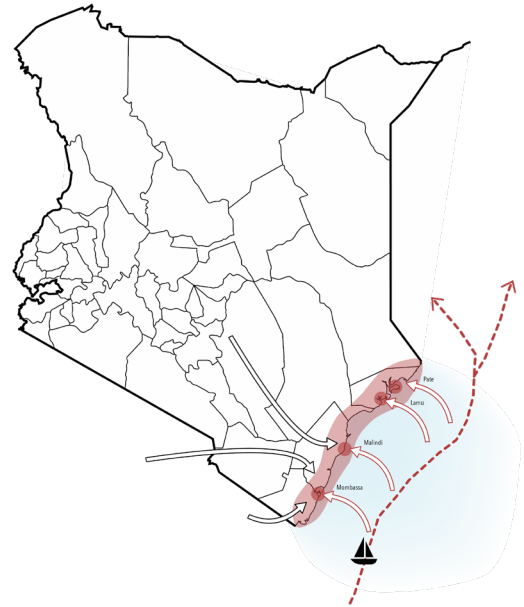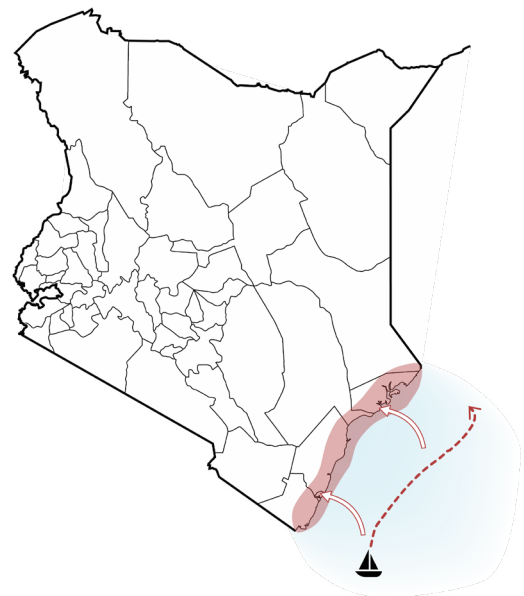

Fig. 04 Arabs

Fig. 05 Portugese

The Omannites built a fairly strong fleet and with this Seyyid Sa'id got the East African dynasties in line. In 1822, he sent an army to seize the important cities of Mombasa, Pate and Pemba, which were then ruled by the Mazrui clan.[6] The Mazrui called upon the British, who immediately sent two warships. The British easily captured Fort-Jesus, raised the British flag and declared it a British protectorate. Three years later the British government abolished the protectorate and a year later the fort was again occupied by Seyyid Sa'id.

In the nineteenth century, under the reign of Sultan Seyyid Sa'id, a lucrative slave trade was established. The Arabs brought the slaves from the deep inlands of Kenya and Tanzania in order to trade them with the slaves of Zanzibar. In 1822, the slave trade was restricted: no more slaves were to be sold to Christian countries.[7]

4. landenweb, z.d, NPO3, 2021. 5. landenweb, z.d, Wikipedia-bijdragers, 2022b, Wikipedia-bijdragers, 2021b 6. landenweb, z.d 2021d 7. landenweb, z.d
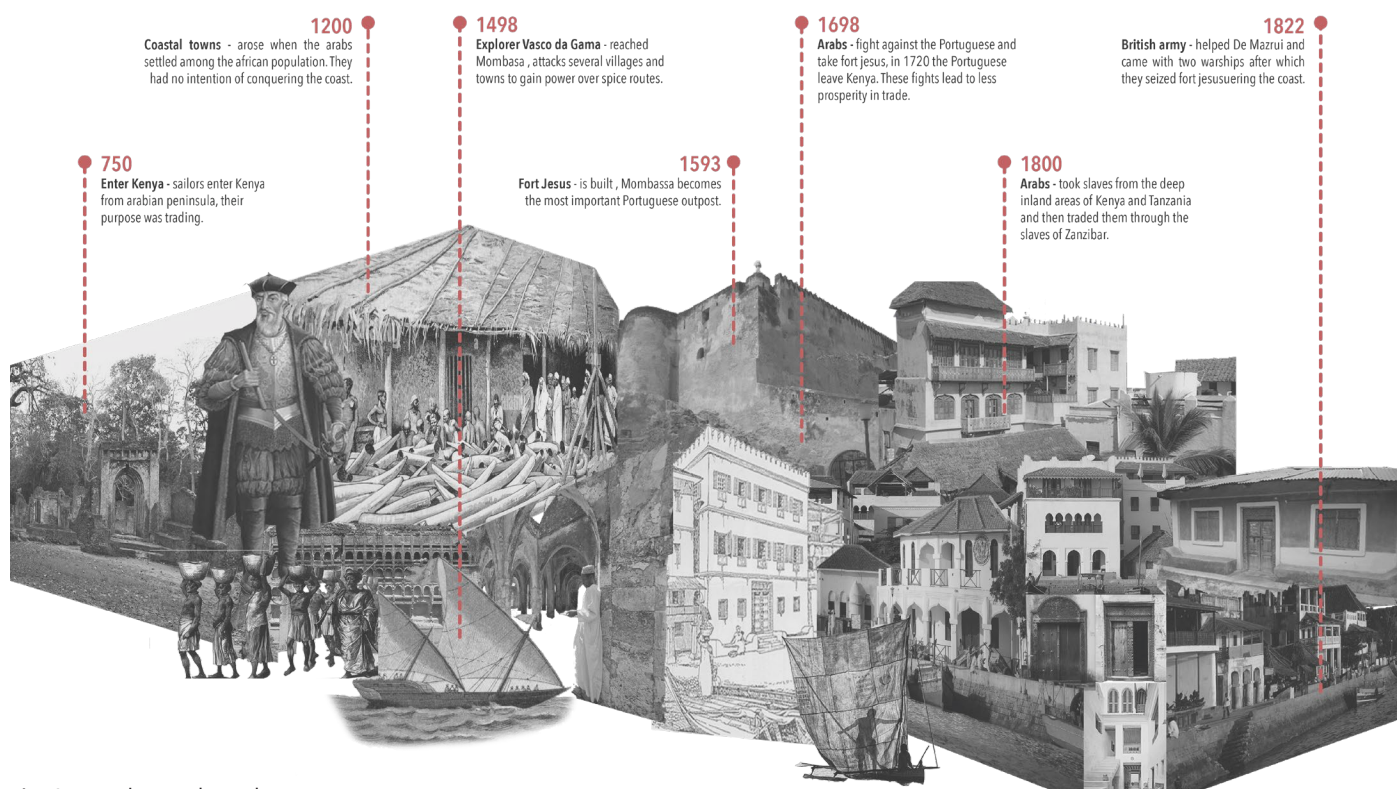

1200
Coastal towns - arose when the arabs settled among the african population. They had no intention of conquering the coast.

1498
Explorer Vasco da Gama - reached Mombasa , attacks several villages and towns to gain power over spice routes.

1698
Arabs - fight against the Portuguese and take fort jesus, in 1720 the Portuguese leave Kenya. These fights lead to less prosperity in trade.

1822
British army - helped De Mazrui and came with two warships after which they seized fort jesusuering the coast.

750
Enter Kenya - sailors enter Kenya from arabian peninsula, their purpose was trading.

1593
Fort Jesus - is built , Mombassa becomes the most important Portuguese outpost.

1800
Arabs - took slaves from the deep inland areas of Kenya and Tanzania and then traded them through the slaves of Zanzibar.

Fig. 06 Timeline Arabs and Portugese

1850 A.D. - 2013 A.D. | German and British

From the second half of the 19th century, Great Britain became increasingly active in putting an end to slavery. In 1845 the transport of slaves by sea was made impossible and 28 years later the slave trade was prohibited completely.[8] From that time on, explorers and pilgrims increasingly came to Kenya. In 1884, European countries laid massive claims all over Africa, which was then partitioned at the Berlin Conference. Remarkably, the Africans themselves had no say in the division. [9]

In 1885, the Germans established a protectorate that included the possessions of the Sultan of Zanzibar, and in 1888 the British East Africa Company arrived in the area. [10] The Germans gave up fighting over the area and handed over their coastal possessions to the British in 1890 (German-English Agreement/Treaty of Helgoland). The British formed the East African Protectorate and thus the area became a British Crown Colony.[11]

The British built a railway from Mombasa to Kisumu (Fig. 07) to improve access to the inlands. The railway was named after its ultimate destination, Uganda Railway, but never reached its final destination. Complicated by political resistance, difficult terrain, disease, warring tribes and man-eating lions, the railway finally reached Lake Victoria in 1901. Travellers who wanted to travel on to Uganda then took a steamboat across the lake to Entebbe, the former capital of Uganda. During the construction of the railway, a camp was built in 1899 at an altitude of 1661 metres above sea level (where the malaria mosquito was non-existent). This place grew into Nairobi, which the British soon made the new capital of Kenya. [12]

Because of the construction of the railway, many Indians were brought to Africa. After completion, many of them stayed in the region to harvest the advantages of the new opportunities and new settlers also came from Britain to seek their fortune in Kenya. [13]

The strategic link between the British Protectorates of East Africa and Uganda made it possible to transport goods and raw materials between the east coast of Africa and the hinterland. Lord-Delamete was at that time the political leader of the white settlers, but knew nothing about land, diseases and animal life. Extensive sheep farming and grain cultivation were therefore disastrous for the landscape. From 1912, there was a more realistic agricultural policy, which resulted in a society where coffee, tobacco, tea, and flowers were grown.

Fig. 07 British

Around 1930, there were over 30,000 settlers in Kenya, many of whom started plantations. The white people often got the best pieces of farmland, which was at the expense of the Africans. This caused reserves to be created where the original inhabitants had to live. [14]

During the First and Second World Wars, many Kenyans served in the British army, which contributed to increasing nationalism. A nationalist movement arose and the call for independence grew stronger. From 1952 to 1959 Kenya was under a state of emergency as a result of rebellion against British rule, the so-called Mau Mau rebellion. In 1957 free elections were held under British rule. [15] The Kenya African National Union, led by Jomo Kenyatta (Fig. 08), won and formed the government.

On 12 December 1963 Kenya became an independent monarchy with British Queen Elizabeth II as head of state and Jomo Kenyatta as prime minister, and on December 14th China opened an embassy in Nairobi. A year later, the republic was declared and Kenyatta became president. [16] Most of the white settlers were bought out by the British government and left the country. A large part of the Indian minority also left the country, namely 120,000 of 176,000. Most of them had British passports and left for the United Kingdom. After Kenyatta his death in 1978, he was succeeded by Daniel Arap Moi, who was re-elected a total of four times. Both regimes were characterised by a lot of corruption and nepotism. The opposition movement and media were suppressed.

Under international pressure, Arap Moi was forced to reform. He called out elections in 2002. Moi was not re-electable according to the constitution but put Uhuru Kenyatta, the son of Jomo Kenyatta, forward. [17] However, he lost the elections to opposition leader Mwai Kibaki, who was elected president. After Kibaki was declared president again in the 2007 elections, widespread unrest broke out, leaving 800-1500 dead and hundreds of thousands of Kenyans displaced. Uhuru Kenyatta, appointed vice president by Kibaki, succeeded him in 2013 and was re-elected in 2017.

8. landenweb, z.d. 9. Wikipedia-bijdragers, 2022b 10. landenweb, z.d.11. Wikipedia-bijdragers, 2022b, NPO3, 2021 12. Patowary, 2020, NPO3, 2021 13. Patowary, 2020 14. Patowary, 2020 15. landenweb, z.d. 16. landenweb, z.d., Wikipedia-bijdragers, 2022b 17. Royal Kenia z.d.
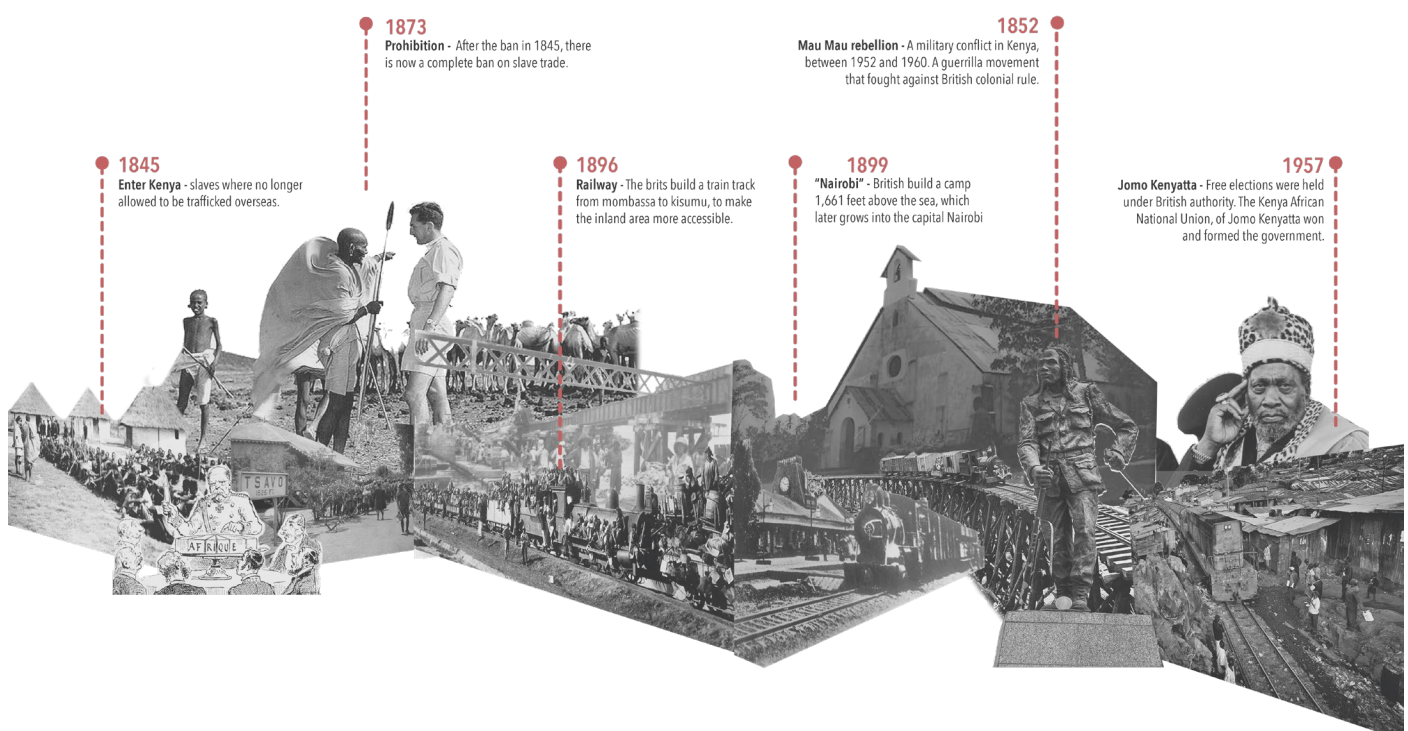
1873
Prohibition - After the ban in 1845, there is now a complete ban on slave trade.

1852
Mau Mau rebellion - A military conflict in Kenya, between 1952 and 1960. A guerrilla movement that fought against British colonial rule.

1845
Enter Kenya - slaves where no longer allowed to be trafficked overseas.

1896
Railway - The brits build a train track from mombassa to kisumu, to make the inland area more accessible.

1899
"Nairobi" - British build a camp 1,661 feet above the sea, which later grows into the capital Nairobi

1957
Jomo Kenyatta - Free elections were held under British authority. The Kenya African National Union, of Jomo Kenyatta won and formed the government.

Fig. 08 Timeline British

1963 A.D. - Now | Chinese

As of 2017, the Lunatic Express, the railway built by the British in 1901, is a thing of the past. Chinese came to Kenya to build a new railway over the same route: The Madaraka Express (Fig. 09). [18]

By 2020, the People's Republic of China had lent over $104 billion worldwide, of which $64 billion went to African countries. The extraction of raw materials is an important reason for Chinese state-owned companies to go to Africa. In many places in Africa, they give loans which are paid off by African countries with raw materials such as oil and copper.[19] China can make good use of these to stimulate their own economy. The money flows from China to Africa mainly consist of cheap loans granted to finance specific projects, especially direct investments in infrastructure. At the same time, African countries are good markets for Chinese products. Now that the years-long construction boom in China itself is coming to an end, those companies are struggling with massive overproduction. As long as workers are not retrained and the factories continue to operate, the companies must look for new markets, including Africa.

African leaders are happy to see the Chinese money coming, especially because China has a policy of 'non-interference'. This means that China only engages in economic relations with African countries and does not interfere in internal or political affairs, unlike many Western countries and organisations. [20]

However, these loans come at a price. The Chinese are burdened several African countries with sky-high debts of which the payment terms are so short that the country in question has to surrender its collateral to the Chinese trading partners as per the agreed contract.

In 2018, the Kenyan president bans the import of Chinese fish and China, in response, threatens to cut off funding for the railway line until the ban will be lifted.

China subsequently comes under international criticism for its policy of loans in infrastructure, which has increased the debt burdens in some developing countries (including Kenya).

At present, the Kenyan government is in danger of losing the port of Mombasa because it cannot repay its debts in time. This is known on the world stage as the 'Chinese debt trap'.[21]

Fig. 09 Chinese

Cooperation with China is seen as President Kenyatta's most important success. China put $800 million into gigantic projects in Nairobi, China town in Nairobi (Chaka Place and Yata Centre), New Port Lamu Port (Fig. 10), The Two River Plaza (mall) and east of Nairobi China Wu Yi upgraded the outer ring road into modern highway allowing businesses in the area to grow.

Although the African workforce has been moving towards its main trading partner and investor in recent years, this has not been mutual. There is an increasing controversy over racism by Chinese expatriates in Kenya which has negatively affected the relationship between both countries. The Chinese do not want to be associated with a darker skin colour because they believe it equates to poverty, laziness and stupidity. Despite the growing frustration, there are plenty of Africans who see the interference from China as an opportunity, evidently seen by the numbers of Africans learning or speaking Mandarin. Learning Mandarin and Chinese culture is also playing an increasing role in education in Kenya.[22]

How big the influence of the Chinese will ultimately be, we have to wait and see.

18. Patowary, 2020 19. NOS, 2018 20. NOS, 2018 21. GCR Staff, 2019 22. Borren, 2020, Travels, 2021

1963
China - opens embassy in Nairobi, two days after Kenya was declared independent.

2018
Ban - on import of foreign fish, china threatens to fund railroad and ban is lifted for china.

2021
Lamu's Port - opening of the port, is part of the gigantic projects that kenia has invested in. The cooperation with Chia is therefore seen as President Kenyatta's most important success.

2017
Madaraka Express - Built, managed and financed by the Chinese. Runs from Nairobi to Mombassa and crosses two national parks.

2020
Commotion - due to racism of chinese expats in Kenya. Despite the growing frustration the African professional community still see the interference from China as an opportunity.

Fig. 10 Timeline Chinese

Which cultures are most prominent on the south-east coast of Kenya?

Kenya does not have a single prominent culture that it identifies with. Instead, its cultural heritage and modern expressions of culture consists of different cultures, formed and practised by different communities of the country.

Bomani is located on the south-east coast of Kenya, where two cultures are predominant, namely the Mijikenda culture and the Swahili culture. Bomani is also exactly on the border where these two cultures, the Swahili culture which is located at the coast and the Mijikenda culture that is located in the hinterland, meet (Fig. 11). This chapter describes the origins of these cultures and their characteristics, particularly in terms of architecture and urban planning.

Both, the Mijikenda as well as the Swahili, are originally nomadic nations/cultures who settled on the coast of Kenya, yet in different time periods.[23] Where the Swahili settled in towns and villages, the Mijikenda mainly settled in the hinterland. For some time, the Swahili and Mijikenda had a strong relationship that encompassed economical, military and political actions. This tradition ceased to exist when the slave-run plantations were set up by the arrival of the Portuguese. This meant that the Swahili and Arabs no longer depended on the food cultivation of the Mijikenda.

23. Cartwright, 2022 (Meier, 2016)
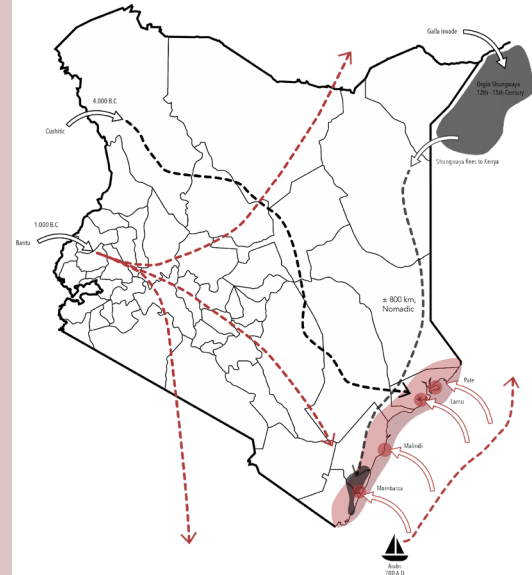
Fig. 11 Map Mijikenda and Swahili

Swahili

The Swahili, also known as the Waswahili, are an ethnic group in the Great Lakes region of eastern Africa, that live on the Swahili Coast. The Swahili Coast stretches from Tanzania, Kenia, Oeganda towards Mozambique including Zanzibar, Comoren Malawi and specific parts of the Democratic Republic Congo.[24] As described in the previous chapter, until the 8th century the inhabitants of the coastal areas did not see themselves as one nation but as several groups of people. The name Swahili is derived from the Arabic language and means 'people of the coast'. Suggesting that the different group of peoples got one name when trade with the Arabs started. After which all groups went through homogeneous changes and thereby started to identify themselves as one nation: The Swahili. [25]

The Swahili was known for their trade by sea, which developed throughout history. Swahili culture mainly arose from trade on the south-east coast and has evolved through various influences that are described in the previous chapter.

First-century writings by Romans describe how the different groups of people living along the coast traded with each other. In this period, a lot of other groups settled in the coastal area as well, setting the total amount of settlements on approximately 400 (Fig. 12).[26]

In the 8th century, trade routes expanded to Arabia, Persia, Madagascar, and sometimes even to China. The traders made use of the varying seasonal winds. As a result of this, traders spent a relatively large amount of time in other countries which might explain why many Arabs settled in Kenya. They, and the merchants who often stayed in Arabia and Persia, have brought back many foreign influences on Swahili culture.[27] The Swahili experienced their heyday in trading between the 12th and 15th centuries. In these century, the control over the trading routes was in the hands of the Arabs.

In the 16th century, the Portuguese tried to gain control of the trade routes. During this attempt, several cities such as Mombasa were occupied and bombed by warships.[28] Due to this roaring times, the prosperous trade character of Kenya disappeared. Even after the occupation of the British, the prosperous trading character was never regained.
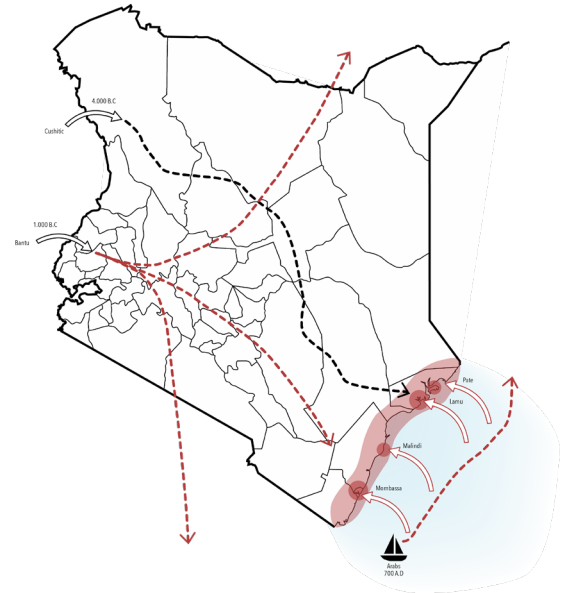

Fig. 12 Map Swahili

24. Wikipedia contributors, 2022, Swahili - Art & Life in Africa - The University of Iowa Museum of Art, z.d.
25. Wikipedia contributors, 2022 26.Cartwright, 2022, Meier, 2016 27. Wikipedia contributors, 2022,
28. Cartwright, 2022, Meier, 2016

Swahili | Social Hierarchy

As shown in Figure 13 on the right, traditional Swahili towns were governed independently of each other by the most influential Muslim families. The political power remained in these families because the governour designated his successor. This structure created a division in the population of the cities.[29]

Swahili | Religion

In the 8th century, when the Arabs came to Kenya in large numbers, the Islam was introduced. The first Mosques were built in Tanga (Tanzania) and were made from wood and date back to the 9th century.[30] By the 12th century, the Islam was the most widely practiced religion among the Swahili. The first stone mosque in Mombasa is the Mandhry mosque. It was built in the late 16th century under the rule of the Oman of Zanzibar.[31] Today the Islam is the second largest religion in Kenya but on the southeast coast, the Islam is still the most practiced religion.[32]

Despite its Arabic influence, the Swahili Mosque (Fig. 14) differs from traditional Arabic Mosques (Fig. 15). In Swahili culture, the mosques are smaller, have very little decoration, no courtyard, and no minarets. They are made of coral stone in combination with mangrove poles and palm tree leaves. From the outside, a Swahili Mosque does not look very different than a standard Swahili home.

Fig. 13 Social Hierarchy | Swahili

The ruling class
Mixed african and Arab descent
Gouverneurs, merchants,
religious officials, craftsmen

Slaves
African descent plantage workers

Not permanently settled
Arab and Persian descend
Merchants

29. Cartwright, 2022 30. Wikipedia contributors, 2022, Swahili - Art & Life in Africa - The University of Iowa Museum of Art, z.d. 31. Wikipedia contributors, 2022 32. Wikipedia contributors, 2022 33. artwright, 2022, Wikipedia contributors, 2022
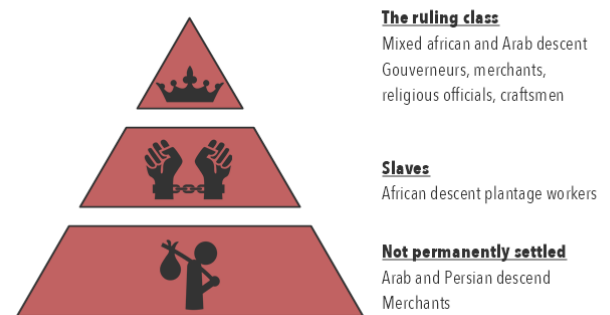
Fig. 14 Mosque in Mombasa

Fig. 15 Suleymaniye mosque

Swahili | Urban Design

In the urban structure of Swahili cities, we can also deduce the importance of religion. The Mosques function as a central point in the neighborhood, which are called Mitaa's (Fig. 16). A Mitaa is a symbolic neighborhood with which residents associate their identity. The status of a Mitaa is reflected in the types of buildings and the use of building materials. [34]

A good example of this is the oldest town in Kenya: Lamu, which is divided into 5 Mitaa's (Fig. 17):
• Mkomani: (stone town) residents see themselves as the founders/elite/ruling class of Lamu. They associate themselves more with the Arabs than the Africans.
• Lagoni: Strangers & newcomers visit here. The houses here were from mud & thatch. In 1982 however the houses were rebuilt from stone.
• Gardeni: for normal people to west besides the dune
• Kashmeri & Bombay: new additions and still grow today

In addition, all houses are built with the front towards Mecca, which indicates deep Arab influences in Kenya's oldest city.[35]

In general, buildings were and still are built very close proximity to each other, a lot of homes share a wall. As a result, cities often have a very narrow and organic street pattern, as can be seen in figure 16 as well, that at the same time, helps protect the inhabitants from the stinging sun.

34. Cartwright, 2022, Department of Architecture and Built Environment, University of Nottingham, Nottingham, UK, 2013, Wikipedia contributors, 2022 35. Cartwright, 2022, Department of Architecture and Built Environment, University of Nottingham, Nottingham, UK, 2013, Wikipedia contributors, 2022


Fig. 16 Urban structure Swahili city, Mombasa
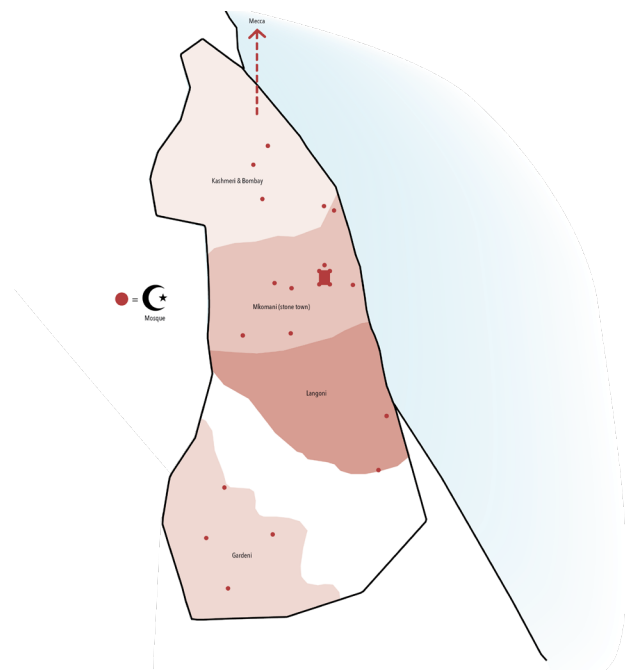
Fig. 17 5 Mitaa's Lamu

Swahili | Architectural Characteristics

Swahili architecture is a term used to designate a whole range of diverse building traditions practiced or once practiced along the eastern and southeastern coasts of Africa. Rather than simple derivatives of Islamic architecture from the Arabic world, Swahili architecture is a distinct local product as a result of evolving social and religious traditions, environmental changes, and urban development.[36]

In general, the buildings are one or more stories high, white plastered and are richly decorated. A typical old tradition of Swahili Architecture is showing off your wealth.[37] The front door for example (Fig. 18), is the greatest symbol of this wealth in Swahili architecture. The doors were rectangular and had carvings referring to Swahili trade culture such as fishing and the sea. As the Arabs settled among the population, the doors were given an arch and carvings with Arabic symbolism.[38] An other old Swahili tradition is the use of porcelain bowls that were used to decorate walls.[39] Just like the doors, these bowls showed how wealthy the inhabitants were.

In addition, homes/buildings often have a Baraza (Fig 19). A baraza is a bench made of stone or concrete, is attached to the façade and provides a friendly transition between public and private.[40] The translation of baraza from Swahili is literally 'counsel' so in addition, the baraza of the village chief has an important role in society:
• it is used to convey the decisions of the government to the local people;
• people can make their wishes known to the government here;
• solving minor problems;
• and distributing local resources

Other Arabic and Persian influences can be seen in the many arches and decorations such as Vidaka. Vidaka are niches in walls in which things can be displayed.[41] It is likely that the use of balconies and verandas was inspired by the Spanish and British. The British introduced mass-produced steel ornaments such as balcony fences. These steel works were then shipped to Kenya and used as balcony railings.

36. Swahili Architecture, 2016, Department of Architecture and Built Environment, University of Nottingham, Nottingham, UK, 2013 37. Swahili Architecture, 2016 38. Swahili Architecture, 2016, De Vere Allen, 1981 39. Swahili Architecture, 2016, De Vere Allen, 1981 40. Swahili Architecture, 2016, De Vere Allen, 1981 41. Department of Architecture and Built Environment, University of Nottingham, Nottingham, UK, 2013

Fig. 18 Zanzibar doors

Fig. 19 Two men playing Bao on Baraza in Stone Town, Zanzibar

Swahili | Traditional homes

Traditional Swahili houses tend to be rectangular structures consisting of 1 storey with a roof. The floor plan (Fig. 20) consists of two long but narrow rooms next to the patio, which plays an important role in keeping the home cool by means of ventilation (Fig. 21). In addition, the building have few windows often covered with shutters to block direct sunlight. This keeps the interior dark and cool. In contrast, the walls facing the patio often have large openings. Also, the entrance towards the patio faces a blank wall so that visitors do not have a direct view into the private rooms of the residents.[42]

The floor plan (Fig. 20) shows a progression in the use of spaces. The Baraza is traditionally situated on the front façade, near the entrance. The less private spaces, such as the rooms of the men and the sitting area, are located on the public side near the street. Deeper in the house the more private spaces are located, such as the kitchen and the bathroom. The woman room is in between the kitchen and the man's rooms.

Often the Swahili houses are made of an adobe or wattle-and-daub construction (better houses were made of coral stone) with roofs made of mangrove poles and roofs made out of palm leaves. The width of the houses was determined by the length of the mangrove piles.[43] Also, as described in the previous paragraph about Swahili architecture characteristics, homes were often decorated by a carved wooden door and besides that, many contain window frames, shutters or rows of porcelain bowls in the ceiling.

42.Cartwright, 2022, Department of Architecture and Built Environment, University of Nottingham, Nottingham, UK, 2013, Donley, 1987 43.Cartwright, 2022, Department of Architecture and Built Environment, University of Nottingham, Nottingham, UK, 2013, Donley, 1987
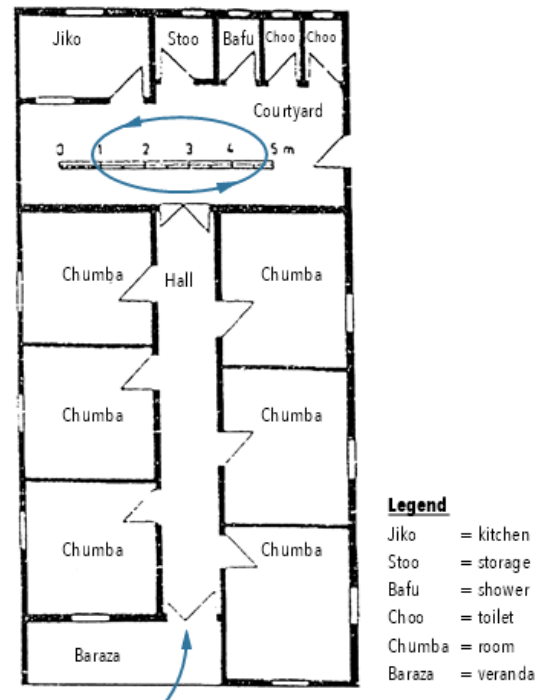
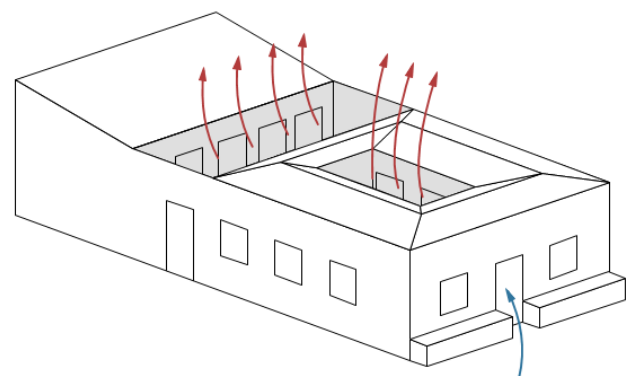**Fig. 20** Typical Swahili house floorplan

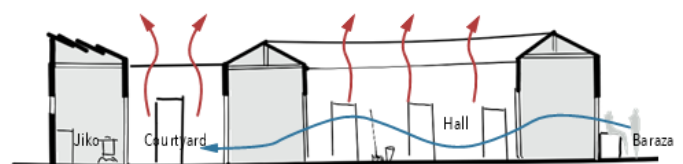**Fig. 21** Typical Swahili house diagram

Fig. 22 Typical Swahili house diagram

Mijikenda

The Mijikenda are a group of nine related Bantu ethnic groups who inhabit Kenya's coast. The orthodox view of the Mijikenda origins is that the Mijikenda people originated in Shungwaya and were pushed south by the Galla after which they reached Kenya around the 16th century (Fig 22). However, no definite evidence has yet been found for the exact location of Shungwaya.[44]

Historically, these Mijikenda ethnic groups were called the Nyika or Nika by outsiders. Which is a derogatory term meaning "bush people" which refers to the inland area to where from they moved. Mijikenda literally means "the nine tribes" and these nine ethnic groups that the Mijikenda peoples are the Chonyi, Kambe, Duruma, Kauma, Ribe, Rabai, Jibana, and Giriama. They are the northern Mijikenda, while the Digo are the southern Mijikenda.[45]

In addition to the origin, the myth also describes the order in which the tribes would have left Shungwaya. The first tribe is the Digo, they are therefore seen as senior by the other tribes and have the highest social status among the Mijikenda tribes.[46] The largest tribe was the Giriama, who also currently inhabit Bomani.

Mijikenda | Social Hierarchy
The right hand image (Fig. 23), shows the social hierarchy of the Mijikenda. Traditional Mijikenda society was primarily a gerontocracy: old men had authority over young men and both old and young men had authority over women.[47]

The Mijikenda lived together in a kaya and each kaya was divided both by age and by lineage. Every four years, the uninitiated boys were circumcised and initiated into a sub-rika. When all 13 sub-rikas had ruled as senior elders, the next 13 sub-rikas were inducted as the next rika.[48]

The kaya elders had ritual power, for example it was their duty to organise corrective measures such as a rain ceremony when the rains ceased.[49] If they did not fulfill these duties, sanctions such as physical violence were applied.

The Mijikenda were not directly involved in the slave trade, but they bought and sold people for their work. They were not classified as slaves but as resources of a clan. As such, they could be used as a form of exchange between homesteads or between an individual family and a homestead that was not a family, especially in times of need. Individuals could also
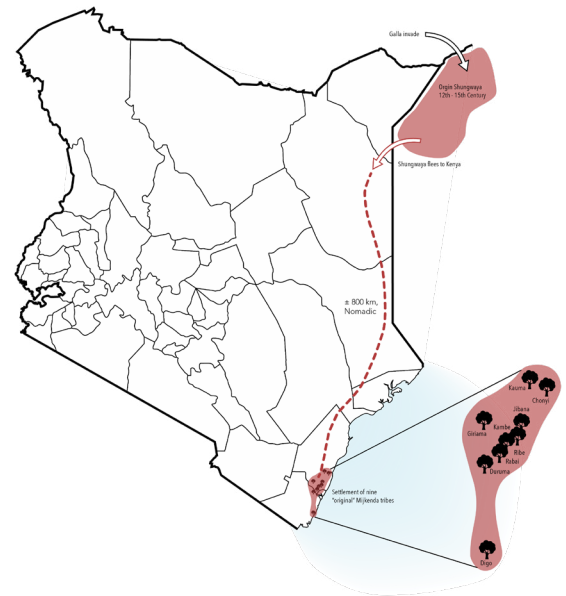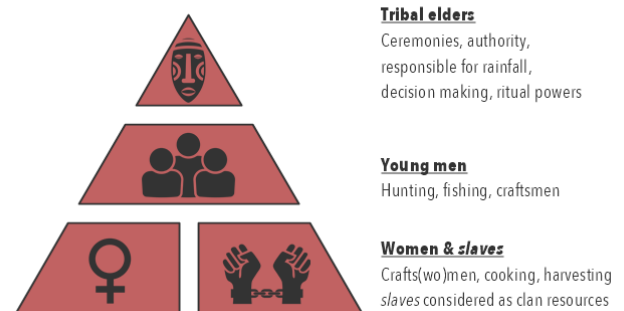

Fig. 22 Map Mijikenda

Fig. 23 Social Hierarchy | Swahili

Tribal elders
Ceremonies, authority, responsible for rainfall, decision making, ritual powers

Young men
Hunting, fishing, craftsmen

Women & _slaves_
Crafts(wo)men, cooking, harvesting
slaves considered as clan resources

sell themselves to a patron who could provide for their immediate survival needs. This was known as "pledging"; with the possibility that they would be sold if the original loan was not repaid.[50]

Mijikenda | Religion
Mijikenda's have resisted the conversion attempts of Muslims and Christian missionaries to a much greater extent than many of their neighbors, and they adhere to many beliefs that were derived from their traditional religion, which was a form of ancestor worship.[51]

Ancestor worship is a system of rituals and invocations of deceased relatives and is based on the belief that the spirits of the dead continue to exist in the natural world and have the power to influence the fate of life.[52] In every kaya, a fingo is buried in a specific place only known by the members of the community. The fingo is a spell that protects the community from witchcraft, bad spells, natural disasters and social distress and is also the name of the talisman made especially for this purpose. In addition, Mijikenda see the door of their house as the gateway between the living (inside the house) and the dead (outside the house).[53]

It is a general belief that the forests are inhabited by spirits and therefore, it is believed that food cooked while using wood from the sacred forest could cause sickness and also, that a dwelling build with timber drawn from the forest would collapse. Accordingly, strict rules are issued to ensure the sanctity of the forest: wood and vegetation cannot be cut and certain places with strong magical value are reserved for the kaya-elders. One of these places is the Moro (Fig. 24), which is a hut or a group of trees in which the kaya-elders come together to pray and to make decisions and which is traditionally centered in the middle of a kaya.[54]

44. Wikipedia contributors, 2021 45. Wikipedia contributors, 2021 46. De Vere Allen et al., 1983, Sacred and cultural values of the Mijikenda Kaya Forest, 2020 47. De Vere Allen et al., 1983 48. Mijikenda | Encyclopedia.Com, z.d. 49. Mijikenda | Encyclopedia.Com, z.d. 50. Mijikenda | Encyclopedia.Com, z.d. 51. De Vere Allen et al., 1983, Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009 52. Wikipedia-bijdragers, 2021a 53. Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009 54. Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009

Fig. 24 Moro in Kaya

Mijikenda | Urban Design

Before the middle of the 19th century, each Mijikenda group lived together in or near its own kaya (Fig. 25), which was in a clearing on the hilltop surrounded by dense forest. The entire community lived within the boundaries of the kaya. There was a palisade around the kaya which was also fringed by a forest for defense purposes with only two access paths leading to it.[55]

In the kaya, a cluster of houses belonging to various clans are arranged in a circle facing the Moro. This physical organization signified the social division of the clans. In the middle of the kaya, were the gathering houses of the various clans and around each clan house were the individual homes of the members.[56]

The clans were unliterary descendants, with the daughter or son becoming a member of the father's descendant group. The number of clans thus remained constant, but each clan was divided into sub-clans, which increased in number as new members were born into the group and as foreign groups were adopted. The clans played a central role in kaya affairs. Each clan had its own area within the kaya and its own specialised function. The sub-clans were not an important political unit, but they did play an important role in the social life of the Mijikenda, especially regarding the organisation of important social events such as weddings and funerals.[57]

Homestead,

Each subclan lived together in homesteads (Fig. 26) that each had an average of three generations. The homestead lay-out depicts the social organization of the community. The one-room dwellings are arranged elliptically around a nyumba ya koma and are accessible by two paths. The main path is used by family members and visitors and the other path is used to go to the farms and pastures. This house defines the center of the common area and is used for storing ancestral carvings. Entertainment and some domestic chores are performed outside the dwellings units to enhance family ties, since all the houses open onto a common courtyard. The whole homestead functions as one large house with many rooms facing towards a central courtyard.[58] Architect Jaime Velasco Perez (personal contact, February 28th) noticed that because of the polygamous nature of the Mijikends, each individual dwelling unit belongs to each wife and her children. The man of the home had no dwelling of his own.
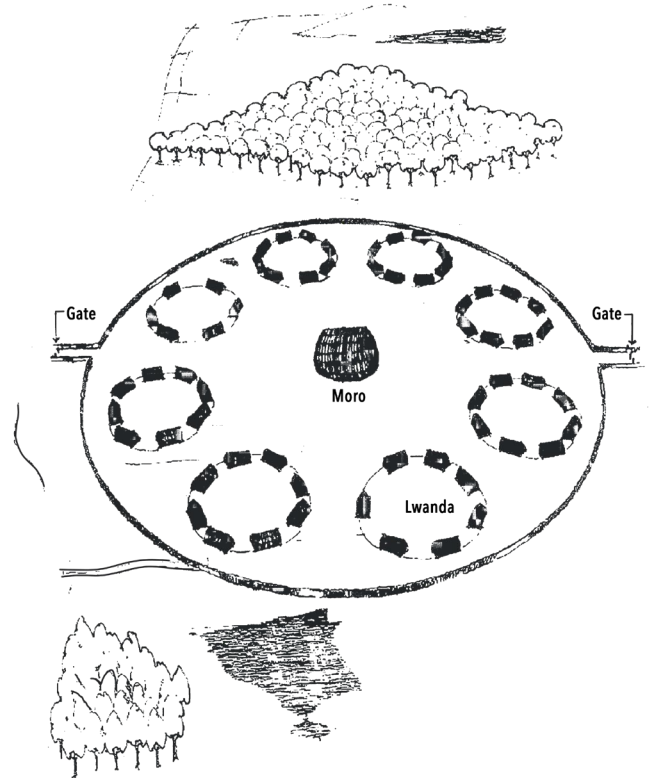

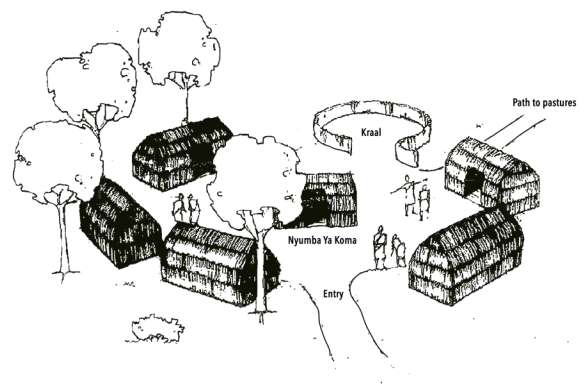**Fig. 25** Typical Mijikenda Kaya Complex

Fig. 26 Typical Mijikeda Homestead

Farmstead,

Towards the middle of the 19th century, people started moving away from the hilltop villages to wasteland where they founded farms. These farms were called 'farmsteads'. The farms consisted of a cluster of houses within an enclosure designed to keep the animals inside. Here again, like in the homestead, the dwellings faced a common area in the middle of the farmstead.[59]

Traditionally, the home of the head of the farm was in the middle, and was known as mwenye mudzi, meaning 'owner of the house'. His home would be surrounded by fields of fruit and vegetables and he would be responsible for all decisions affecting the people living on his farm.

Generally, such a farmstead consisted of:
- Wenye mudzi (where he lived with his wives)
- Dwellings of his married sons
- Dwellings of his unmarried sons

Mijikenda | Architectural Characteristics

Unlike the Swahili, the Mijikenda do not have a term to describe their architecture. Swahili concerns a much larger scale than Mijikenda, so Swahili influences are also found in buildings other than housing. However, despite the fact that Mijikenda mainly concerns housing, we do see certain architecture/building characteristics (Fig. 28). Namely, that the houses are made of grass and wood and that they are generally oval in shape. All buildings are relatively closed to the outside world, partly to keep out the heat. The Kigojo, the kitchen, on the other hand, has rather open woven walls that allow the structure to be ventilated.

55. Anyamba & Adebayo, 1994, Sacred and cultural values of the Mijikenda Kaya Forest, 2020, Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009, Orchardson, 1986 56. Anyamba & Adebayo, 1994 Sacred and cultural values of the Mijikenda Kaya Forest, 2020 57. Anyamba & Adebayo, 1994, Sacred and cultural values of the Mijikenda Kaya Forest, 2020 58. Anyamba & Adebayo, 1994, Sacred and cultural values of the Mijikenda Kaya Forest, 2020 59. Mijikenda | Encyclopedia.Com, z.d.
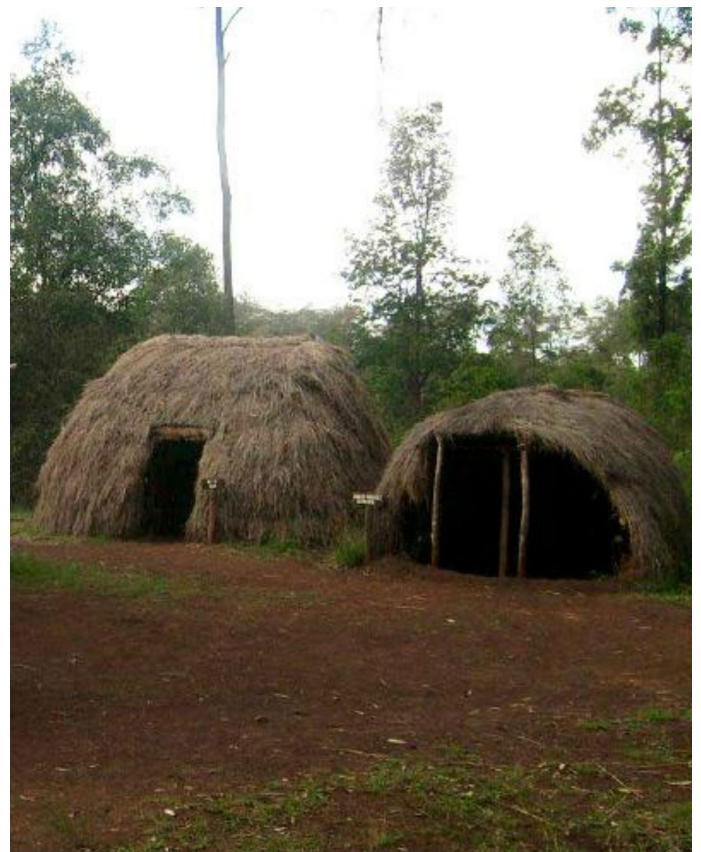

Legend
1. Individual dwellings
2. Nyumba Ya Koma
3. Drying racks (mwambaro)
4. Cattle kraal

Path to farm and pastures

Main path to homestead

Fig. 27 Mijikenda Homestead Layout

Fig. 28 Typical 'huts' in Mijikenda homestead

Mijikenda | Traditional homes

The layout of the Mijikenda house (Fig. 29) has three distinct areas: the entrance and the entertainment area, the cooking and storage area plus a sleeping area. The single-roomed dwellings, without partitions, enhance the free flow of air which keeps the house cool during the day. The loft is about 1,5 meter above the ground and is used for the storage of grain. The smoke from the fire below drives away insects and preserves the grain in the loft. The posts supporting the loft separate the cooking and entertainment areas. The doorway (Fig. 30), which is also the only opening in the facade, opens directly onto the entertainment area with a few items of furniture places on its sides. During the day, this opening is closed by a lightly woven door, which is replaced by a sturdier door at night. This keeps the interior very dark and cool at the same time.[60]

60. Anyamba & Adebayo, 1994, Sacred and cultural values of the Mijikenda Kaya Forest, 2020, Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009, Orchardson, 1986, Willis, 1993
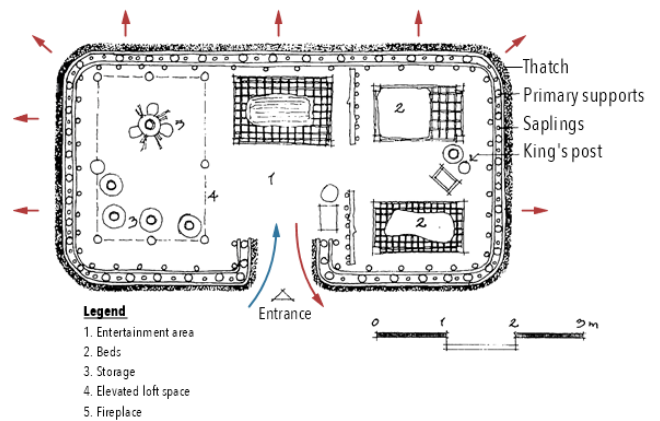

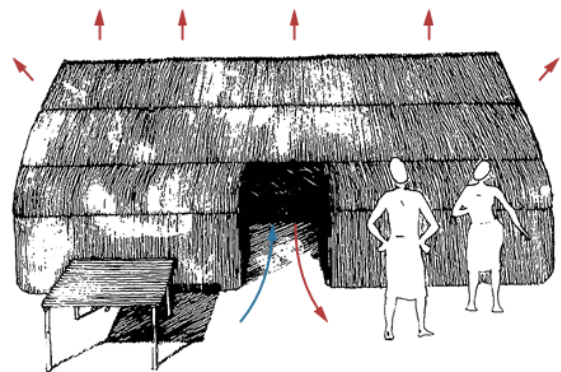**Fig. 29** Typical Mijikenda hut floorplan

Fig. 30 Typical Mijikenda hut facade

The Mijikenda house is an oblong-shaped structure, covered with grass thatch to the ground. The structure is formed by rows of wooden columns supporting beams (Fig. 31) along the length of the house. This is covered by a network of slender branches tied to form a mesh of approximately 1,5 m x 1,5 m which is then thatched. The thatch is made from bundles of grass. At the entrance stronger wooden branches force the structure up and out. Until it dries, the structure is supported by a simple scaffold.[61]
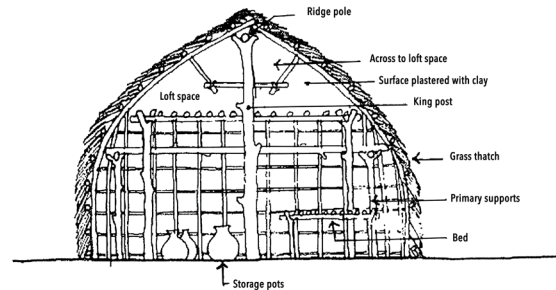
The limitation of available materials dictates uniformity of design. The grass-thatched house is rarely longer than 7 m or wider than 3 m, since larger dimensions will make the weight of the thatch on the basket-framework prohibitively heavy. Unseasoned posts and saplings are used since they can easily be bent. Coarse grass which is collected during the dry season is used for its toughness, and can last for at least 10 seasons. Sisal and coconut ropes are used for tying the thatch on the basket framework. The framework is left to weather for about a month before it is thatched.[62]
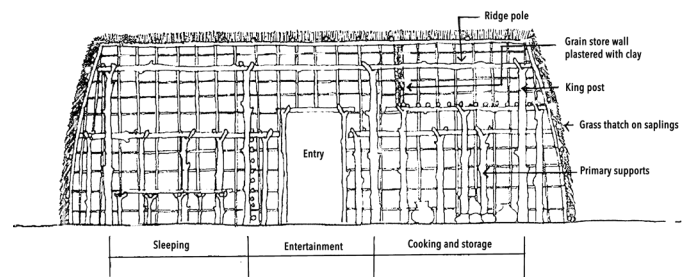
61. Anyamba & Adebayo, 1994, Sacred and cultural values of the Mijikenda Kaya Forest, 2020, Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009, Orchardson, 1986, Willis, 1993 62. Anyamba & Adebayo, 1994, Sacred and cultural values of the Mijikenda Kaya Forest, 2020, Traditions and practices associated to the Kayas in the sacred forests of the Mijikenda, 2009, Orchardson, 1986, Willis, 1993

Fig. 31 Typical Mijikenda hut section

In what way does the built environment of Bomani reflect culture?

Bomani is a coastal village about 25 kilometres north of Mombasa, a coastal city that also appears prominently in the first chapter due to the important role it has performed in the history of Kenya. Bomani is the village where the North Coast medical training college, and therefore the residents who participated in this study, live.

The previous chapters have described the time period that has had the most influence on the history of Kenya and which are the predominant cultures on the south-east coast of Kenya. This chapter studied the ways in which the cultures of the south-east coast of Kenya are reflected in the contemporary built environment of Bomani.

Based on interviews with architects working on the south--east coast of Kenya and residents of Bomani, an analysis was made of the ways in which traditional features of social hierarchy and religion are apparent in Bomani. These interviews can be found in the appendix of this research paper. The analysis of the buildings in Bomani was done by means of Google Street View and photographs of Bomani residents. We mainly looked at the external, architectural characteristics of the buildings along the B8. The analysis of the layout and use of two houses in Bomani was carried out on the basis of interviews with and photographs taken by residents. The map on the right (Fig. 32) shows the research area.
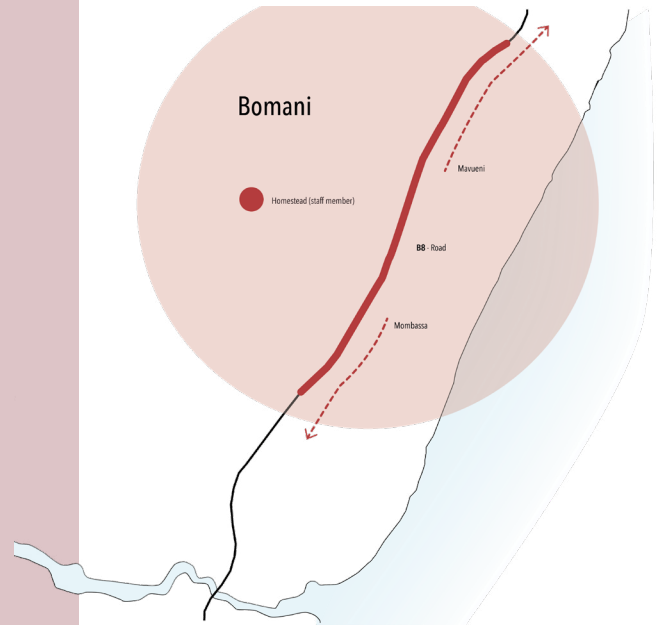

Bomani

Homestead (staff member)

Mavueni

B8 - Road

Mombassa

Fig. 32 Research area

Social Hierarchy

As described in chapter 2, two topics play a major role in social hierarchy, namely age and gender. From the interviews with residents and architects working on the south-east coast of Kenya, it appears that the division of roles between men and women has changed a lot but that to some extent this still exists in villages. The age hierarchy, on the other hand, continues to play a major role in the culture of not only the southeast coast but also in the whole of Kenya.

Religion

In Bomani one cannot speak of a dominant religion. The Swahili generally have the Islam as their religion, while the Mijikenda worship their ancestors. Through Christianisation and Islamisation, ancestor worship has become less important, but it has not completely disappeared. In Bomani, the two religions, ancestor worship and Islam, come together and there is a movement visible towards Christianisation.

Urban Design

Looking at the map of Bomani, it is easy to see that Bomani is not built according to the traditional Swahili or Mijikenda culture. There appears to be no obvious structure in the town planning, whereas in the Swahili and Mijikenda culture there is such a structure. There are no Kaya's visible, in which homesteads are built around a Moro, nor is there a traditional Mitaa structure in which mosques serve as the centre. The images on the right (Fig. 33 and Fig. 34) show the urban structure near the B8 and in a homestead in Bomani.

Fig. 33 Settlement near B8

Fig. 34 Settlement Homestead Bomani

Architectural Characteristics

How the buildings in Bomani reflect culture is explained based on a selection of buildings located on the B8 and in a Giriama homestead 3.5 km away from the B8. Starting with buildings in which Swahili characteristics are visible, followed by buildings with clear Mijikenda characteristics and how the two merge.

In the streetscape of Bomani, there are several houses in which a traditional Swahili façade layout is visible. A more traditional Swahili house and a somewhat newer Swahili house, both situated beside the B8, are compared. In both homes (Fig. 35 and Fig. 36), the entrance is located centrally in the façade and on either side there are façade openings fitted with shutters. There is an important evolution visible in terms of the colour of the façade. Traditionally, the houses often have a white plastered façade, while in the contemporary buildings much more colour is present. Both homes still have similar roof shapes but the material of the roof has changed. The traditional house has a Makuti roof with steel ridge tiles while the newer house has a roof of corrugated steel.

Along the B8, there are not only houses but also hotels, shops and, for example, restaurants. The hotel in the picture on the right (Fig. 37) has the necessary Swahili characteristics. The veranda, for example, ensures that no direct sunlight enters the ground floor. It can be deduced from the interviews that the private rooms are on the first floor, under the Makuti roof. The dormer windows prevent direct sunlight from entering and thus keep the rooms cool. We see the (coloured) plastered façade repeating itself here, and also the decorative steel fencing introduced by the British can be seen in the façade.

In the newer buildings, for example shops (Fig. 38), many different verandas can be seen. What strikes one when comparing the verandas is that the distinctive Swahili arches recur frequently.

Besides the B8, there are also a number of apartment complexes with a varying number of floors. Often, the complexes can be recognised as large volumes with flat roofs and repeating

Fig. 35 Architectural Swahili characteristics B8, housing

Fig. 36 Architectural Swahili characteristics B8, housing

Fig. 37 Architectural Swahili characteristics B8, hotel

Fig. 38 Architectural Swahili characteristics B8, stores

façade opening patterns. Swahili characteristics that are often found in such buildings situated beside the B8 are the balconies, the covered verandas, the canopies above the façade openings and the decorative balustrades. These façades are also plastered, but they are not all white anymore (Fig. 39).

Both, besides the B8 and some 3 km further on in the heart of Bomani, there are also many Mijikenda influences (Fig. 40), mainly in houses. The influences are mainly reflected in the materialization, namely wood with mud and roofs of Makuti. A change that can be seen in this, is that over the ridge of the roofs there is often a steel plate applied to make them waterproof or that the roofs consist entirely of corrugated steel plates. Another evolution that can be seen, looking at the houses shown here, are the decorative tiles that are incorporated into the facades. In addition, the houses, like the traditional Mijikenda houses, have few facade openings. However, it is highly unlikely that this has the same purpose as it did in the Kaya's (the front door is the gateway between the living dead and the living).

The picture on the right shows two, according to residents of Bomani, modern houses. In these homes, both Mijikenda and Swahili influences can be seen, but there are also features that cannot be linked to either culture. What immediately stands out is the façade, which is not made of mud nor plaster but is built of coral/concrete stone and cement (Fig. 41). The houses are mostly rectangular, have several facade openings with shutters and have a corrugated iron saddle roof.

Fig. 39 Architectural Swahili characteristics B8, apartment

Fig. 40 Architectural Mijikenda characteristics Homestead, housing

Fig. 41 Architectural characteristics Homestead, modern housing

Modern Swahili homes

The previous chapter also described the characteristic layout of a Swahili house. There was a clear division between the private (bedroom, kitchen, etc.) and less private areas (sitting room) of the house and the patio played an important role in that division and in keeping the house cool. In order to determine what has changed, the house of a resident of Bomani was analyzed (Fig. 42).

On the street side, the house has a baraza (Fig. 43), which creates a friendly transition between the public space and the private home. The house is then symmetrically laid out with the main entrance in the middle of the façade. The hall in the middle provides access to the various spaces and falls under outdoor space because of the opening in the roof. This opening allows daylight to enter and plays an important role in ventilating the house. The further you walk into the house, the more private the spaces become. At the back of the house are the bathroom, the kitchen and the bedroom of the house elders. The man of the group lives at the back in his own part of the house. He also has his own kitchenette and the general storage is located here. The openings between the different rooms are closed by curtains instead of doors.
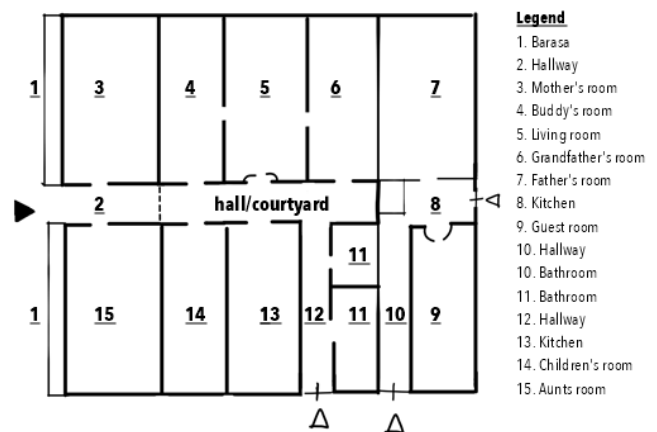

Legend
1. Barasa
2. Hallway
3. Mother's room
4. Buddy's room
5. Living room
6. Grandfather's room
7. Father's room
8. Kitchen
9. Guest room
10. Hallway
10. Bathroom
11. Bathroom
12. Hallway
13. Kitchen
14. Children's room
15. Aunts room

Fig. 42 Modern floorplan home Bomani | Swahili influence

Fig. 43 Swahili in Bomani

Modern Mijikenda homes

The kayas are no longer inhabited by the entire Mijikenda tribes but have kept their function as places of worship. Because the kayas are important places of worship, they have been protected by UNESCO as world heritage since 2008.[63] The Giriama, the Mijikenda tribe that is most active in Bomani, have settled in homesteads in the villages surrounding the original kayas many years ago. In Bomani, a large proportion of the inhabitants still settle in homesteads, however, not as in the kaya's surrounding a Moro.

In the typical Mijikenda house, a dwelling was divided into the entrance and entertainment area, the cooking and storage area and a sleeping area. The single-roomed dwellings had no partitions which enhanced the free flow of air causing the house to stay cool both during day and nighttime. The dwellings were oblong shaped and only had one opening in the facade that kept the interior very dark and cool at the same time. To assess what has changed, a homestead of a Giriama resident from Bomani was analysed.

This 'modern' homestead includes several buildings, where each building serves its own function that are still oriented towards a courtyard with shared buildings, yet no longer in a circle. Because the Giriama have different buildings for all functions, they have no need for segregating walls. The homestead of the resident analysed for this research includes a house for the parents, a house for the sons, which they have to build themselves when they are considered to be adults (+/- 14 years), a kitchen, the shelter of the poultry, the washing hut and the toilet.

In this homestead, there is a mix of more traditional and more modern buildings. When the sons leave the homesteads to settle elsewhere, their hut is used for poultry or storage. When a son chooses to settle permanently in the homestead, he builds a permanent/modern house in which the house does have space dividing walls.
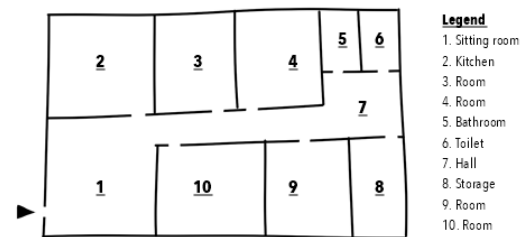
63. UNESCO, 2008

Legend
1. Sitting room
2. Kitchen
3. Room
4. Room
5. Bathroom
6. Toilet
7. Hall
8. Storage
9. Room
10. Room

Fig. 44 Modern floorplan home Bomani | Swahili influence

Fig. 45 Mijikenda in Bomani

Mijikenda and Swahili in Bomani

As far as social hierarchy and religion are concerned, there are quite significant changes taking place. Age hierarchy continues to play a significant role, but gender hierarchy is becoming less apparent. The mix of religions also causes some changes in the urban structure. No particular religion is dominant in Bomani, as a result of which they didn't built around a mosque or Moro, as was clearly visible in the Kaya and Mitaa plans.

As far as the architectural characteristics of the buildings are concerned, much of the Swahili and Mijikenda culture is reflected (Fig. 46). Especially the use of arches, verandas, balconies, ornate steel balustrades, the plastered facades and the use of shutters from the Swahili culture and the materialisation from the Mijikenda culture can be seen in the current buildings of Bomani. However, many new features, such as use of corrugated steel sheets, steel ridge tiles on Makuti roofs, masonry facades and use of colour, have also been introduced into the built environment.

As far as it concerns the exterior, there have been some developments, but when it comes to the layout of the houses, these are still based on the traditional norms and values of the Swahili and Mijikenda culture.

It can be concluded that traditional features are gradually fading away and being replaced by new influences, but that the underlying norms and values remain unchanged. The next chapter explains the reason behind the change in traditional characteristics.
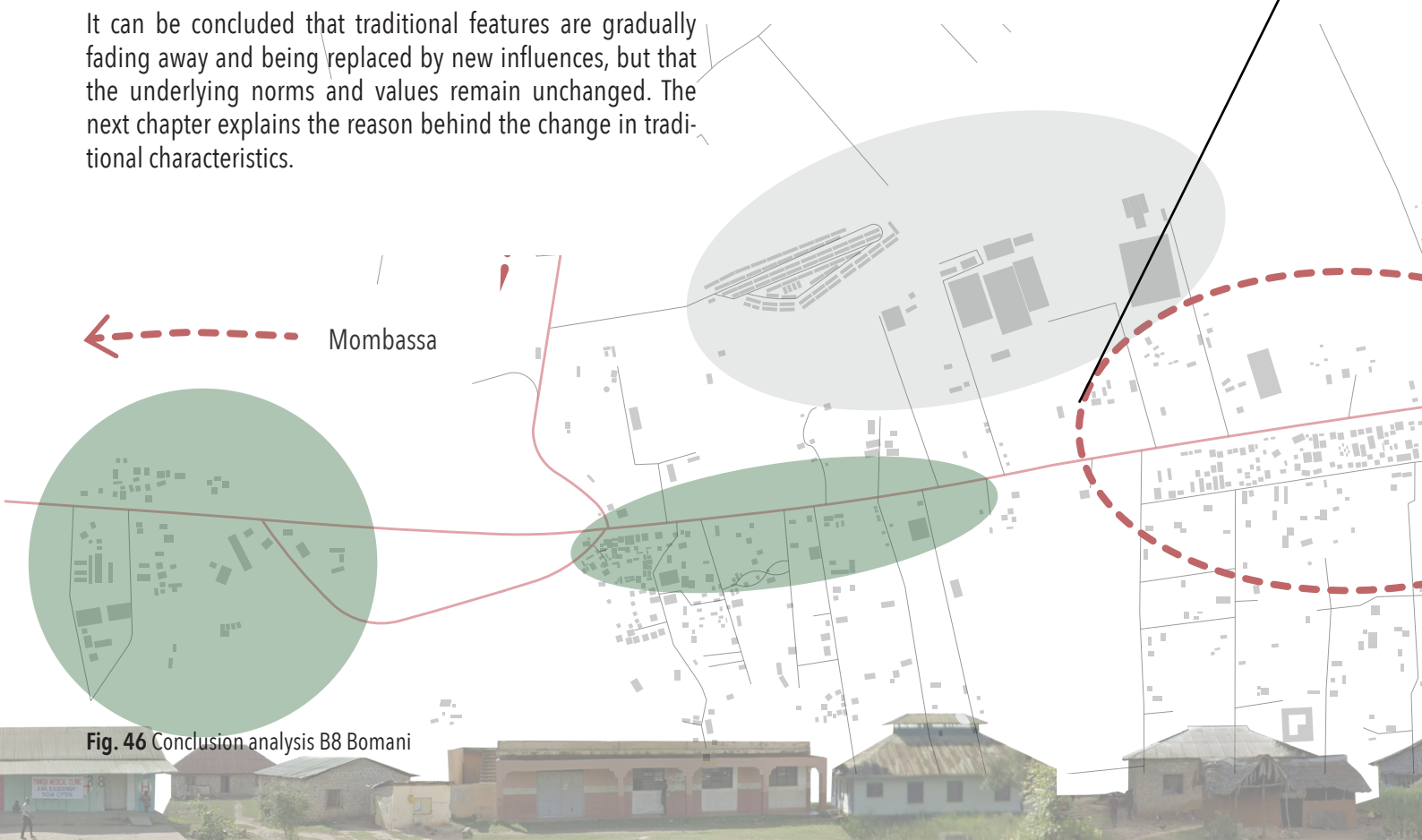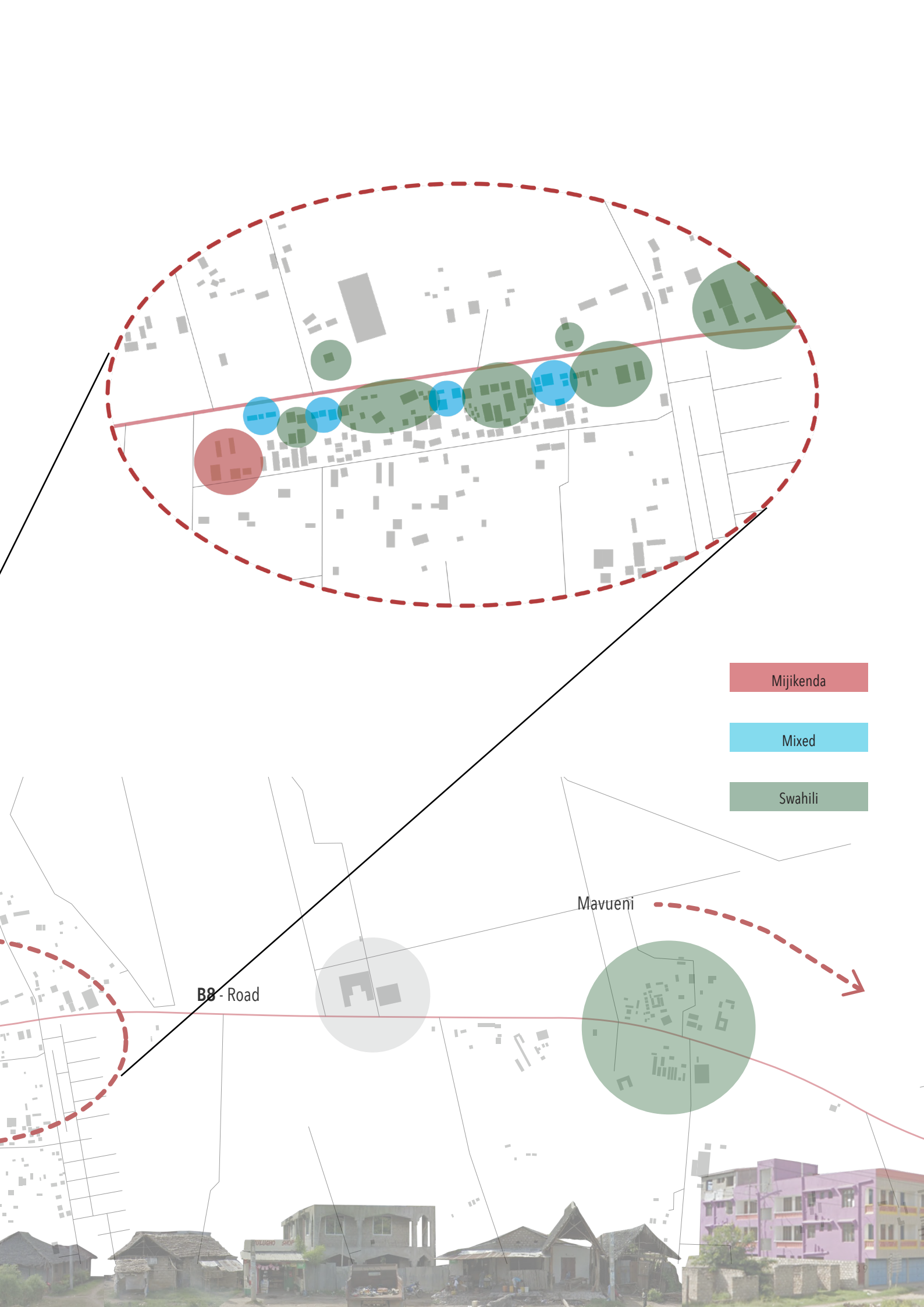
Mombassa

Fig. 46 Conclusion analysis B8 Bomani

Mijikenda

Mixed

Swahili

Mavueni

B8 - Road

What causes the building culture in Bomani to change?

Although many traditional architectural characteristics from the Swahili and Mijikenda culture can be seen in Bomani, major changes are taking place. These changes are particularly noticeable in the use of materials.

In this chapter, by means of interviews with architects Jackson Kariuki and Jaime Velasco Perez, both working on the south--eastern coast of Kenya, we investigated the reasons behind these changes in external architectural characteristics.

Building code

In 1926, the first building code was introduced in Kenya. This was done by the British colonial government and concerned Nairobi. In 1948, the building code was replaced by the Nairobi City Counsel By-Laws, which also introduced urban planning and zoning. The present building code[64], which applies to the whole of Kenya, was accepted in 1968 and dresses the following topics:
- national, regional and local planning (town and country planning, plot layout and accessibility regulations for people with disabilities)
- space regulations (dimensions and daylight accessibility)
- advertising
- demolition works
- building preparation
- building process
- construction
- foundation
- materials and craftsmanship (floors, walls, roofs, glazing, stairs, lifts and fencing)
- services (lighting, ventilation, heating, thermal comfort, energy efficiency, water supply and drainage, rainwater, non-water related sanitation, electricity and waste disposal)
- safety (fire safety, fire alarm system and maintenance)

With the introduction of the Building Code, two types of buildings can be distinguished: permanent and semi-permanent buildings. In contrast to semi-permanent buildings, permanent buildings must always adhire to the Building Code.

To obtain a building permit, a building plan must be submitted. In Kenya, a citizen, contractor or developer may not apply for a building permit, with the result that permanent buildings always require the services of an architect. In addition, the Building Code prescribes material specifications with which permanent buildings must be built. This would mean that a house with unprocessed coral stone blocks that vary in size would not fall under the Building Code, but if it concerns coral stone that has been processed into uniform blocks, it would fall under the Building Code.

Another government influence, but not related to the Building Code, is the ban on gender segregation in government buildings. In villages you can still see this, but in government buildings where there is no private interference, such as schools, it is strictly forbidden.

64. Government Kenya, 2009

Finance

So, finance already plays an essential role in determining whether you build a permanent or semi-permanent building, which automatically also influences the choice of materials.

The traditional materials that were used in the Swahili and Mijikenda culture are also clearly reflected in Bomani. However, there are also many new materials introduced, which ensure that traditional features fade. An example of this is the traditional Makuti roofing, which is increasingly being replaced by corrugated steel sheets. According to Architect Jackson Kariuki (personal contact, March 2nd) the change in these external features is mainly driven by the cost of the building materials. Based on the above, the following section gives an example of how the availability of money can influence the choice of building material, using roofing as an example.

In Bomani, roof covering options include traditional Makuti, roof tiles and corrugated steel sheets. In the past, Makuti was a cheap and widely used material and roof tiles were too expensive for the people living in Bomani. This was because Makuti, palm leaves, was a locally available product and because roof tiles had to be transported from the inland (Nairobi) towards the coast. *Transporting* materials costs money, which automatically makes a product more expensive. Nowadays, partly due to climate change, there are not so many palm trees in Bomani anymore and multiple layers of Makuti are needed to make the roof waterproof, with the result that the Makuti is not as easily available as it used to be. Because of the *scarcity*, the material is used less, with the result that the making of the Makuti roofs is no longer passed on from generation to generation. As a direct consequence, making a Makuti roof has become a *specialized* job, which raises its price even further. Corrugated steel sheets, which are easy to transport, to process and can be purchased locally, are therefore an affordable alternative. *Maintenance* also plays a part in these developments. A Makuti roof, for example, requires a new layer of Makuti every five years to keep the roof water-resistant, and unlike the Makuti, the corrugated steel roof requires no maintenance.

The downside of this economically appealing choice, is the effect on the indoor climate of the house. The traditional Makuti roofs insulated very well, keeping the inside of the house cool. The corrugated steel roofs do not have this ability and also resonate the sound of precipitation. This is a downside one must accept when, mainly for economic reasons, it is the only possibility.

Social Hierarchy

As described in chapter two, people used to show their wealth and social status by decorating their houses. Since the gap between rich and poor became larger, due to the implementation of the building code, the differences between high-end, middle and low income classes became clearly visible in the built environment.

The high-end projects make use of traditional materials to preserve the traditional building ways. Figure 47 is an example of this high-end way of building. In this building we see the use of coral stone stucco, which has this distinct pink/orange colour flare. Around the front door, a new interpretation of door carving is shown, incorporating in the facade. In addition, all the windows and doors are made out of wood, which is traditional but now a days really expensive. Jackson… states that therefore most people use steel windows. These buildings mainly features a flat roof, made out of concrete, or thatched with rooftiles or Makuti which benefits the internal climate. Also, the use of coral stone tiles is shown which is a highly efficient floortile which stays cool because of the thermal capacity of coral stone.

In the middle class there is just enough wealth to afford a permanent house (Fig. 48). This shows in the use of materials and the level of detailing. These people can afford to hire an architect to get a building permit and use the more durable materials which the building code prescribes. This is however the limit. Buildings like this usually show a bear concrete construction with an infill of concrete blocks/coral stone blocks with mortar. These houses are not plastered, in contradiction to their more high-end counterpart. Another distinct difference concerns the sloped roofs made of congregated iron sheets. houses are subject to maintenance. People are not used to finishing everything at once; when they have saved up some money, they for example invest it in the stucco or tiles in the house.

The last category concerns the semi-permanent buildings, that are built by the less wealthy people. These houses are still made with wattle-and-daub walls and usually have Makuti roofs, yet corrugated sheets is also frequently used (Fig. 49). When the Makuti roof fails. These houses do not last long and therefore need a lot of maintenance. However, you can see that some people try to decorate their house with broken tiles for example, to 'upgrade' their social status.

Fig. 47 High-end architecture

Fig. 48 Middle class architecture

Fig. 49 Low class 'architecture'

Vicious circle of financial prosperity

The external architectural characteristics of the Swahili and Mijikenda culture are changing as a result of the 'Building Code'. This has created a division in the built environment. Namely, people with little money cannot afford a permanent home and therefore build their own home from locally available materials without an architect. Due to limited budgets, they continue to build in a traditional way, using traditional materials. However, when a traditional material runs out, they cannot afford to preserve their tradition and therefore have to change along.

For those who have more money to spend, permanent buildings are designed by an architect and must comply with building regulations. Because the regulations must be met, there are also requirements for the materials, with the result that not all traditional materials and building methods are sufficient and therefore vanish. However, traditional materials such as Makuti and roof tiles, which are now considered to be more costly materials due to transport costs and scarcity, are still affordable for the rich. In this way, richer people are better able to maintain traditional features, but are also more likely to be influenced by western culture and innovations.

It can be concluded that the changes in materials and characteristics are mainly linked to the financial capacity of the client (Fig. 50)
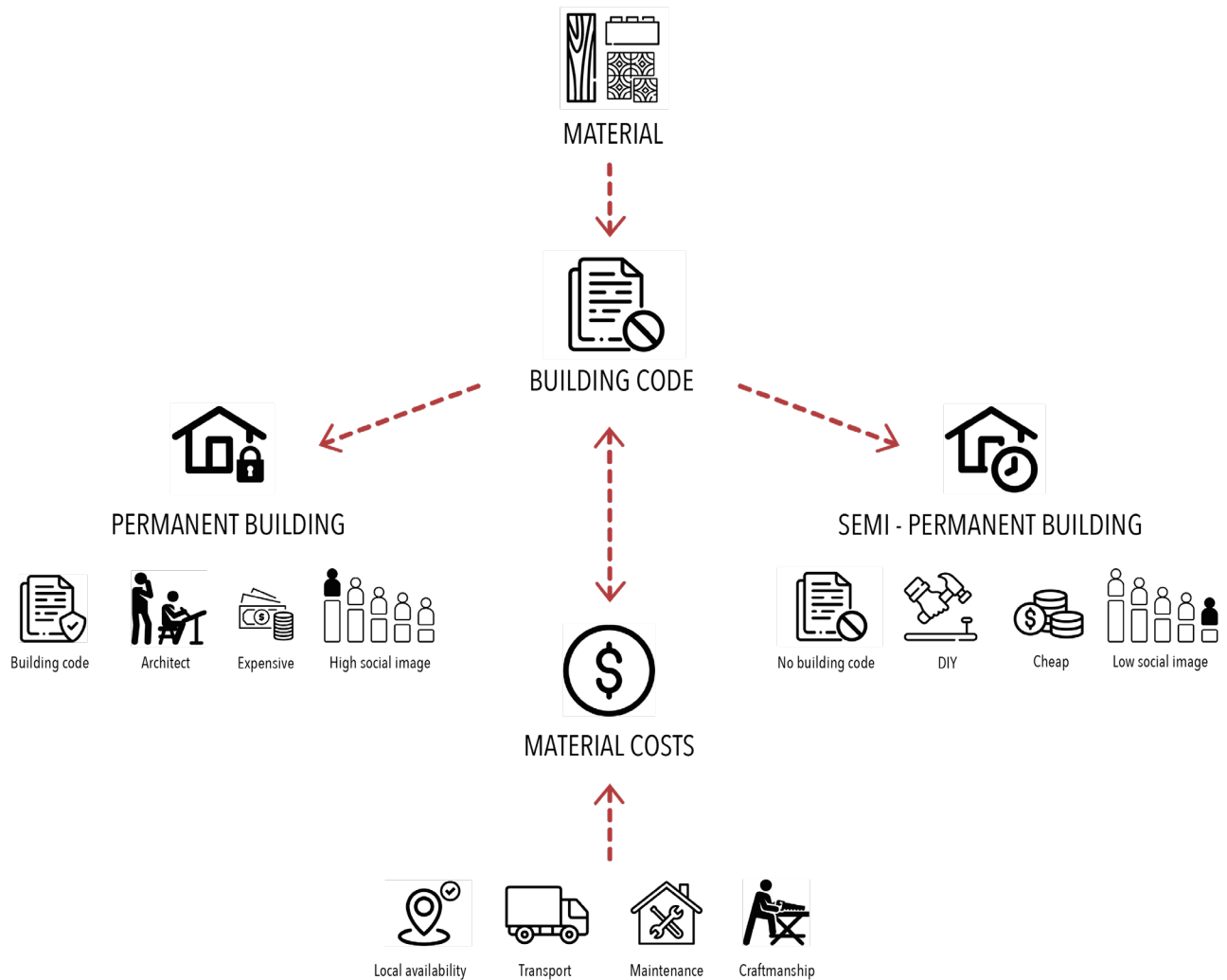
What causes the change?

MATERIAL

BUILDING CODE

PERMANENT BUILDING

Building code   Architect   Expensive   High social image

SEMI - PERMANENT BUILDING

No building code   DIY   Cheap   Low social image

MATERIAL COSTS

Local availability   Transport   Maintenance   Craftmanship

Fig. 50 Modern floorplan home Bomani | Swahili influence

CONCLUSION

A specific culture is site bound and is shaped by the habits and customs of people over the centuries. Throughout the years, many explorers and migrants have entered Kenya, all of whom in turn have had their influence on decisions, developments and, certainly, on its culture. On the scale of Kenya as a whole, the British have played a major role in this culture by introducing the national rules, installing a national government and by making the inland accessible due to the construction of the railway.

Zooming in towards the south-east coast, there are two predominant cultures, namely the Mijikenda and the Swahili. The Mijikenda culture is located around the sacred forests, while the Swahili culture, influenced due to the settling of Arab traders from the 6th century onwards, is mainly located on the coast. Both cultures have a distinct way of dealing with their built environment and even though they have different origins and cultural norms and values, similarities between both can be seen in religion, social hierarchy and urban planning.

In terms of urban planning and region, both build their villages and cities around a religious building, the Mosque or the Moro. With regards to urban planning and social hierarchy, in both a division amongst the population occurred, creating Clans and Mitaa's.

Regarding the structure of buildings, in terms of floorplans, social hierarchy plays a predominant role as well. In the more traditional Swahili homes, woman, together with the kitchen, were placed in the most private parts of the house. In the Mijikenda, man had multiple wives causing the need for more houses in the homestead. Nowadays, the interpersonal relationship and the gender division has visibly changed. It is now more common that man and woman live together in one house. In governmental buildings, gender division is even forbidden. However, what is still strongly reflected is the age hierarchy. In the Mijikenda culture for example, when a boy is considered grown up (14-16 years old), he builds his own house in the homestead.

Regarding the architectural characteristics of the built environment, the economic wealth is the predominant factor. The economic wealth dictates whether people can afford a permanent house with more durable materials or if people need to live in a semi-permanent dwelling which is made from traditional, local available, materials such as wattle-and-daubt. This division between permanent and semi-permanent was mainly caused by the building code that was introduced in 1926, that dictates that an architect is the only one that can file for a building permit which in turn means that every permanent house has to be designed by an architect that costs money and therefore, excludes the economic less wealthy people from permanent housing. Secondly, the building code dictates which materials can be used, and how materials need to be processed, causing many traditional materials no longer to comply.

It can therefore be concluded that both, Mijikenda as well as Swahili, cultures are reflected in the built environment of Bomani, but that the cultural characteristics are slowly fading away. The reason behind this change is not due to culture, but due to the enforcement of the building code, in relation with the economic wealth.

DISCUSSION

When searching on the internet for Bomani, the location of this research, not many hits can be found. As a result of the postponed Kenya trip, the research had become highly dependent on this available online information, meaning that the study had to be constantly adjusted according to available information

Since Culture is a broad topic and information was hard to find, it was needed to focus on specific topic as building culture. Therefore, some nuance is missing in the research.

Since the fieldtrip couldn't take place, the information on site had to be gathered differently. Therefore, a buddy system was invented. All students received the contact details of students from the North Coast Medical Training College which we could contact for questions regarding the research. By means of texts, pictures and video's, valuable insights have been obtained. Even though these conversations were valuable, the research would have been improved if the location could have been analysed by the students themselves. The way of communication and information gatherings left a lot of room for interpretation and selective pictures are shown which influences the analysis.

With regards to the last chapter, more interviews with architects, would have been beneficial so they could have been cross-referenced. More information causes a better comprehensive understanding regarding the underlaying actors of change.

Regarding further research into this topic, a suggestion would be to conduct more local information by visiting the location and having more conversations with the locals. Another suggestion would be to dive deeper into the locally available materials and the specific values and cost of the materials, to verify the conclusions that were drawn up in chapter 4.

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