

DHARAVI: PLACES AND IDENTITIES

An architectural-sociological survey of five selected places within the informal settlement in Dharavi, Mumbai

The thesis has linked different research methods of sociology, architecture and urban morphology to provide a comprehensive knowledge within the selected neighborhoods and the requirements of the residents' habitat.



"The cities of the future aren't going to be made from glass and steel constructions like former generations of urbanists pictured but rather from rough bricks, straw, recycled plastic, blocks of cement and waste wood. The majority of the urban world of the 21st century will submerge in the misery of environmental pollution, excrement and waste instead of living in the high rising cities of light."

-Ar. Martina M. Spies



ABSTRACT

Dharavi, a central district of Mumbai, is one of the densest informal settlements in Asia. It is a home for about 100 communities (nagars) with different backgrounds and from all parts of India. These neighbourhoods have grown organically with its inhabitants living together in cramped spaces and under poor hygienic conditions.

The thesis considers the organizational and structural solutions which have been found by its inhabitants at a modest level of order and design of their habitat as a starting point and basis of improvements of the living conditions. This is a contradiction to the slum redevelopment projects initiated by the Slum Rehabilitation Authority since 1971. The current government projects neither take the vital connection between the living and working spaces nor the concept of community spaces nor the spatial references to the traditional living culture of India into account.

The inhabitants themselves are in the focus of research – especially as suppliers and sources of meaningful information.

The investigation of the social fabric and the spaces in which the daily life happens show how the spatial structures (hardware) are reflected in the social structures (software). Using case studies in various different places/neighborhoods provides an understanding of these relationships and the social, economic and structural changes during the last decades.

PROBLEM STATEMENT

World-wide, the development of informal settlements takes place more or less simultaneously, and at a rather fast pace. According to the UN-Human Settlements Programme, one billion people currently live in slums due to irregular and informal employment. Between 2050 and 2060, the world's population will reach its maximum, which means roughly ten billion people. Nothing less than 95% of this growth will manifest itself in cities in the south. This means, almost all future lives will be lived in cities – predominantly in megacities, and within those, mostly in slums and housing without access to water and sanitary facilities.

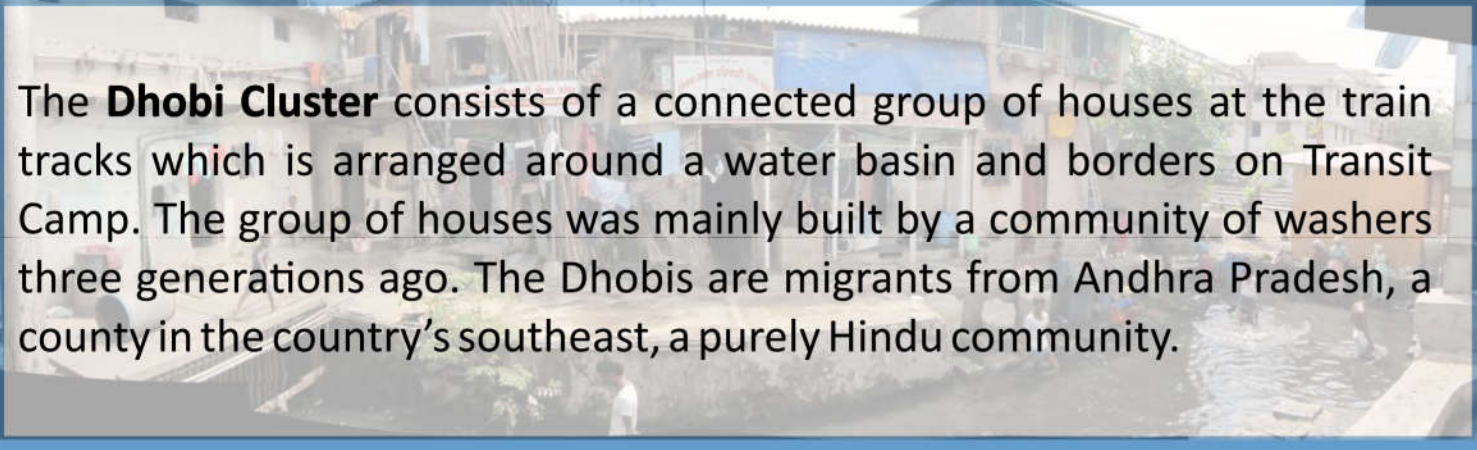
Informal settlements are, for the most part, connected to negative aspects: Poverty, dirt, illegality, poor education and dire prospects for children. They also contrast legal cities spatially, socially and economically, and pose a challenge for all its inhabitants and in most cases, the inhabitants don't have any legal claims in the city. The impression, that the negative aspects of an informal settlement – in Dharavi as well as worldwide – are mostly due to the lack of a social housing policy and city planners' top-down methods, imposes itself.

This is where this dissertation picks up:

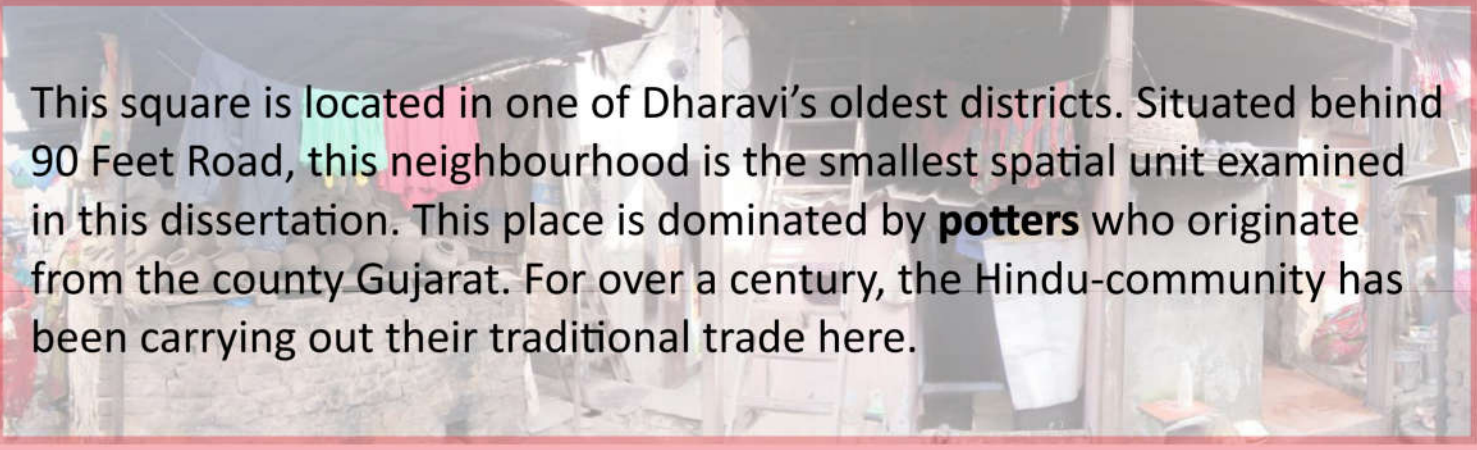
The inhabitants themselves are seen as the protagonists and architects of the environment they have created – the people living in the district plan, build and change their houses on their own without any aid provided by the government. They create their structural environment according to their needs, available funds and the spatial conditions.

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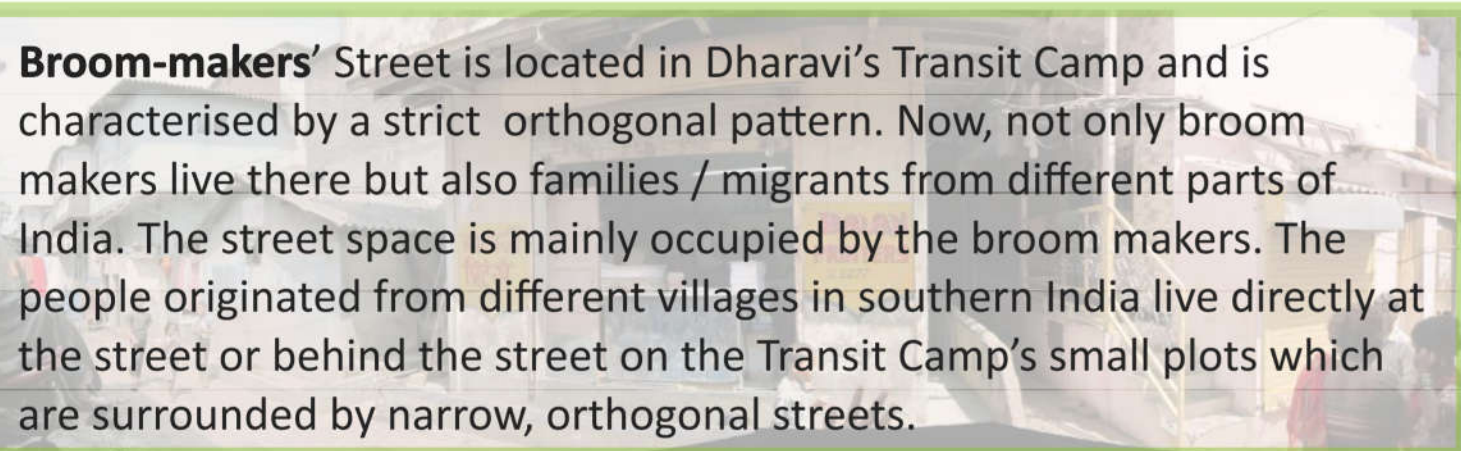
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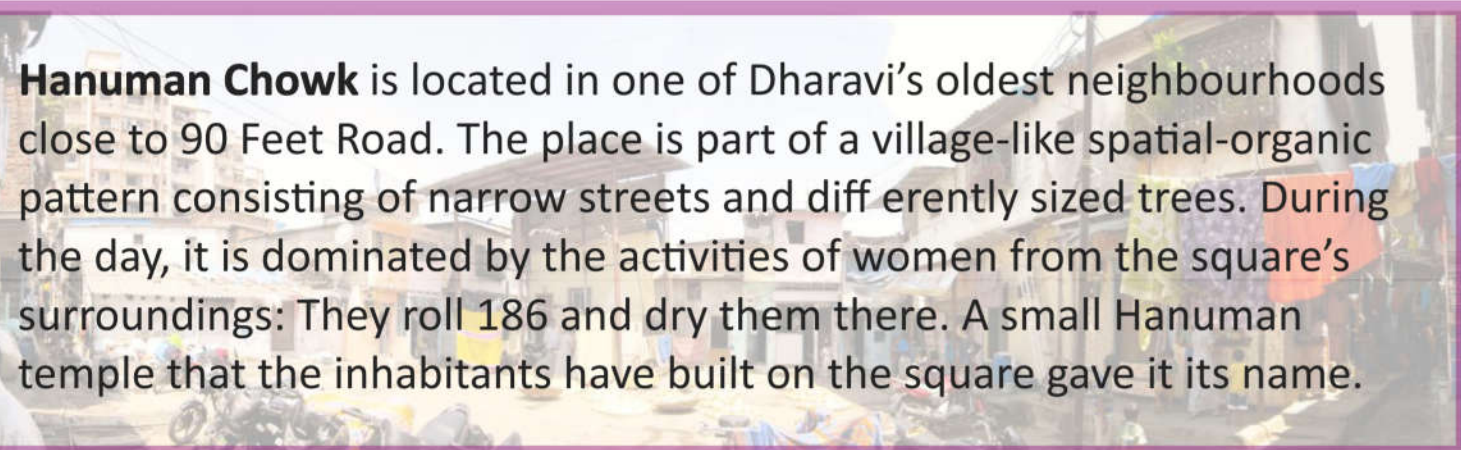
The **Dhobi Cluster** consists of a connected group of houses at the train tracks which is arranged around a water basin and borders on Transit Camp. The group of houses was mainly built by a community of washers three generations ago. The Dhobis are migrants from Andhra Pradesh, a county in the country's southeast, a purely Hindu community.



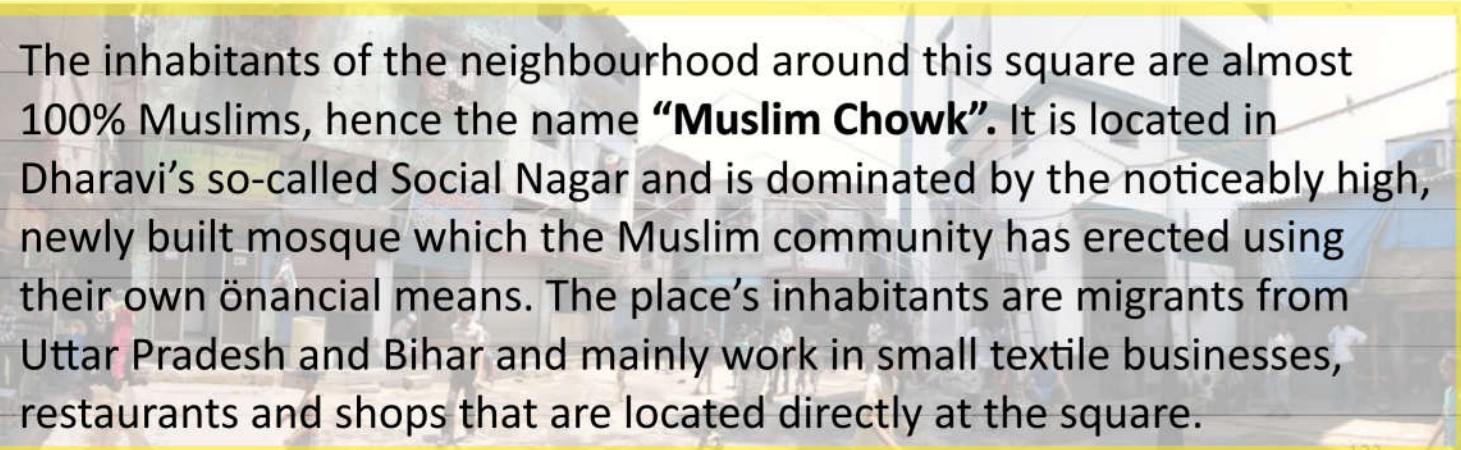
This square is located in one of Dharavi's oldest districts. Situated behind 90 Feet Road, this neighbourhood is the smallest spatial unit examined in this dissertation. This place is dominated by **potters** who originate from the county Gujarat. For over a century, the Hindu-community has been carrying out their traditional trade here.



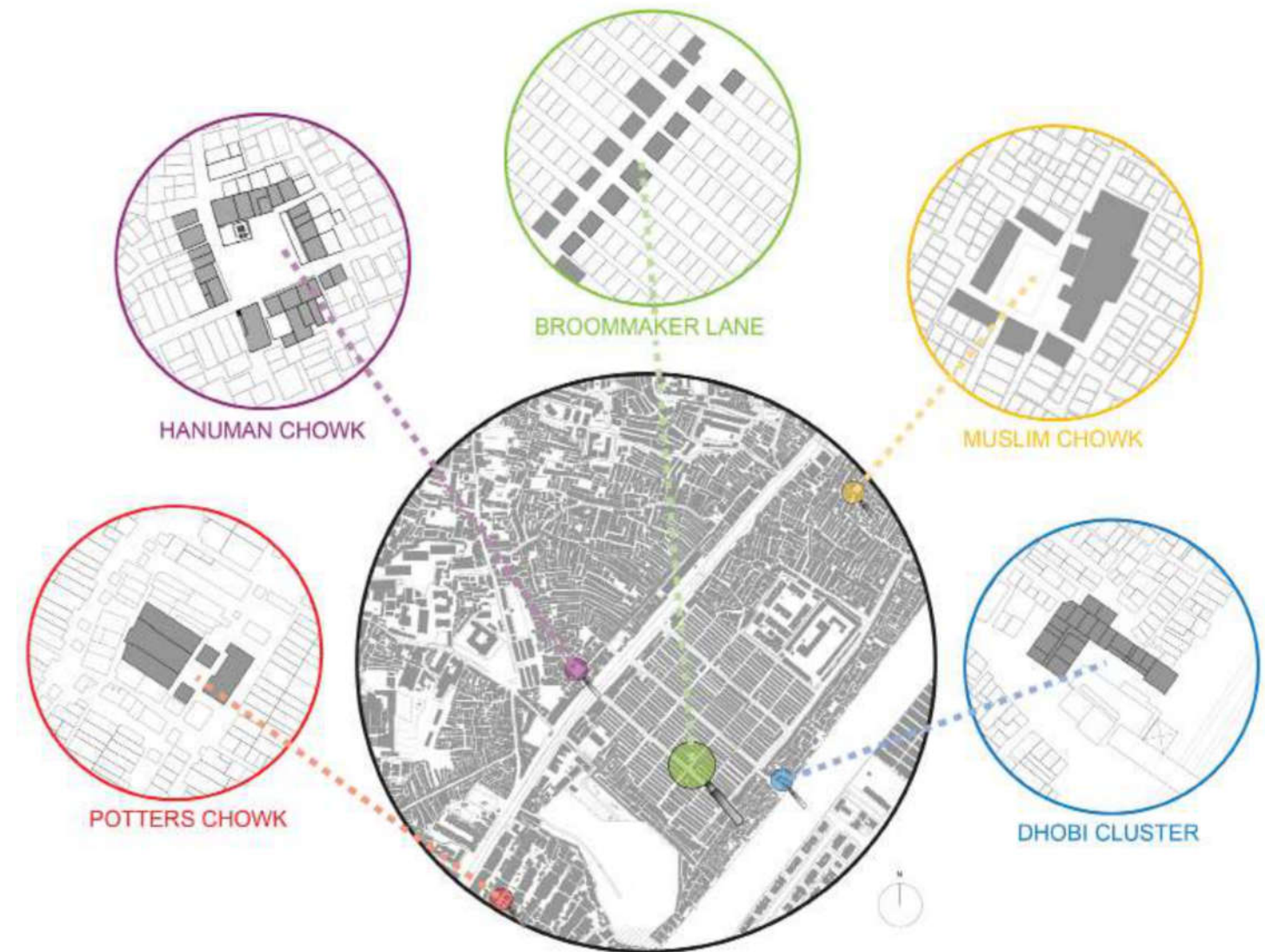
Broom-makers' Street is located in Dharavi's Transit Camp and is characterised by a strict orthogonal pattern. Now, not only broom makers live there but also families / migrants from different parts of India. The street space is mainly occupied by the broom makers. The people originated from different villages in southern India live directly at the street or behind the street on the Transit Camp's small plots which are surrounded by narrow, orthogonal streets.



Hanuman Chowk is located in one of Dharavi's oldest neighbourhoods close to 90 Feet Road. The place is part of a village-like spatial-organic pattern consisting of narrow streets and differently sized trees. During the day, it is dominated by the activities of women from the square's surroundings: They roll 186 and dry them there. A small Hanuman temple that the inhabitants have built on the square gave it its name.



The inhabitants of the neighbourhood around this square are almost 100% Muslims, hence the name "**Muslim Chowk**". It is located in Dharavi's so-called Social Nagar and is dominated by the noticeably high, newly built mosque which the Muslim community has erected using their own financial means. The place's inhabitants are migrants from Uttar Pradesh and Bihar and mainly work in small textile businesses, restaurants and shops that are located directly at the square.



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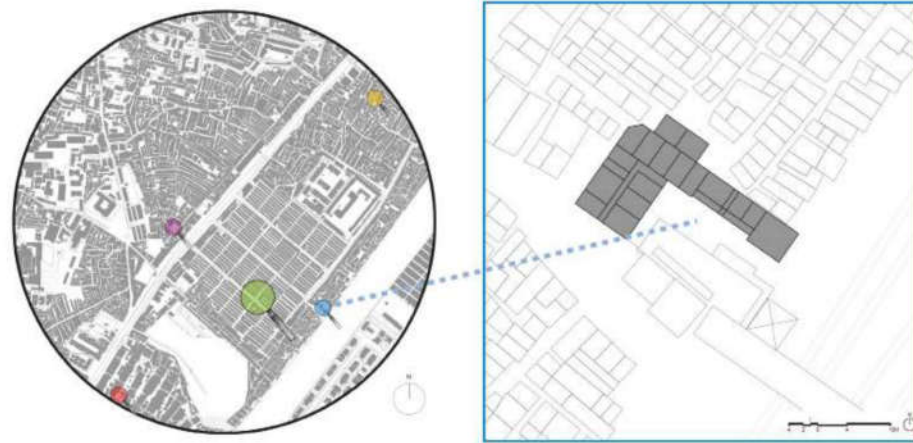
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DHOBI CLUSTER

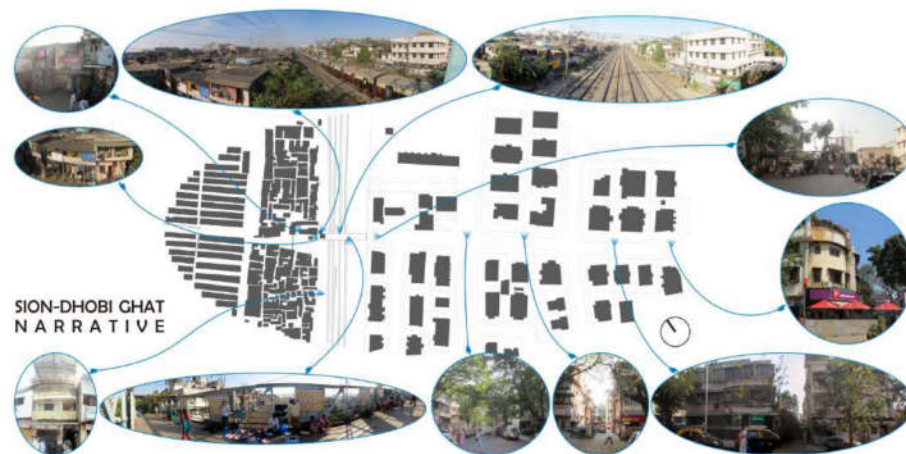
The Dhobi Cluster is situated between the train tracks and Dharavi's Transit Camp, directly at the pedestrian bridge leading to the neighbouring district of Sion.

The cluster's fragmented spatial situation differs from the orthogonal pattern of the bordering Transit Camp: The houses are melted into a group and are opposite of a water basin that claims a relatively big free space – 50% of the whole cluster space. This square hasn't been built on for several decades and is defended vehemently by the washers since its origin as it is their working space¹⁵¹. The Dhobi Cluster is located directly under the high voltage cables that were installed in the 1930s when Mumbai was connected to the power supply. It is strictly forbidden to build in this area.

The site plan in Figure 88 illustrates the relatively big free space which stands opposite of the modified Cluster's space. The figure shows the spatial topographical differences between the civil district Sion and the informal settlement Dharavi.



Dhobi Ghat location



The neighbourhood around the Dhobi Cluster: The plan shows the spatial-topographical differences between the civil district Sion and the informal settlement Dharavi.

Phase 1947-1960: Setup

Schematic illustration of the composition: The First washers identified this untouched place as their new, potential work place and source of income. The basin soon became a point of attraction for arriving Dhobis.



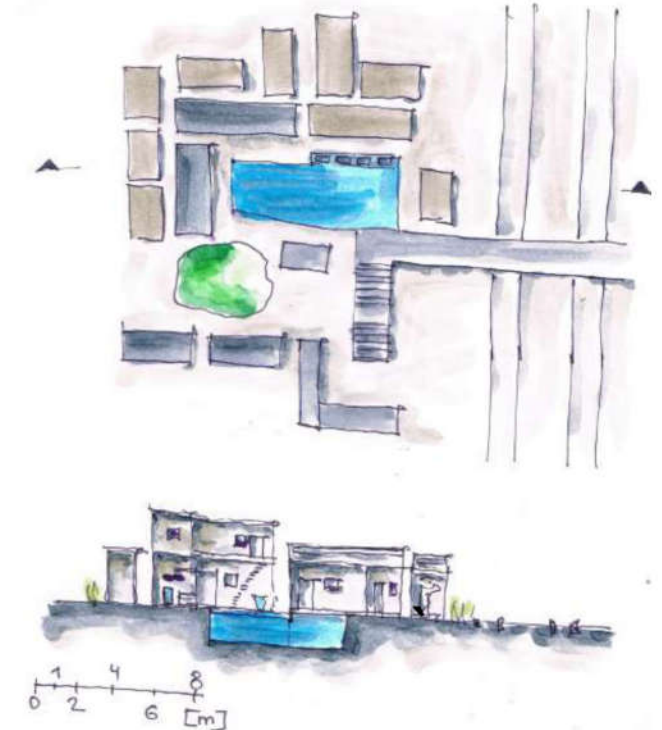
Phase 1960-1980: Consolidation

Schematic illustration of the consolidation: More and more families settled around the Ghat. Now, the majority of mangroves have been cut down and more and more swamps are filled up due to the spatial densification.



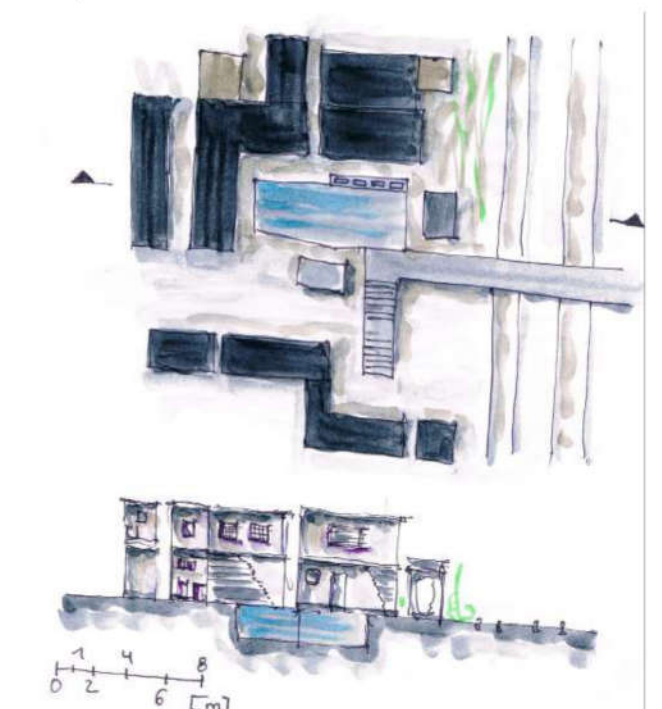
Phase 1980-2000: Modernisation/Densification

Schematic illustration of the densification: Interim walls were built within the houses to create separate living space for more people. The houses were extended horizontally as well as with another floor, grew together and became connected groups during this time.



Phase: 2000 until today (2016): Break/Upheaval

Schematic illustration of the break / change: The illustration shows a sketch of the cluster's extreme densification. Now, Dhobi Cluster consists of bricks in steel-concrete skeleton construction. The cluster started to intermix socially.



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LIFE AT AND AROUND THE DHOBI CLUSTER



Living space of short distances
The Dhobis' lives play out in the water basin's immediate surroundings:

Within 50 meters, they work, live, cook, shop, pray and meet friends and neighbours. All daily errands concerning the household can be accomplished within 15 minutes.

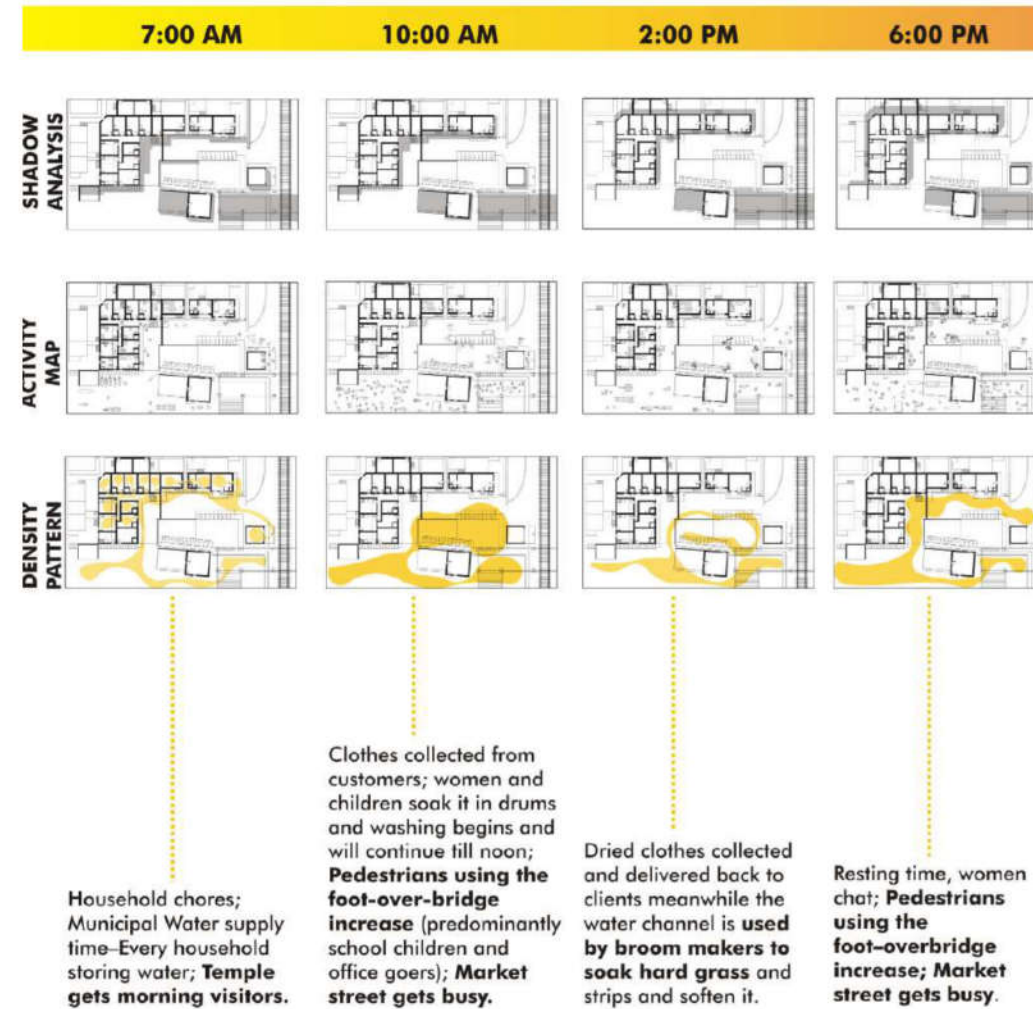
The washers' work place is directly in front of their houses, and "walking shops" (street vendors) come here every day at certain times to offer their goods, such as fruits, cotton candy, children's toys and saris. Different usages
On average, the washers spend 12 hours a day at the Dhobi Ghat; their children usually spend their leisure time / the time after school close to their parents. The Dhobi Ghat is their playground and playroom after school: While playing, there are no differences between boys and girls, a reason for this is that the children are very young, between 2 and 6 years of age. The spatial usage in the Dhobi Cluster's left and right wing differs: The right wing's male residents work outwards during the day while their wives undertake their work on the platform with opened entrance doors. While the women from the right wing do housework and use their homes for the tiffin service all day long, the Dhobis leave their houses early in the morning to work in the water basin.

The Dhobis' inner spaces are closed and unused during the day: The Ghat is the centre for men and women where they work and live. Festivities at the Dhobi Ghat
Festivities are important societal and connecting rituals that follow the Hindu year cycle.

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DIFFERENT USAGE OF LIVING SPACES



The **Dhobi Cluster's** different façades respect the people's life patterns: The Dhobis live under very confined spatial conditions without windows and only small ventilation openings. The façades are closed towards the Ghat which indicates that the apartments are mainly used for resting, sleeping and cooking next to their time-consuming profession, not for spending time and living".

In contrast the doors and windows of the right wing of the houses are always open. Due to the residents' different professions, there are differences in size and space: While the Dhobis' rooms stay empty throughout the day and are mainly used as a storage, kitchen and place to sleep, the right wing is here housewives transform their one-room-apartments to cook shops and small workshops during the day.

They earn additional money by sewing and making tiffins, which is used to pay the rent or invest in the children's education. Their homes are up to 60% bigger, are directly accessible from the Ghat and are used every hour.

A temple is erected directly in front of the Ghat to honour the elephant god. A small communal space develops in front of it, which is used to play board games. During the colour feast the cluster becomes a playground for both children and adults and the Ghat is coloured in different colours. During this time, the basin remains unused. There are no grave conflicts between the inhabitants, however, the men celebrate with alcohol from the neighbouring shop.

The immediate living space around the Dhobi Cluster is adapted to the people's needs too: Every (green) space in the neighbourhood is used effectively, no matter how small. The residents have set up mini-vegetable gardens directly between the Ghat and the train tracks, which they tend to and cultivate: This equals urban gardening on a micro-level. The temple on the Dhobi Cluster's front side takes up a prominent and relatively big space: The religious site is twice as big as the Dhobi houses and is only a meter away from the train tracks. The temple is a religious expression and a sign of a common identity:

The Dhobi Cluster's inhabitants come from different parts of India and honour their "personal" deity, however, the temple strengthens the feeling of togetherness. It is decorated with placative-graphic elements as in the village. The deity which is worshiped by everyone is illustrated by a stone, like in the village temples in Andhra Pradesh. Hotspot news stand (with unwritten rules for usage) Directly next to the Ghat, an important social meeting point was installed in the market street about ten years ago in 2006: A roofed newspaper stand has served the surrounding residents as a meeting point ever since.

The usage of these fragmented public spaces is successful as it's based on the unsaid but clear rules of a small community. According to the time of the day, different people use it: In the morning, especially older, male residents sit there, as the housewives are occupied with collecting water. Women and children use the place in the afternoons when they have time to rest.



FIG 114 | Living within the Cell Scale: The collage illustrates life in an apartment within the Dhobi Cluster.

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LEARNINGS FROM THE DHOBI CLUSTER



Hyper living space :

The reason for the spatial and hence the cultural and sociological differences between the Dhobi Cluster's left and right wing are the people's different motivations of why they settled down here: The original residents' motivation was the water basin which has been expanded and sustained by their ancestors. Its high value is manifested through the basin's size that has the same size as the group of houses.

The water basin as survival space:

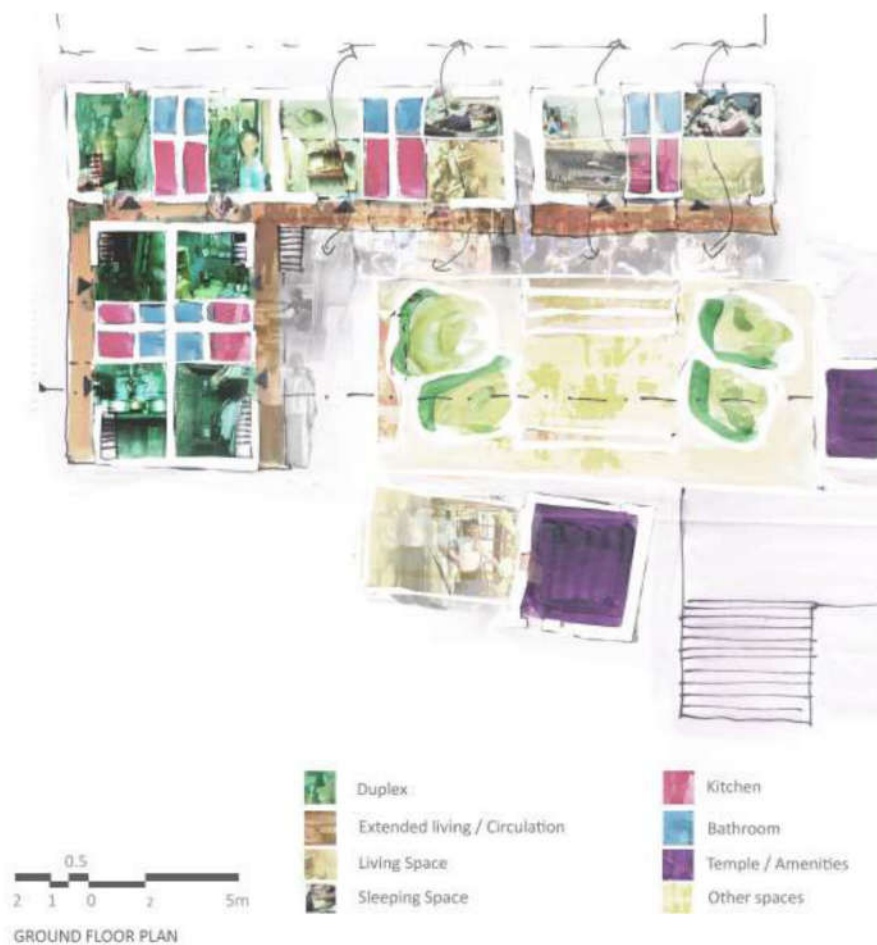
The Ghat 206 is still the Dhobis' livelihood which is important for their survival and belongs to the "untouchable" spaces in the neighbourhood. The water basin is an important hotspot and a fixed part of the socio-economic structure, and it therefore "occupies" the potential space for more buildings.

The remaining washers' daily routine circles around the water basin:

At first, the pieces of clothing, soap water, soda and bleach are put into big tanks at the Ghat to soften them, making them easier to clean. In the late noon, the laundry is washed in the water basin. Men and women stand in the contaminated water up to their hips for several hours.

The act of washing:

The act of washing is a ritual learned in the home village. It consists of brushing, rinsing and wringing out the laundry. The whole working process takes between 10 to 14 hours – starting when the clothes are picked up to delivering the clean pieces of clothing.



DHARAVI: PLACES AND IDENTITIES

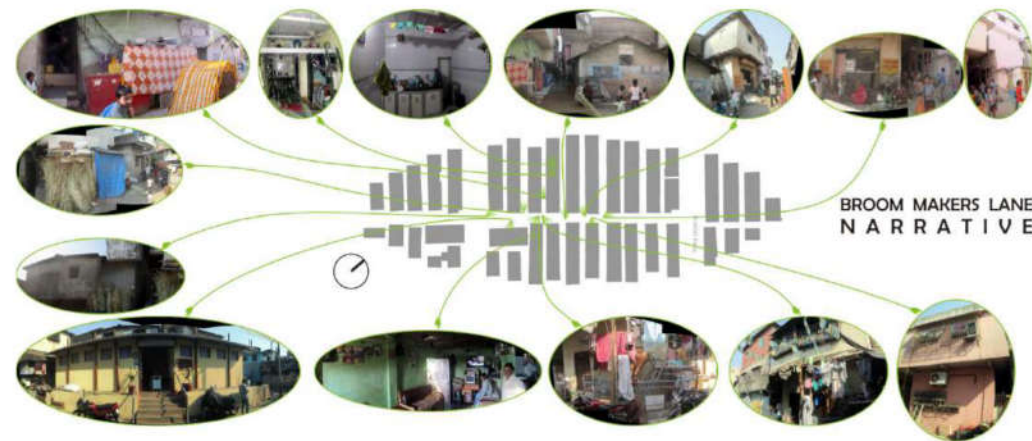
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BROOM MAKER'S STREET

The spatial examination unit "Broom-makers' Street" is analysed based on informal conversations and group discussions with residents, interviews with experts, group discussions and own observations in the three research criteria "densification and change", "dislocation and adaption" and "linking of space and variability".



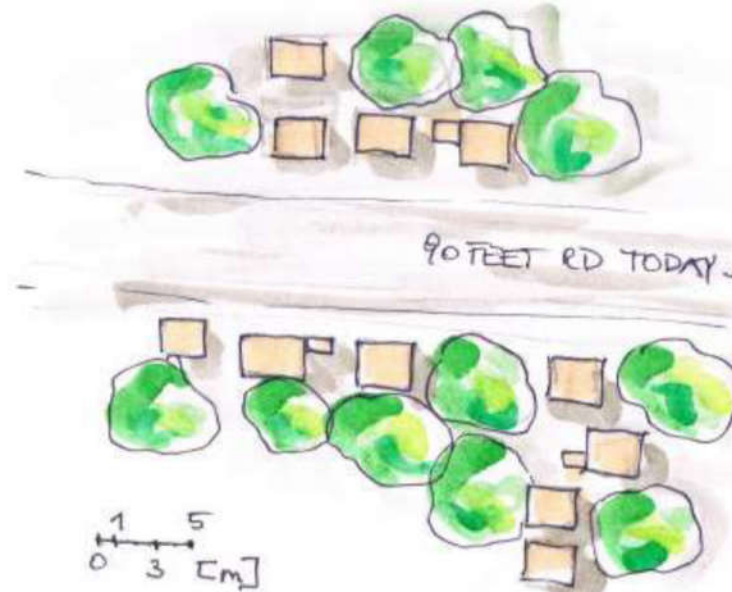
Broom Maker's Street location



The neighbourhood around Broom-makers' Street: The plan shows the Transit Camp's orthogonal pattern.

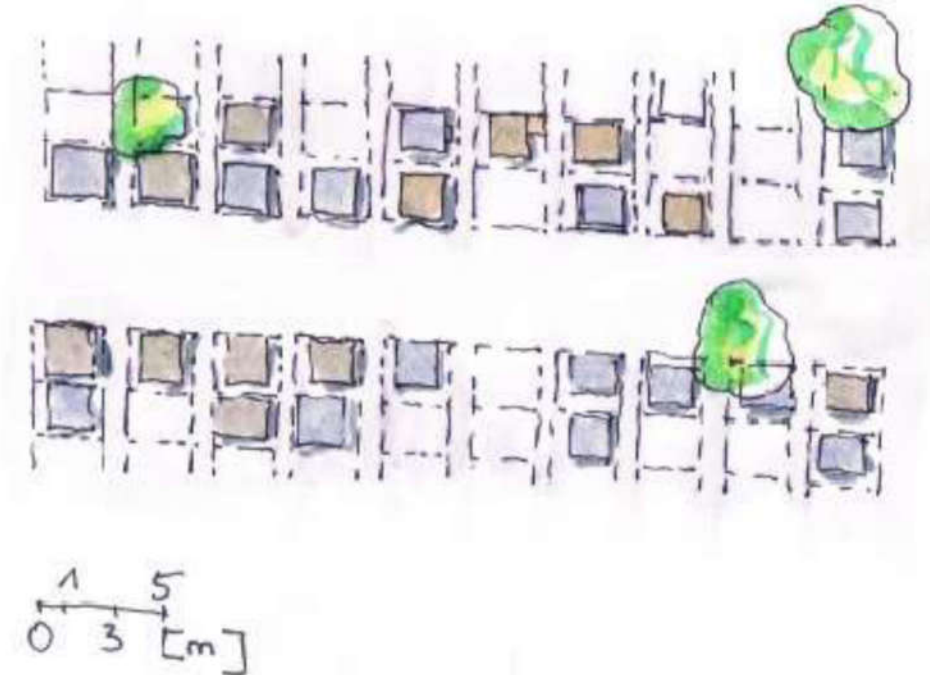
Phase: 1930-1972: Beginning and set up

Schematic illustration of the structure: Although the houses were small and kachcha, there was enough space to work in front of the houses. The big free spaces between the houses close to 90 Feet Road constituted a work space, platform for communication and storage for palm leaves that were collected during the Indian winter back then as well as today.



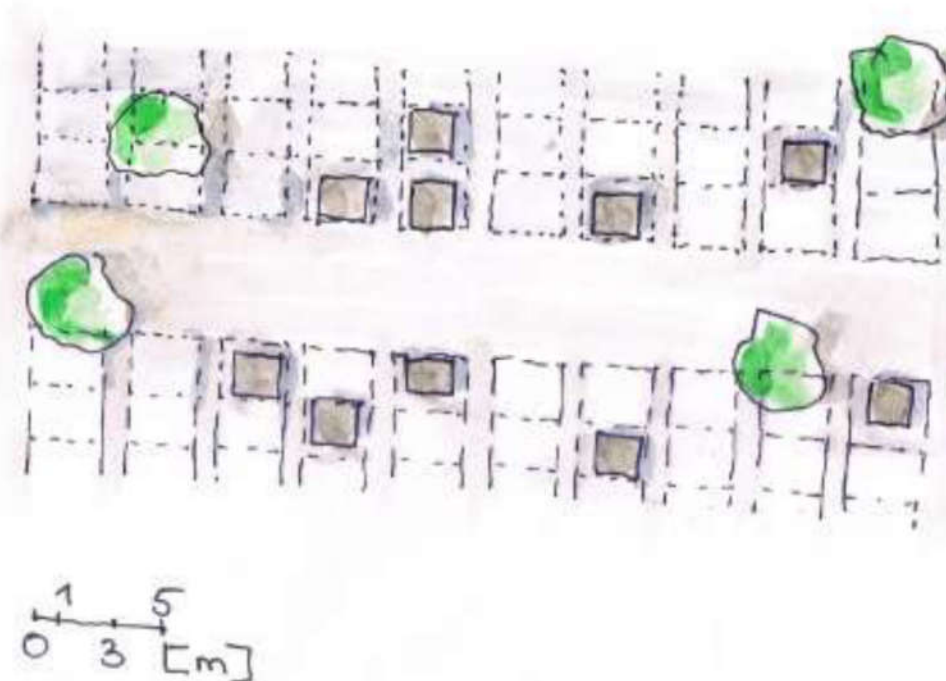
Phase 1980-2000: Modernisation

Schematic representation of modernization: By means of horizontal extensions, living space was gained for the public street. This not only narrows the road area, but also has a negative effect on the light conditions and ventilation, especially in narrow alleyways.



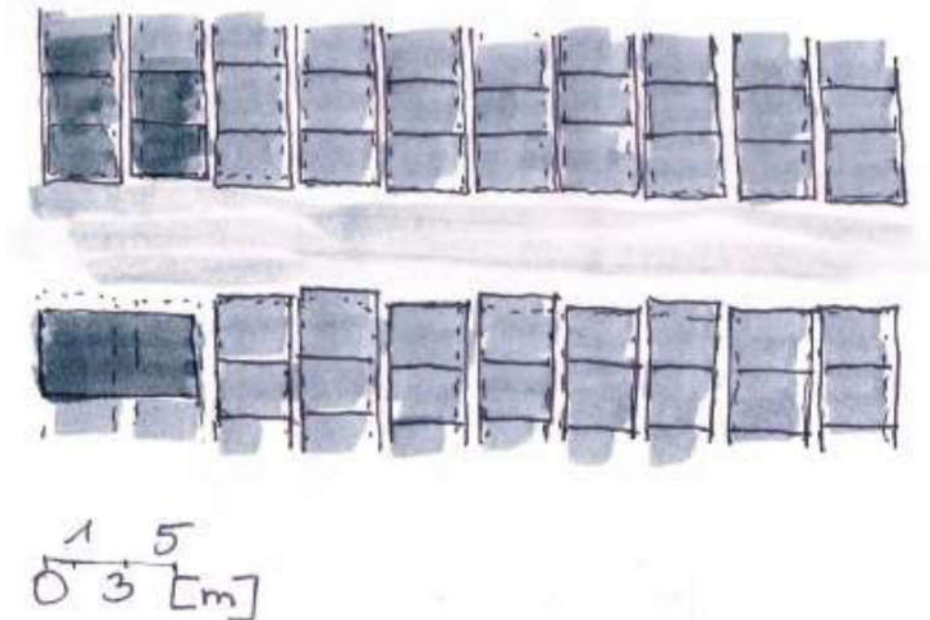
Phase 1972-1980: Resettlement & Radical Break

Schematic illustration of the resettlement and the radical break: The draft shows the Transit Camp as a part of Dharavi that was completely covered with mangroves.



Phase 2000 - 2016: Densification & Mixing

Schematic illustration of densification and intermixing: The Broom-makers' Street is now located between two busy market streets which are each 8 meters wide.



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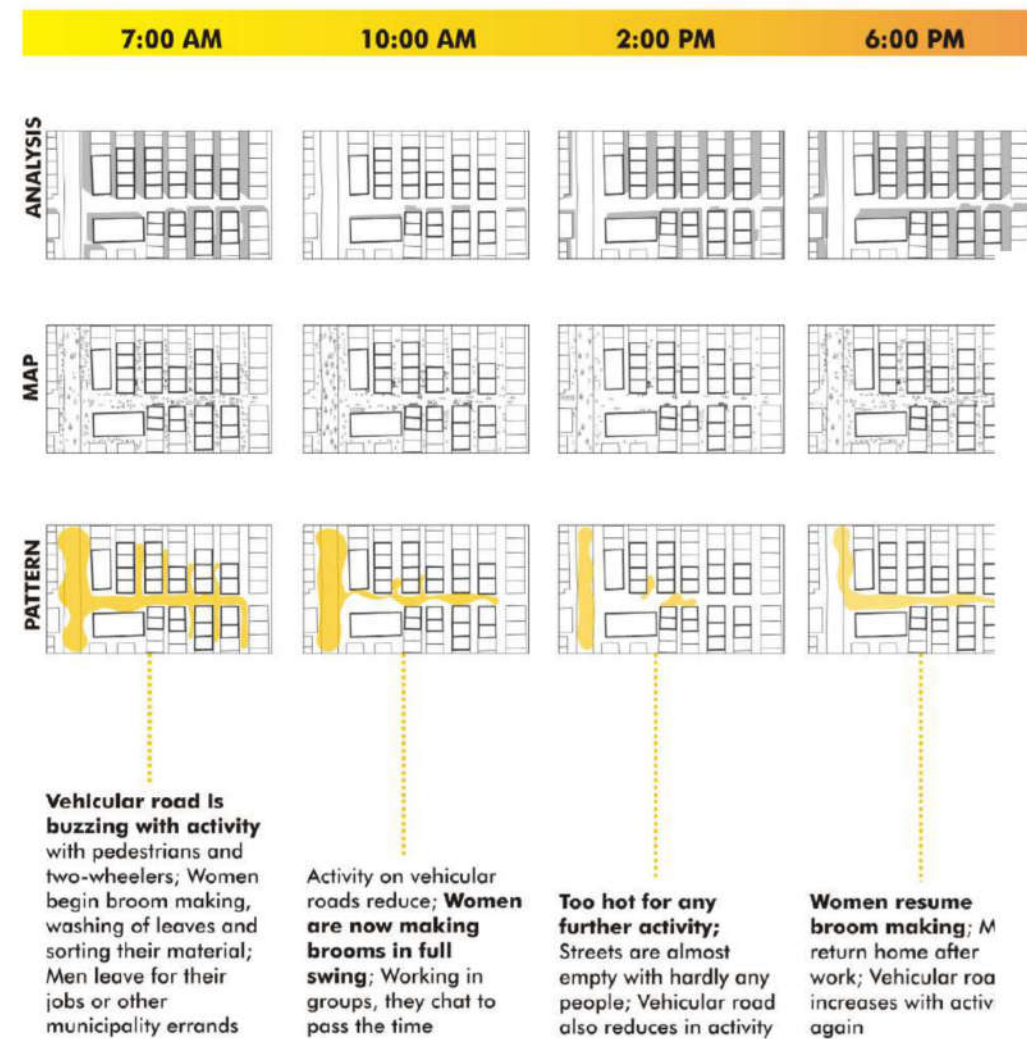
Hyper living space Broommakers' Street



Living within the Cluster Scale: The collage illustrates life on and around Broom-makers' Street

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The **broom-makers** have settled in Dharavi as a marginalised group and have implemented their profession as well as their societal and cultural background within the street in form of a changeable and flexible working and living space. The original single-storey houses have now been densified by new population groups that mainly consist of young male representatives from Muslim communities. This has not only resulted in a new „cultural, condensed spatiality“, but also a mixture of different cultures and religions on two levels, which had not existed until a few years ago: this new social stratification now takes place in different ways (old- fashioned broom making family versus young, male migrants) between the ground floor zone and the upper floors. T

The original inhabitants find themselves in an economically and societally transitory situation which should spread to and affect the architecture in form of flexible floor plans like separable inner rooms and widened connecting corridors. The modest solutions that the residents themselves have created within their private premises as well as in their „workroom Broom-makers' Street“ show how flexibly they use the available space: city planners can learn from the inhabitants of Broom-maker's Street as architects of their houses.

The upper floors as transitory work places The many workshops are on the upper floors and serve as a contrast to the apartments on the ground level: When walking through the street, one doesn't sense the extremely high economic potential that is hidden here. All the workshop floor plans share a common spatial principle: Next to the necessary equipment such as sewing machines and desks, the mori, ceiling fans, big water jugs, a TV and a gas burner are fixed integral parts.

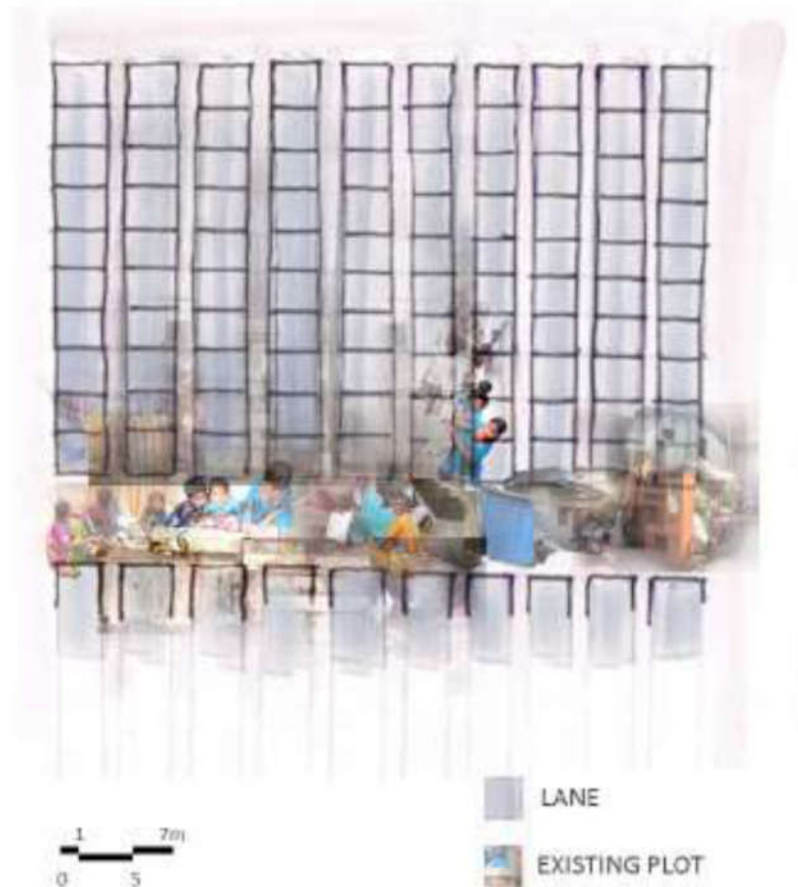
The young male workers' few personal belongings are stored on the walls and in the room's corners. As mentioned before, they belong to a working class which has newly developed during the past few years. The young people aren't noticed within the "street community". For them, Dharavi is a temporarily and spatially transitory zone which offers them the opportunity to earn money for their families and their futures for a certain amount of time.



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LEARNINGS FROM THE BROOM-MAKER'S STREET



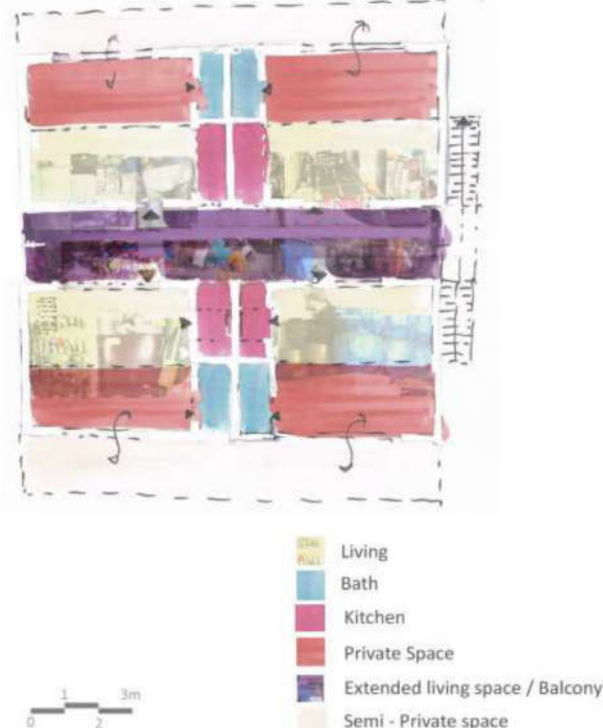
This sketch illustrates the current state of the Broom-makers' Street



The development street is widened by a meter and hence provides better ventilation. Furthermore, an additional communication space with trees is created instead of the public toilet.



Schematic illustration of a storey or a multi-storey house in the Broom-makers' Street. The open corridor offers an extended working and communication space for the inhabitants.



The square interior, whose width is taken from the current ground plans, can be used arbitrarily and can be spatially separated and variable for multi-generational budgets.



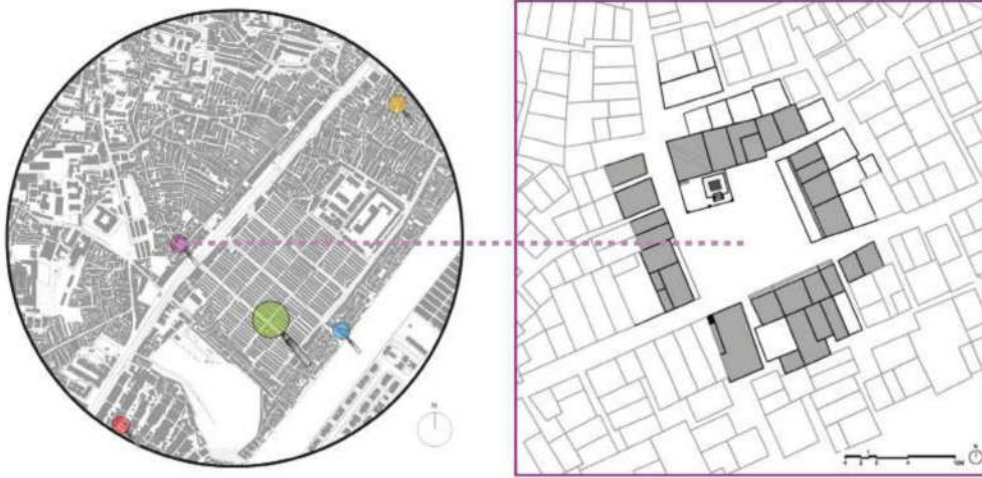
An internal staircase can be built for families living on several storeys

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HANUMAN CHOWK

The Hanuman Chowk has developed during India's independence³²⁶ and is dominated by the women's activities during the day. The women live around the square: They roll out 327 and dry them there. A '' in Hindi means thin bread loafs. The square's name originates from the small Hanuman temple the inhabitants have built on the square.³²⁸ The ''-women'' are Hindus from Uttar Pradesh and Maharashtra. The Chowk developed due to the settlement of migrants from various villages in Maharashtra and has kept densifying since the 1940s. Today, inhabitants from all parts of India live at Hanuman Chowk.



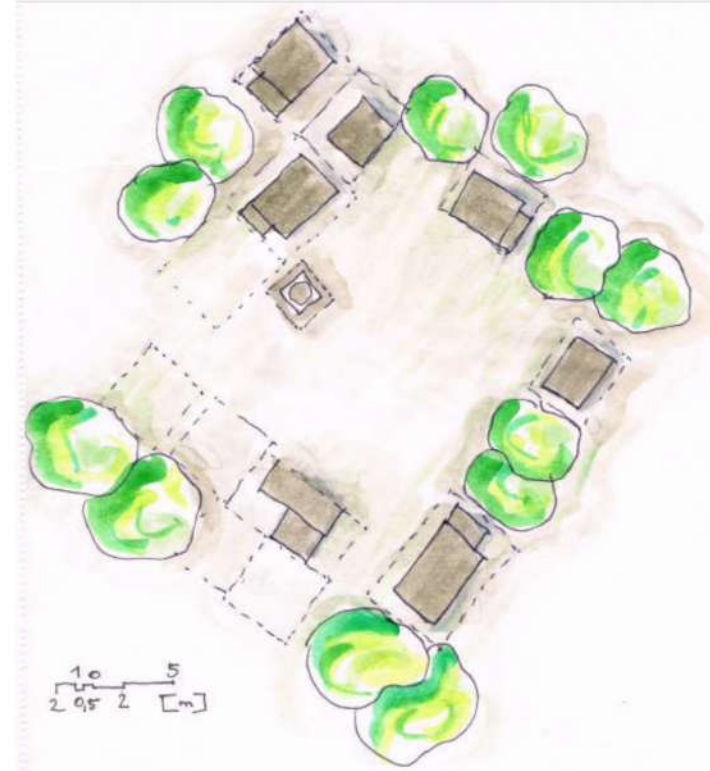
Hanuman Chowk location



The neighbourhood around the Hanuman Chowk

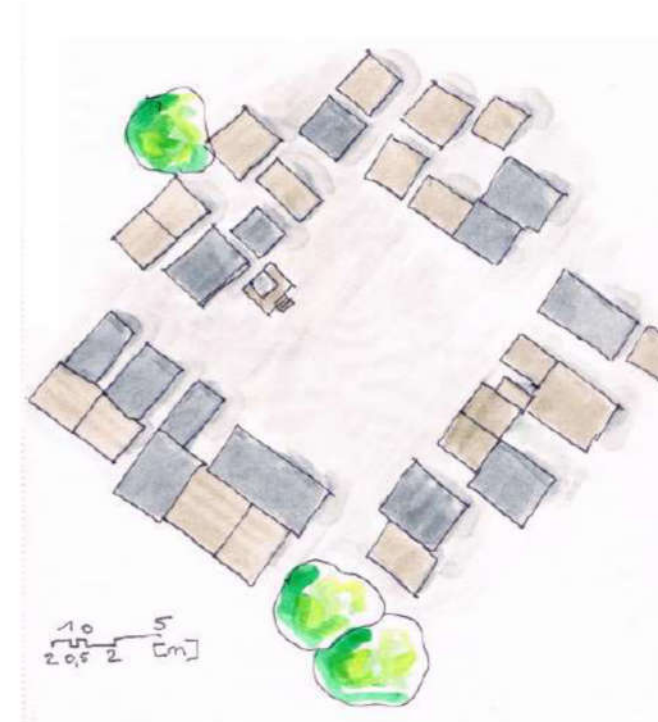
Phase 1945-1970: Set up

Schematic illustration of the structure: During this initial phase, the bordering neighbourhoods consisted mainly of loose development which were similar to the rural structures at home.



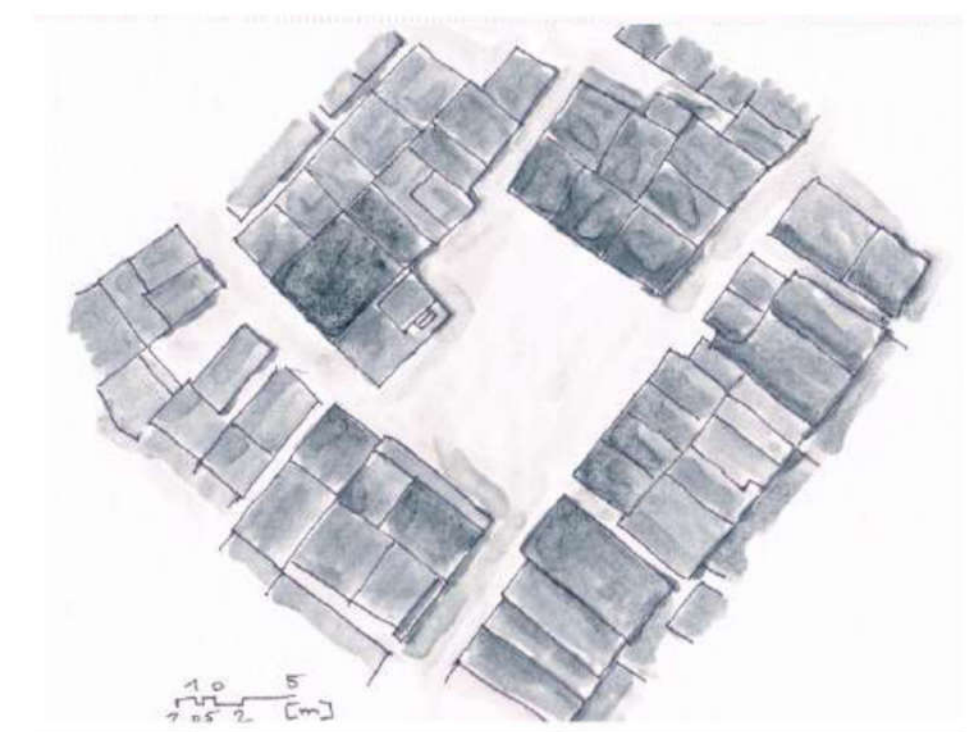
Phase 1970-1995: Consolidation

Schematic illustration of the consolidation: During this time, there were no structural interventions on behalf of the government. Until the 1980s, the square was unsurfaced and permanently flooded especially during the wet season.



Phase 1995-2016: Modernisation & Regrouping

Schematic illustration of the modernisation and restructuring: Mahindra says that the BMC would remove additional buildings. Everyone at the Chowk adheres to the structural limit of only one upper floor.



Sociological development of Hanuman Chowk

Schematic illustration of a house's structural development at Hanuman Chowk.



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Living within the Cluster Scale: The collage illustrates life at and around the Hanuman Chowk.

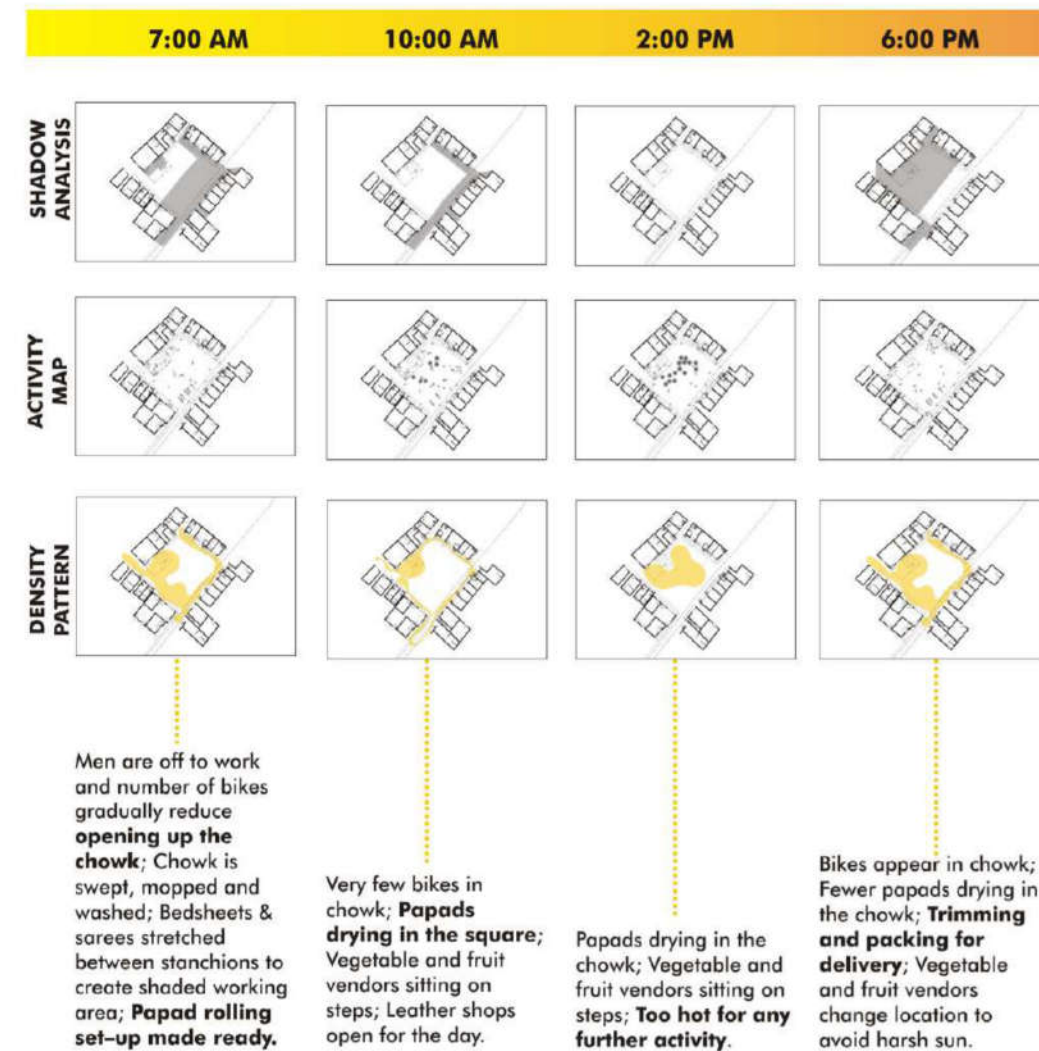


The graphical floor plans illustrate how the inhabitants would improve their houses here at the Hanuman Chowk – within their budgetary limits and spatial imaginations. The square's spatial print remains – however, the group of houses is organised anew, loosened up and supplemented by bathrooms and additional openings.

Furthermore, a ring-shaped development is placed around the apartments on the upper floors which serves as people's extended living space and provides good ventilation at the same time. A "healthy" roof landscape acts as communal space and space for urban gardening; the receives its own playground on the roof which should become a protective space especially for girls. Easily moveable panels define the women's work space during the day and protect them from the sun.

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The houses at **Hanuman Chowk** used to be only half as big and had only one floor like the other houses in the district. They were also only made from partially resistant materials which had to be replaced after every monsoon, like in all the examined places. Consequently, the people in harsh climatic conditions were occupied with earning their livelihood and with maintaining and renewing their house which went along with the annual cycle: monsoon – dry period. Mainly the male residents slept directly on the square.

The Hanuman Chowk also served as additional sleeping space at night and became a 24-hour living space for the people. This has now changed due to the expansion of the houses and the relocation of life to the insides. Now, all houses are locked at night and the Chowk remains unused for a few hours. Renuka's house unites all spatial functions in a room. Four people share a living space of about eight square meters, where everything happens. There's no space for intimacy.

Life at the Hanuman Chowk has changed during the last 10 to 15 years: Living has become a more personal, self-contained process that mainly occurs within one's own four walls. For the young generation like Varsha, the living room and the connected living space don't concentrate as strongly around the square: Two generations ago, there were leather workshops and the inhabitants' walking and living radius was more focused on the square for economic reasons. Today, the male inhabitants' professional centre of life mainly plays out at work places further away.

Women and children keep the Hanuman Chowk lively during the day – as market women, housewives or women. Like in all the examined places, the female inhabitants still spend most of their time close to their apartments and only travel short distances within their neighbourhood. In case the production decreases during the next years as the daughters will choose different jobs than their mothers, the square's special spatial quality will be upheld: Their great-grandparents and grandparents have created this special spatial and social quality.

The square gives the young and the old an identity and emotionally ties them to the "home Hanuman Chowk".³⁷² Hence, the square should be carefully, in small steps of structural improvements, put into the context of an emergent and modern urban society. Through affordable interferences on a micro-level, the Chowk can gently develop into a spatially healthy neighbourhood – embedded in a modern urban middle class. It is necessary that the city administration takes over the formal act of responsibility of a functioning infrastructure and its maintenance.

Varsha's house indicates in which direction the spatial structure at the Hanuman Chowk could move. The language of her house reflects the demands of a new, modern society within Dharavi: For them, their life plays out in their house or in the city. Her grandmother, for whom the square has become more important due to her limited mobility, contrasts this: The Hanuman Chowk is still her living room, communication space, source of her memories and part of her identity which has its origin in the village



DHARAVI: PLACES AND IDENTITIES

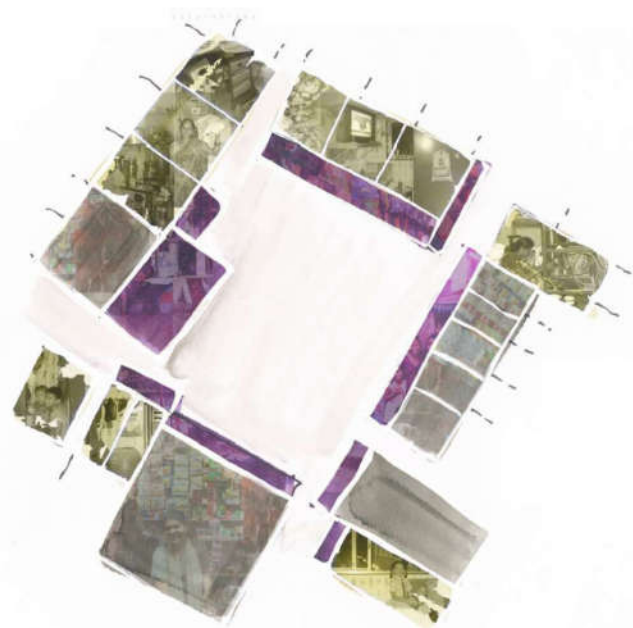
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LEARNINGS FROM HANUMAN CHOWK



Extended Indoor Space
Bath / Mori
Kitchen Space
Community Space / Balwadi
Semi Public Space

Current state of Hanuman Chowk



Private
Commercial / Balwadi
Semi Public Space

The sketches on this page and the next pages offer a schematic illustration of a possible redesign and a gentle reconstruction of the Hanuman Chowk in the sense of "architecture without architects".



Private Space
Very Private Space - Sleeping
Bath
Kitchen
Semi Public Space
Community Space / Balwadi

GROUND FLOOR PLAN

SECTION



The kitchen area takes up 50% of the room (gas stove, cooking utensils, etc.). There aren't any windows; in this case, a small ventilation opening and the entrance door are the house's only openings. As mentioned before, the drying of the loaves happens in the house during the rainy season:

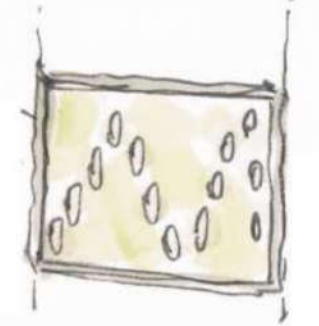
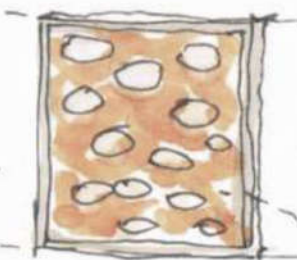
Then, the mobile stove and the big basket with a diameter of one meter dominate the inner space and take up the whole living space. Hence, the platform placed in front is even more important.

The bathroom (4 square meters) was built in next to the open kitchen block about eight years ago and has since simplified the hygienic conditions especially for the four women of this three-generation-household.

The furniture follows a western concept of living. It is the expression of a new modern middle-class way of life in Dharavi whose inhabitants have built their wealth within three years, starting from nothing. Varsha's grandmother, a woman, was the one who helped make the family's formerly small house what it is today.

LIGHT
PANELS WITH
PATTERN.

SEMI-
TRANSLUCENT



DHARAVI: PLACES AND IDENTITIES

An architectural-sociological survey of five selected places within the informal settlement in Dharavi, Mumbai

POTTER'S CHOWK

The examined square is located in one of Dharavi's oldest districts, the potters' district, and lies about 100 meters away from 90 Feet Road. In contrast to the busy main road, a walk through Kumbharwada feels like a walk through a traditional village in Gujarat: Suddenly, everything is very quiet. Since two generations, about 18 families from Gujarat have lived here together and share the square as playground, living room and work space.

The first potters arrived in Dharavi about 100 years ago and belonged to those communities that settled down as a homogenous employment group, like the öshers and tanners: The port in former Bombay had been expanded since 1912 which made a connection over the sea between Gujarat and Maharashtra possible. For that reason, between 150 to 200 potter families from Gujarat arrived in Dharavi during that time. Another important reason was that the soil around Dharavi was highly suitable as raw material for pottery.



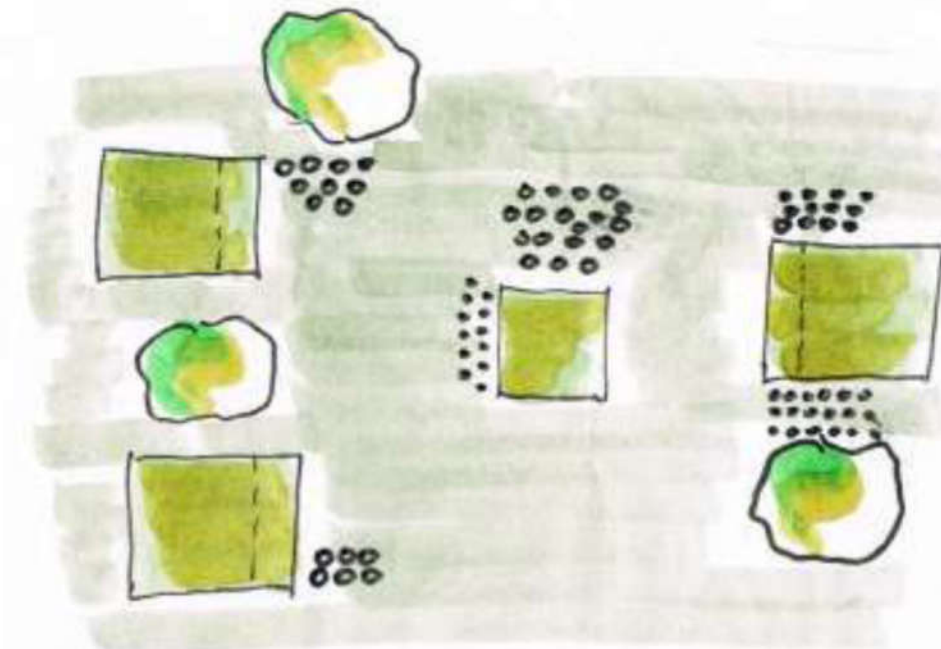
Potter's Chowk location



The neighbourhood around the Potters' Chowk

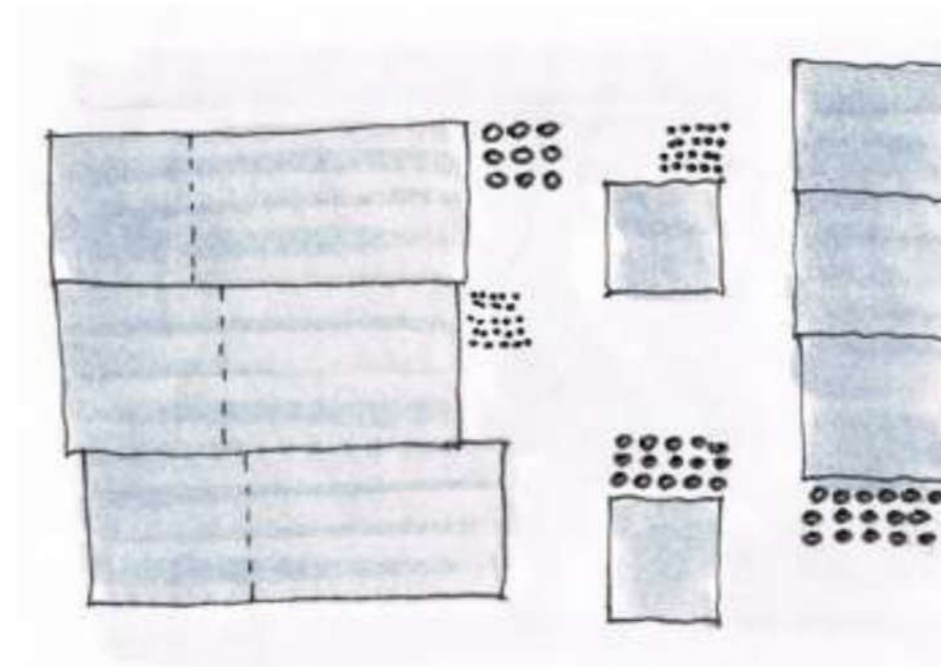
Phase 1900-1932: Set up

Schematic illustration of the structure: The first houses developed around today's square, their entrances were opposite each other. In the square's centre and in front of the houses, there was a small oven which was shared by the potters.



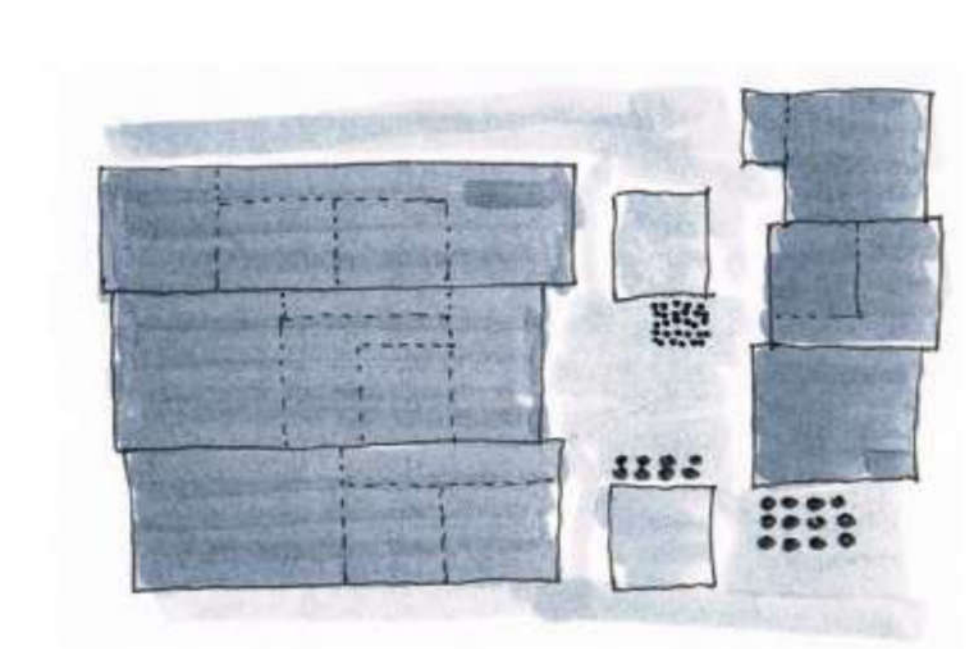
Phase 1932-1980: Reconstruction & Expansion

After the fire, the houses were built in pakka-style: The walls consisted of a construction of wooden frames which were coated by corrugated iron panels out of concrete plates.



Phase 1980-2000: Modernisation/Densification

Schematic illustration of the consolidation and modernisation: In the 1990s, the square densified more as slowly, migrants from other parts of India also moved there and started working in other professions.



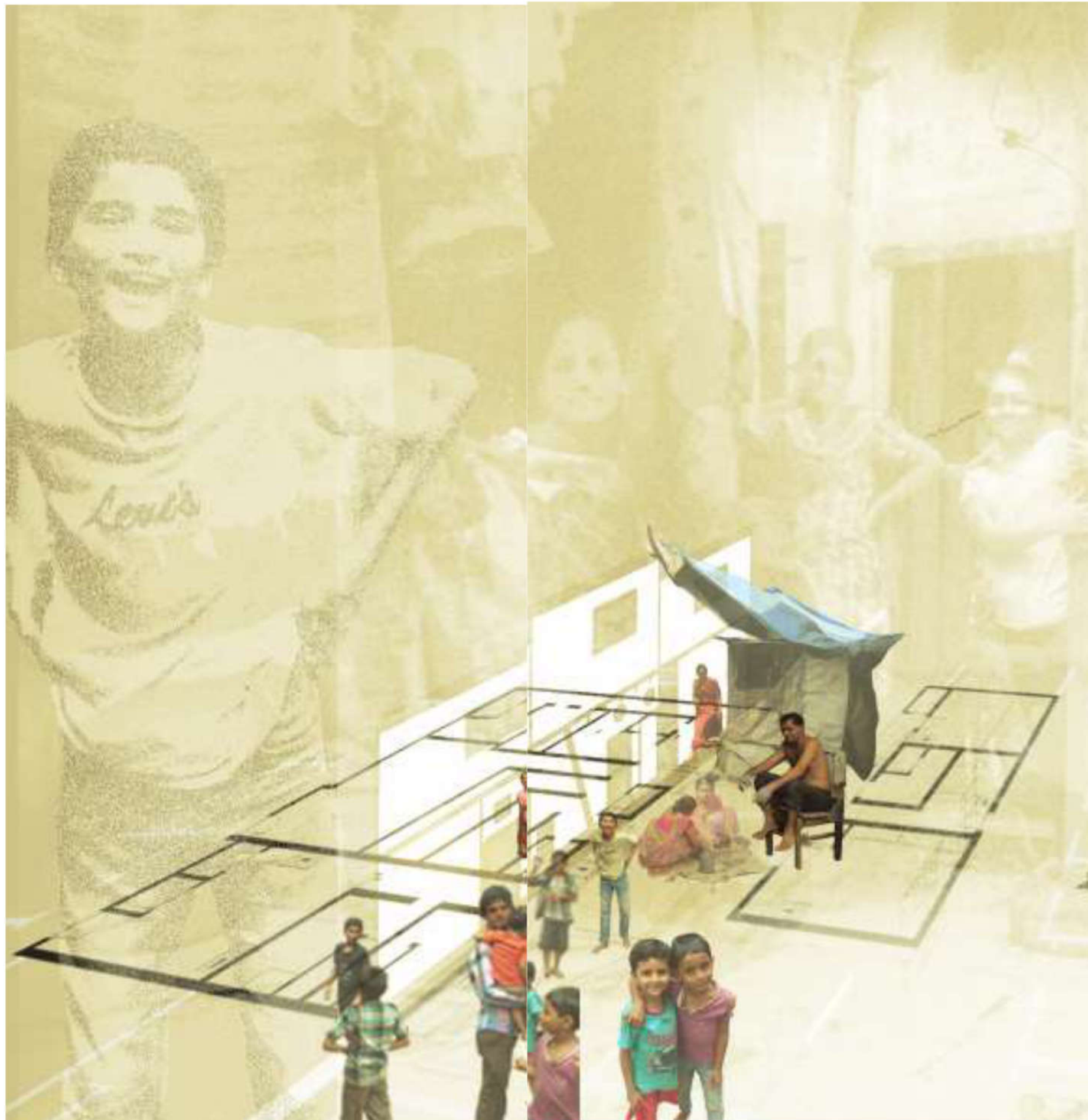
Sociological change of Potters' Chowk

Schematic illustration of a house's structural development at the Potters' Chowk.



DHARAVI: PLACES AND IDENTITIES

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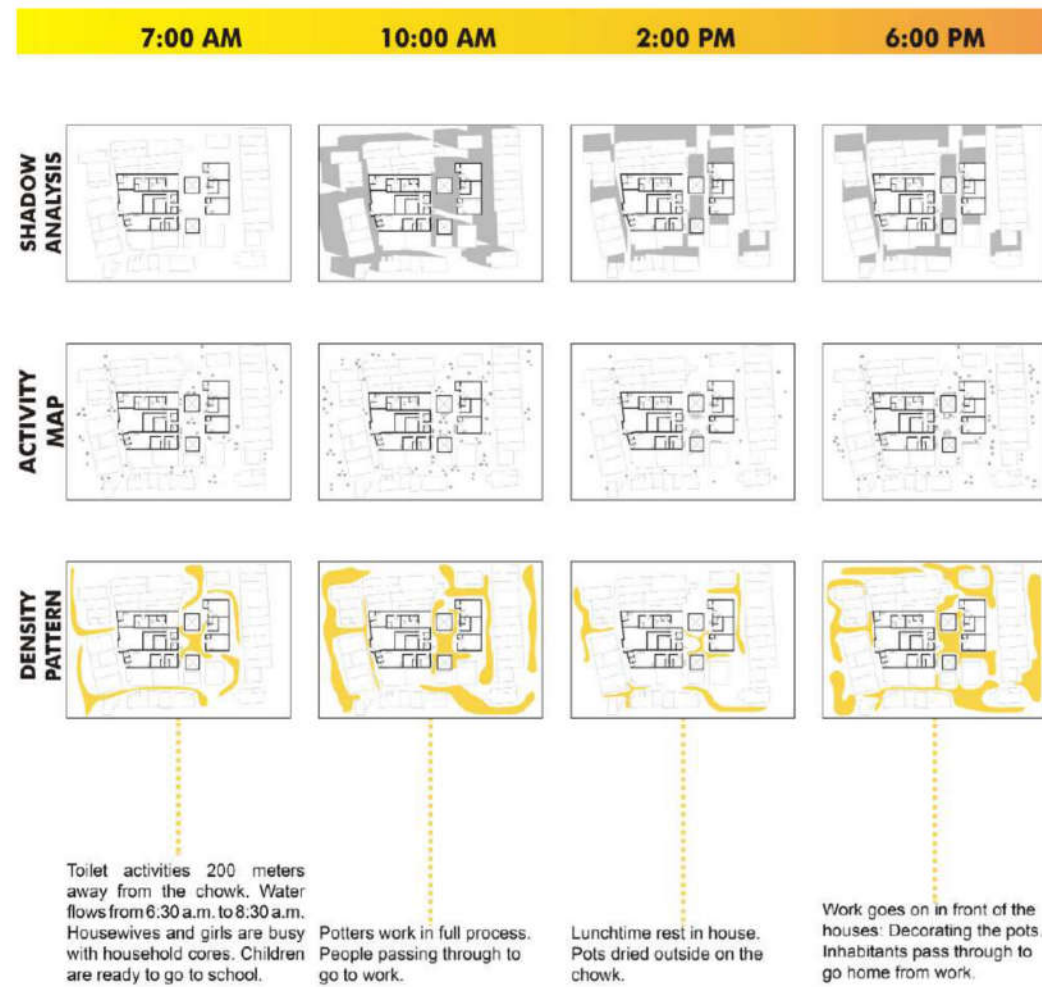


The potters' houses' floor plans are structured in several zones, those directly at the 90 Feet Road include a public area facing the street which is an accessible business zone for the customers. The area for living and sleeping for all family members is in the middle and inner zones. During the day, this area turns into a working and storage space. It is only laid out with mats at night and thus becomes an intimate zone for sleeping where everyone has their own fixed place on the floor. The house's backside is the work shop area with short distances between the kiln and the workplace. The part in the back is either next to a small square or stands parallel to the next row of houses – like in the case of the examined Chowk. All houses on the Chowk follow an adapted typology as they are parallel to 90 Feet Road in the second row. They don't look out on the main road, but to a narrow road which is the backside of a parallel row of houses.

The "washing street" is located there, which includes a small door opening and a water connection for the dishes and the laundry. A house on the square used to be a well-ventilated, open and long building with a length-width relation of 8:3. It united all functions under one roof. The innermost room of the oldest potter family at the Chowk is located in the middle of the apartment. It's still the couple's work space and bedroom and is also completely dark during the day due to the extensions of other houses around it. Furthermore, the house was extended and connected with stairs; their son and his family live on the upper floor, he only helps his family with their work at the weekends. Despite the darkened rooms, the natural ventilation (still) works relatively well thanks to the open square. The doors are always open during the day, as the potters believe that Laxmi, the goddess of wealth and prosperity, walks on the paths and blesses their households if they keep their environment clean and their entrance doors open. The inside of a typical potter's house was divided by a long corridor as additional development zone, due to the increased need for space and the connected spatial densification in the whole potters' district.

DHARAVI: PLACES AND IDENTITIES

An architectural-sociological survey of five selected places within the informal settlement in Dharavi, Mumbai



The wide canopy, approximately 70 cm, is a significant spatial element under which the owner processes the raw material every day, sitting on the step in front of his house. The kiln is two steps away and situated directly in front of the house's entrance area: There is a narrow public passage for pedestrians between the kiln and the house. The living area is mainly used as a storage space for the finished products, but also for further work steps that have to take place on a protected space. Hence, the painting, counting and packaging of the clay containers takes place on the apartment's floor.

The whole family is highly rooted in their religious values. Hasmukhbhai's and all other residents' personal house temple is their referential space to the temple in about 200 meters' distance: It takes up half of the wall space next to the kitchen area. Everyday while cooking, Dakshaben puts a small gift for her "personal" god in her temple. She has internalised this ritual which has been part of her daily life since her early childhood.

The inner room size has decreased by about 30% due to the densification of the last decades and is also used differently by its inhabitants. Hasmukhbhai and his wife are most likely the last generation living in Dharavi whose main profession is pottery.

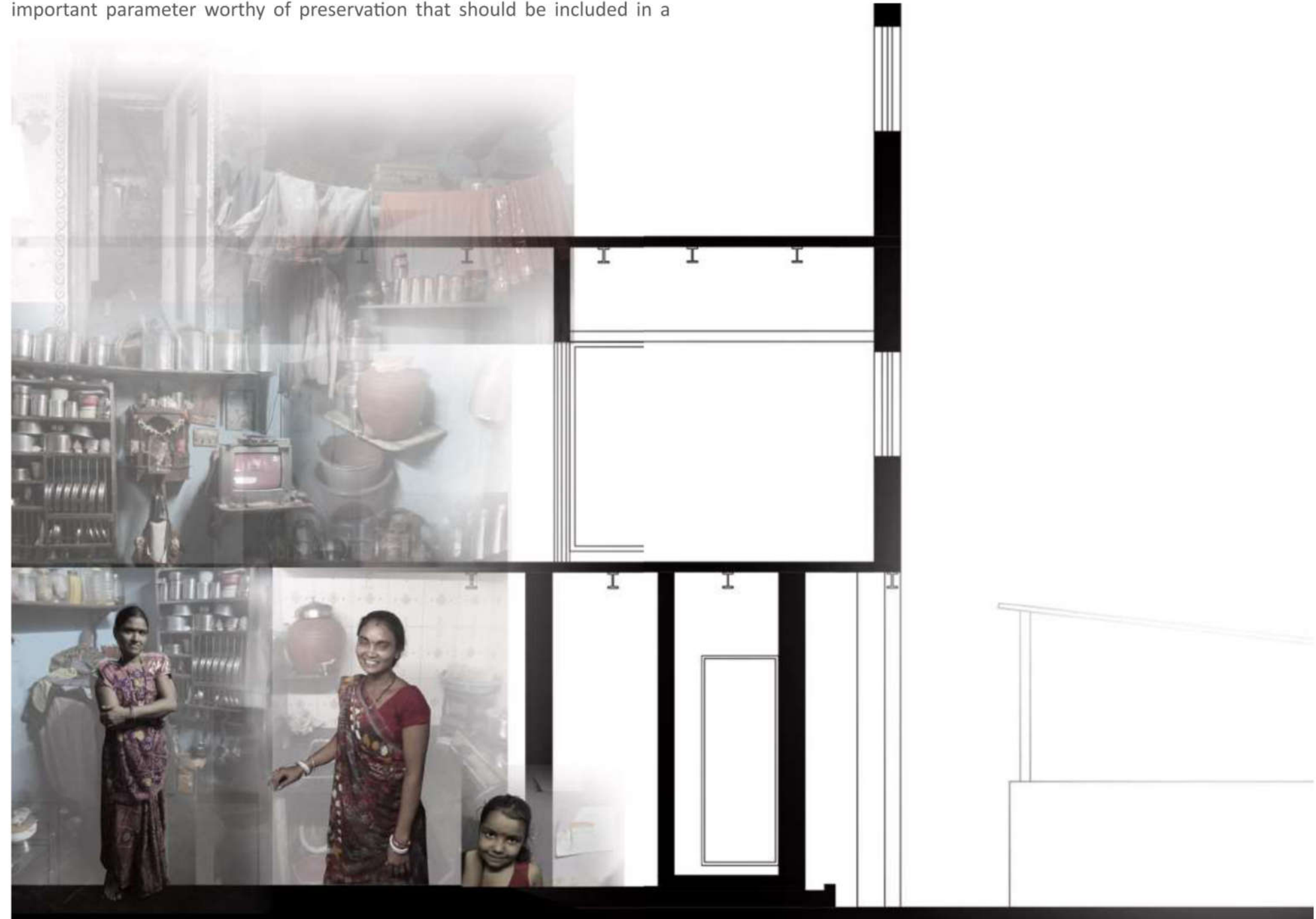
Qualities and potentials

The spatial quality created by the people themselves mainly lies in the manageable size and multi-functionality of the square: In the evenings and during periods of rest, the space interacts with the different steps, level jumps and elevations as furniture of a living room that can't necessarily be found in apartments. Togetherness takes place on the square; sleeping and eating is a personal and familial act within one's own four walls.

The steps and platforms in front of the houses, that can become wider platforms and thus communication spaces for their inhabitants, serve as an important parameter worthy of preservation that should be included in a

useful spatial concept of rehabilitation projects. Roofed and stair-like tiered platforms could be used as space for communication and learning especially by the younger inhabitants.

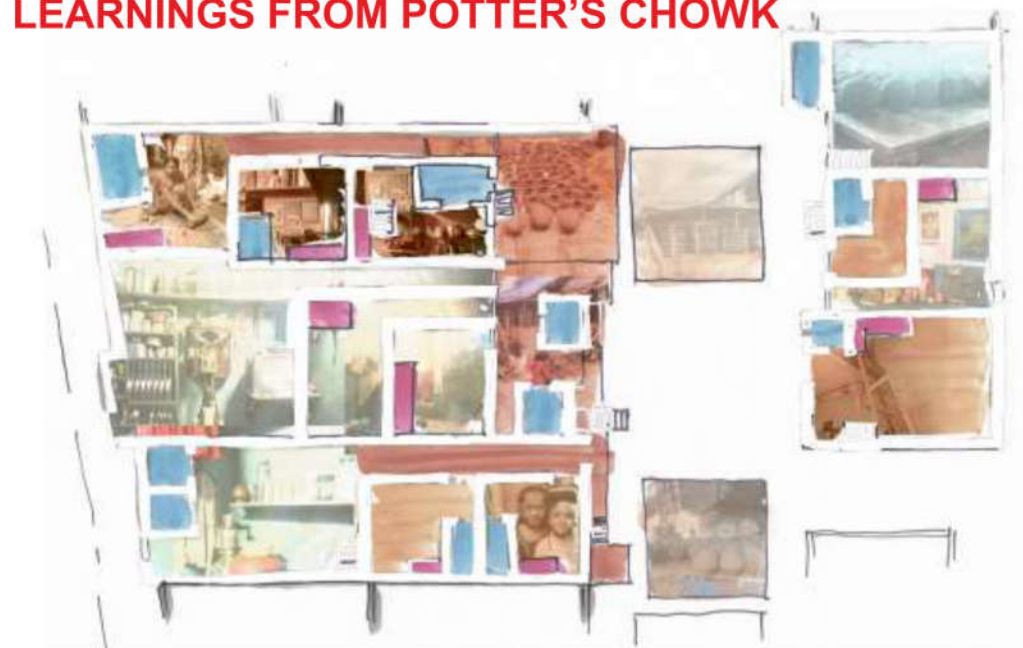
If the occupational profile and the changed spatial demand connected to it will change with the youngest generation in all the examined places, these areas created by the people need to be considered. Like at all examined places, these created micro-spaces contribute significantly, as furniture, to the well-functioning communication amongst the people living here: The square doesn't only have the dimensions of a living room, but it also is a living room for the residents.



DHARAVI: PLACES AND IDENTITIES

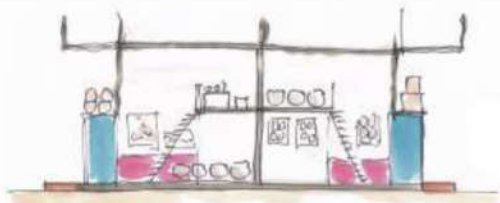
An architectural-sociological survey of five selected places within the informal settlement in Dharavi, Mumbai

LEARNINGS FROM POTTER'S CHOWK

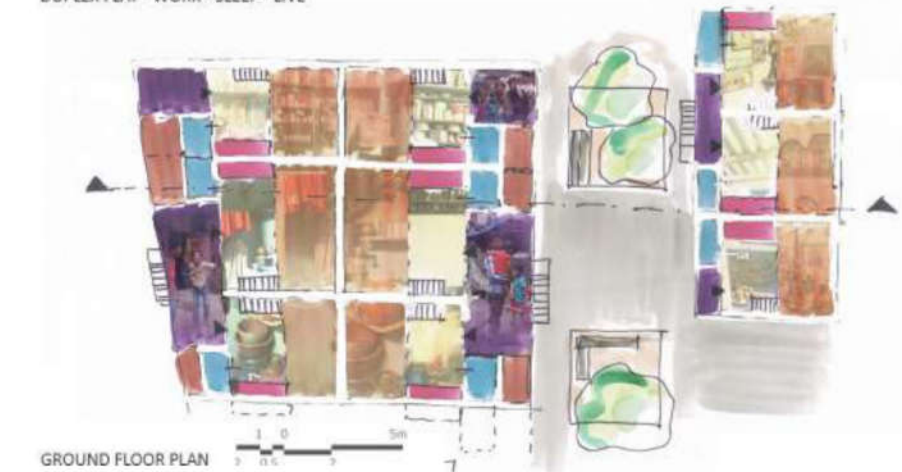


Existing Living Space
Existing living + work space
Existing workshop
Bath
Kitchen
Semi private space

GROUND FLOOR PLAN



DUPLEX FLAT - WORK - SLEEP - LIVE



Learning from the Potters' Chowk: The sketches on this and the next pages show a schematic illustration of a possible spatial transition at the Potters' Chowk: The "spatial prints" of the original floor plans remain. The roofs become a communication space for old and young.

Private space
Duplex - very private
Kitchen
Bath
Semi private / Workspace
Podium - to site on



SECOND FLOOR PLAN



SECTION

Possible measures of improvement

1. "Breathing roofs" As there are hardly any green spaces, especially in Kumbharwada, "breathing roofs" could be created, which are "planted" into the roofs in the potters' clay containers and filled with plants: Thus, additional space is created which acts as an atelier as well as communication space.
2. Densification due to extension. It is assumed that the Chowk will be more intermixed socially – other families and businesses are going to move here, like in the described case of the Muslim migrants in the workshop. The houses could be extended by another storey and become duplex apartments / extended living areas for one family each. The additional apartments each receive a bathroom and toilet that look out to the backroad.
3. Connecting traditional patterns with modern demands. In about 10 to 20 years, the next generation will consist of inhabitants who actively take part in the social and economic happenings of the megacity Mumbai.