

The Production of Space and Place in Informal Settlements: *A Case Study of Mukuru Kwa Njenga, Nairobi*

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Abstract

The paper seeks to understand how the space and place are conceived and used in Nairobi's informal settlements. Using the case of Mukuru Kwa Njenga, the study explores three questions around the production of space and place; first, whether in informal settlements there exists abstract or conceived space, second, whether the space responds to a structure of power in the area, and third, how do people use day by day the different categories of space (public, semi-public and private). Fieldwork was carried out in seven 100 x 100m sample areas across the settlement. Data was gathered through structured and non-structured interviews and focused group discussions. The use of space was registered through structured observation of the spatial characteristics, activities and socio-spatial interactions at three different periods of the day: morning, afternoon and night, in different locations. The study finds that, informal settlements indeed have internal structures that resemble the formal city, although in a less systematic way. Ownership of resources and the internal structures of power play a major role in the conception of space into an informal functional space. But opposite to the formal city, there is a large scope for the free action where creativity is reflected and retained, and where the structures of power rarely intervene. The study concludes that understanding the spatial dynamics in the informal settlements and creation of flexible spatial solutions that allow low income people to have a space and place in the city may be the way towards an inclusive transformation. The study recommends multi-functionality of urban space for low cost income dwellers.

Keywords: Informal settlements, place, slums, socio-spatial dynamics, space.

INTRODUCTION

Rapid urbanization in developing countries is challenging governments and professionals to rethink urban development strategies and policies of 21st century. In a world where an average of 30% of the urban population lives in informal settlements, 61.7% in Africa and 54% in Kenya (UN-Habitat, 2015), it is urgent to understand these large parts of the cities, and also to explore beyond the overwhelming problems and weaknesses of the informal settlements in order to take advantage of their strengths and opportunities. Informal settlements refer to unplanned settlements, not authorized by the state while slums refer to dwellings which have become substandard through construction, age, subdivision or neglect and which generally have low to negligible levels of service. Depending on context, an informal settlement may or may not have slipped into the category of a slum. Slums and informal settlements are often concentrations of

urban poverty, yet not all those living in informal settlements and slums are poor (Jones, 2017).

Though they are often seen as dark points in the cities of many southern countries, informal settlements have become indispensable urban areas that provide housing, informal services, facilities and businesses opportunities for a broad urban population (Ghafur, 2001; Nijman, 2009; Roy, 2011). Indeed informal settlements are places of intense social organization and economic production (Nijman, 2009). While this assertion does not support the existence of informal settlements in the poor conditions they are today, it recognizes the added value they can offer to the formal city if transformed preserving their social, cultural and economic value.

The concepts of space and place are closely interlinked. The geographer Tuan (1977) defines

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place as a humanized space, as a space that we know and is familiar to us; as a space with attached values whatever the scale it is. Places embody cultural values, expressions of identity, memories and history that gives character to a continent, a neighbourhood or to a single room and create a sense of belonging (Mehrhoff, 1990). This study examines how space and place is produced in the informal settlements using a case study of Mukuru Kwa Njenga in Nairobi.

Informal settlements in Nairobi

Nairobi city with its current population at 4.4 million people (KNBS, 2019) had over half of the urban population living in over 180 different informal settlements scattered throughout the city in 2009. According to UN-Habitat (2010), this population was occupying just 5% of the city territory, which shows the extreme spatial urban congestion and overcrowding in these areas.

Majority of informal settlements in Kenya, like in the international sphere, are not recognised by their respective governments. Most of them are just blank spaces in the official maps, as if they were completely empty places. However, it is well known among those that have ever interacted with informal settlements that they are incredibly rich multifunctional spaces full of social and economic life (Neuwirth, 2006; Nijman, 2009; Roy, 2011). This lack of recognition by the governments still leads to general deprivation of human rights based on the lack of basic services supply like water, sanitation, electricity or solid waste collection. Yet, it is worth mentioning that the Government of Kenya's attitude towards informal settlements has progressively changed from the eradication through massive evictions in the '80s and '90s towards later pro-poor policies, such as slum upgrading programmes (Muranguri, 2011; Githira, 2016). However, absence of basic services persists and selective eviction is still a lingering threat; especially on public spaces earmarked for development and contested private land.

Despite the important role in the urban areas played by informal settlements as places and slum dwellers as urban actors, government upgrading programmes are not achieving the challenge of integrating informal settlements in the city. For example, the Kenya Slum Upgrading Programme

(KENSUP) implemented by the Kenya Government and UN-Habitat since 2004 favours building of high-rise blocks in place of in-situ solutions which appears incompatible with the way of life practised in the informal settlements (Huchzermeyer, 2011; Muranguri, 2011). The misunderstanding of informal settlements in terms of spatial reality has led to a failure in addressing real spatial needs of slum-dwellers, which often leads to gentrification processes.

Mukuru Kwa Njenga

Mukuru Kwa Njenga is one of the 180 informal settlements of Nairobi inner city. According to KNBS (2009), it had a population of 66,500 people living in less than 1 km². However, estimate from community based enumeration done in 2009 was much higher at 132,700 (CURI, 2012). **Figure 1** shows the location and village boundaries of Mukuru Kwa Njenga. Like in other informal settlements of the city there is no formal infrastructure and service provision in Mukuru Kwa Njenga, so majority of slum dwellers lack safe running water, sanitation and garbage collection services, resulting in constant disease outbreaks.

Even so, the settlement has many things to offer to the city. Its vitality and vibrant economic life suggest an interesting starting point towards urban change (**Figure 2**). Almost any good or service one needs can be found in the broad spread of businesses along the settlement, although of very low standards, informally provided. The rich urban spatiality combines all kind of imaginable functions and activities in the same place, just like it happens in other informal settlements around the world (Ghafur, 2001; Davis, 2006; Neuwirth, 2006; Nijman, 2009). Opposite to the formal city, the urban spaces in the informal settlement are dominated and managed by the inhabitants, who are the main producers and users of the space.

This article aims to expand knowledge on the production of the space in informal settlements feeding from the various experiences in different regions in order to culminate with the study of the conception and use of the space in informal settlements in Nairobi through the empirical case of Mukuru Kwa Njenga informal settlements. This research tries to study how the space is used and shaped and how place is conceived by the society

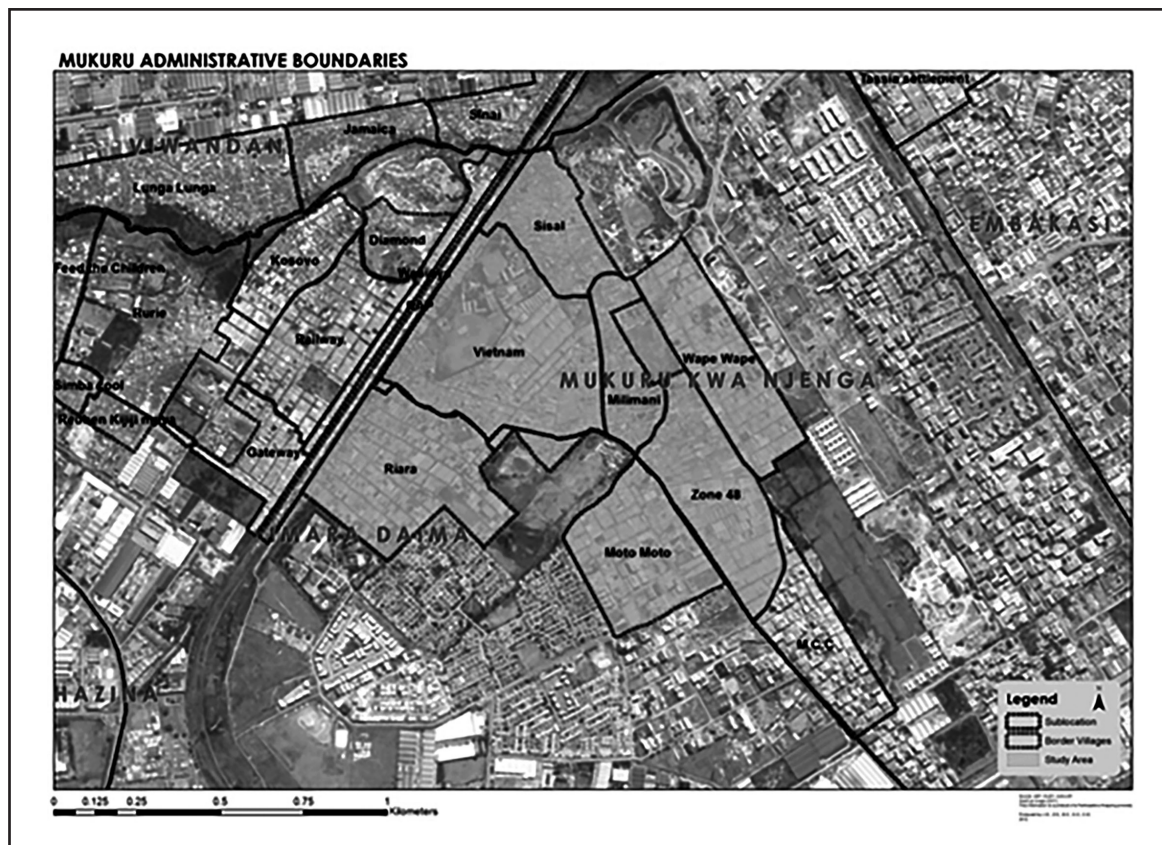


FIGURE 1
Mukuru Kwa Njenga
Source: CURI 2012



FIGURE 2
Slum vitality
Source: Fieldwork 2016

in the informal settlement. This case study has its background the on-going work of the Centre for Urban Research and Innovations (CURI, 2012) for the Mukuru Kwa Njenga Slum Upgrading Project, since 2012.

THEORY

The Production of Space and Place

The space and place in relation with the processes

of socialization in the formal city has been theme of study for decades. Renowned authors like Lefebvre (1974), Tuan (1977) and Foucault (1980) have developed theoretical works on social spatiality and place-making processes. They were followed by De Certeau (1984) and other Marxist spatial theorists like Soja (1996), Harvey (1993), Castells (2010), Wallerstein (2004), and more recently by Urry (2003) and Creswell (2009); among others.

At the urban scale the growth and dynamics of urban transformation in informal settlements have also been fields of study among geographers, sociologists, urban planners, architects and other disciplines especially in Latin America and Asia. They include studies developed about the spatiality in informal settlements (Nijman, 2009) and on the use of the space in informal settlements related to particular fields like the use of the street (UN-Habitat, 2011), the use of the open spaces (García, 2011), the use of the neighbourhood in low income areas (Fox & Brumley, 2002), the use and production of space related to water and

sanitation (Hossain, 2012) and related to gender home-based work (Ghafur, 2002). These works have brought to light how particular spaces in informal settlements are used and produced themselves or in relation with economic activities.

However, there is a gap in knowledge about the comprehensive and integrated production of the space and place in the informal settlements; an overview that supports the understanding of how these complex systems are conceived and used in the informal settlements of today. A better understanding of the socio-spatial dimension of the productions and use of the space and place in informal settlements may help to understand their potentialities as urban players and formulate urban policies and slum upgrading programs closer to the socio-spatial needs of slum dwellers thus contribute to the successful transformation and inclusion of informal settlements in the city.

Space and place in the formal city versus the informal city

The space

The first general question that arose from this study is whether the theorization of the production and use of the space in the formal city can be applied to the informal city, and more specifically to the space produced in informal settlements. The late 1960s were years of transition regarding research in informal settlements that began to leave behind (yet not at a policy making level) a time in which informal settlements were seen as dark spots in the city, as no-places, as focus of problems that prevented the city from development (Lewis, 1959; Clinard, 1966; Juppenlatz, 1970). It is then when informal settlements started to be seen by some scholars as possible solutions for urban demands, as effective systems of self-governance and self-organization, as alternative places that covered low income housing deficit and moreover spaces full of economic activities and social life (Mangin, 1967; Turner, 1968; Laquian, 1969).

The concept of lively space was introduced in literature by Michel Foucault. Foucault (1980) criticises that the space has been treated as the dead, the fixed, the undialectical, the immobile, while it is in continuous movement and change. In the same decade, Lefebvre opens the field of discussion on social spatiality with the spatial

theory of space as a social product in the era of capitalism (Lefebvre, 1974). The distinction between abstract space (the represented space of technocrats, the space as a tool of power of the authorities to manage and maintain control) and the social space (the space produced by people) is the theoretical basis on which other spatial theorists and scholars build on. In the informal settlements, characterized by self-organized urban systems, space is not managed by the authorities and structures of power of the formal city, but is based on a self-produced process where no official authority is involved. However, internal structures of power may play a role in the production of the space, which is the focus of this study.

Other authors whose works are built over Lefebvre's theory have developed theoretical spatial analysis that could perfectly be applied to the spatiality of the informal city. Edward Soja does a distinction between space as contextual given [what Lefebvre calls natural space], and socially-based spatiality, the created space of social organization and production [second nature or Lefebvre's social space] (Soja, 1989). Soja (1996) introduces the notion of third space, a holistic conception of spatiality as confluence of society, geography and history where the first space and the second space live in mixture.

The place

The concept of place addresses very different scales ranging from regions and countries, to territories, cities and neighbourhoods, households and small significant places like a room or a part of a room. Tuan (1977) defines place as a humanized space, as a space that we know and is familiar to us, as a space with attached values whatever the scale it is. Places embody cultural values, expressions of identity (Mehrhoff, 1990), memories and history that gives character to a continent, a neighbourhood or to a single room (De Certeau, 1984) and create a sense of belonging, what confers a location the significance of place. In other words place is a meaningful location (Creswell, 2009). This means, as Harvey (1993) stresses, that place (...) is like space and time, a social construct.

Bringing the discussion to the informal settlements most of the informal settlements worldwide are indeed very well defined territories with attached

values and meanings both for people staying in the informal settlements and outsiders. Thinking about place as a territory, as it happens in informal settlements, may be a sign of collective identity, a sign of a group (Nijman, 2009; Rao, 2006). But it is also a symbol of power demonstration and control that is connected to the need of protection (Cresswell, 2004). The different neighbourhoods have their own rules and identity, what stresses their strong sense of belonging. Likewise the public and private spaces are, like in the formal city, humanized spaces with memories, history and attached values.

RESEARCH METHODS

The current study applies a multidimensional tool of analysis that builds on different theoretical approaches on the production and use of the space and place. The main framework for the empirical analysis is built over Lefebvre works, and incorporates related approaches by other scholars such as De Certeau (1984), Tuan (1977), Guattari (1987), Foucault (1980), Harvey (1993) and Soja (1989) in a parallel way, as well as the contributions that other scholars have brought to the field of spatiality in informal settlements.

The fieldwork research is divided in Lefebvre's two main concepts on the production of space with the added notion of place that have their parallelism in the thoughts of other renowned scholars. While abstract space is viewed conceptually as the represented or conceived space, social space and place is the space shaped by people and the conception of place.

The abstract space: represented or conceived space in informal settlements

In general terms no formal urban planner, architect or formal authority is involved in the production of the informal space, as it happens in formal urban planning. However, the conception and creation of space in informal settlements may respond to a social hierarchy and internal structures of power that are the focus of this section of the study. Building over Lefebvre's theory on the production of space, it is said that in informal settlements there is what Lefebvre names represented or conceived (abstract) space, or what Soja calls second space. And if there is, does the production of the abstract space then respond to a structure of power within

the study area like it happens in the formal city?

The social space and place: representational or lived space and the conception of place in informal settlements

This section of the study is based on the everyday life approach developed by De Certeau (1984) and underpinned by Lefebvre (1974), Tuan (1977) Soja (1989), Harvey (1993) and Cresswell (2009). Three different categories of lived space were analysed observing the narrative of everyday life in the study area. Public space is understood as street and open spaces accessible for anybody regardless of religion, race, ethnic group, culture, gender or age. Semi-public space is viewed as public spaces used for private purposes, such as kiosks, street vendors, shops over the road and extension of businesses or households over the public space. Private space are spaces that are privately used as households, private businesses, home-based businesses or private facilities. The last question posed by Lefebvre is how do people use day by day the different categories of space (public, semi-public and private) and what is their contribution to the production of the space and place?

The fieldwork was carried out in seven 100x100m sample areas across the settlement selected according to criteria of economic activity intensity, year of creation (thus urban layout) and ethnic predominance in Mukuru Kwa Njenga between February 2012 and October 2012.

Data collection about the conception and use of the space from the seven sample areas was gathered through semi-structured and non-structured interviews, structured observation methods and mapping. Interviews and discussions with the community leaders, elders, households heads, businesses people and pedestrians selected according to systematic random methods were held over eight months of research from February 2012 with a team comprised of four research assistants from the University of Nairobi, six guides from the different villages previously trained in the data collection, two local leaders and two key informants.

The abstract space was analysed through the study of the conception of space from the settlement internal structure. Semi-structured interviews and

informal discussions were conducted, in different times along the eight months of research, with Mzee Njenga (elder and founder of the settlement), with the seven chairmen and chairladies of the villages, with five youth leaders and five structure owners. Informal discussions with several key informants, e.g. Muungano wa Wanavijiji, research assistants, representatives of self-help youth groups and women groups, complemented the information gathered.

The social space or the use of the space and conception of place was registered through structured observation of the spatial characteristics, activities and socio-spatial interactions developed in the public, semi public and private space in relation with the physical configuration of the different locations captured by mapping, but also through interviews to households heads and business people in the case of the private space. Activities and spatial-social interactions were studied at three different hours of the day (morning, afternoon, night) in different locations of the selected sample areas.

RESULTS AND DISCUSSION

The abstract space: conceived or represented space in the informal city

It is observed that the production of space and place in Mukuru Kwa Njenga responds to a way of urbanization characteristic of self-organized communities in urban areas, to a particular spatial and territorial order. The urban layout in the different neighbourhoods or villages reflects the historic moment they were created, the social structure complexity of the self-organized community in each stage and its interrelation with the spatial context, what is connected with Soja's tripartite conception of spatiality (Figure 3). As rules were set and more defined structures of power were created in Mukuru Kwa Njenga, the way of informal urbanization and expansion changed too.

At the beginning

In 1958, when the first inhabitants settled in what today is called Mukuru Kwa Njenga, the natural space was transformed by the settlers into a social space in an unplanned and anarchic manner. By

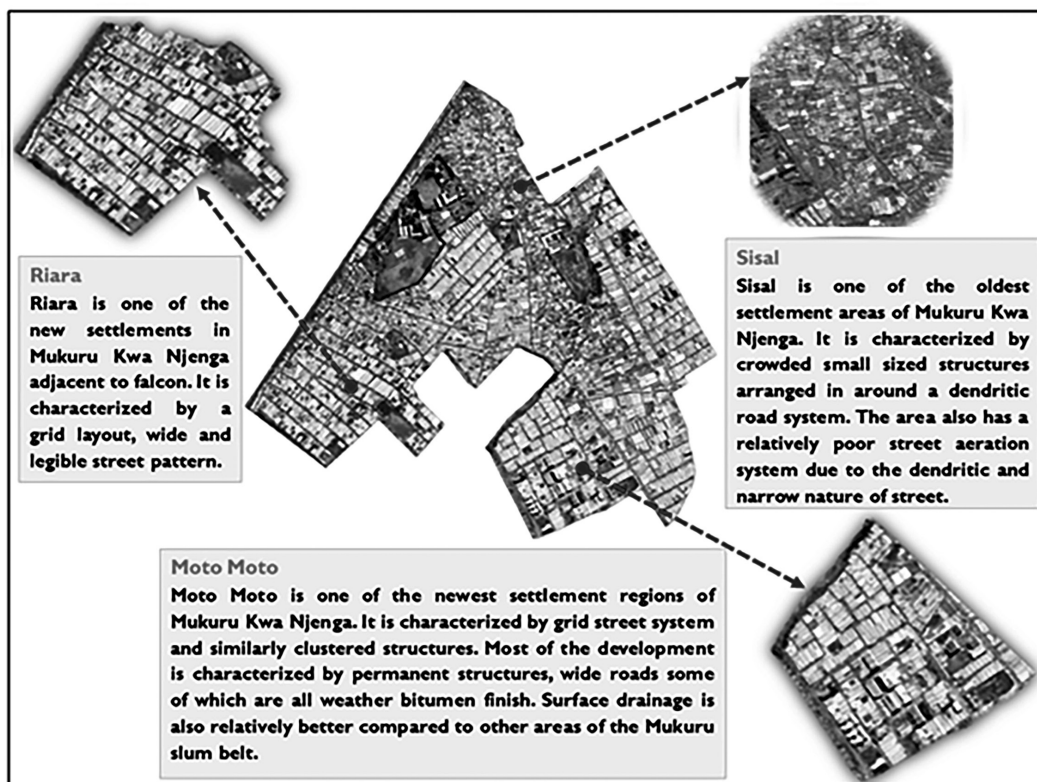


FIGURE 3
Settlement morphology in Mukuru Kwa Njenga
Source: CURI 2012

that time there was no control over the land, one could build her or his house wherever one desired. According to Mzee Njenga, who is a founder of the settlement;

People were just living here, there were farmers, pastoralists, workers [of the quarry]... There were no rented spaces(...) You constructed where you saw fit. (...) You would not be questioned by anybody. You just had to build close to other people because then there were many [wild] animals (Personal communication, February, 2012).

During two decades, the lack of control by the authorities, the small size of the community and the simple social structure led to an unplanned and anarchic urbanization where there was no need to set rules regarding the conception and use of the space. This, in hand with the need for protection from wildlife and the lack of economic and material resources resulted in a compact and dense urban layout. The absence of crime influenced the building materials adopted. People had no need to protect themselves from gangs, so they used that which was freely available and affordable materials for self-construction like cartons mixed with wood.

Change over time

When local government started to administrate the area, in 1969, things started to change. The posting of a Chief to control the area by the authorities led to a different way of production of the space. The unplanned way of urbanization then reflected the need to squat and build up in a rush, at night out of sight of the area administration. The result was close to the smooth space of (Guattari, 1987); an anarchic configuration based on people needs, organic, with no characteristic order, no centre and constantly fluctuating to adapt to the changing social and individual needs; a space representative of the free action (Guattari, 1987) where no figure representative of the formal structure of power was involved.

Mukuru Kwa Njenga grew rapidly between 1984 and 2000. Prior to 1981, the Nairobi City Council demolished slums in the area as they appeared. It stopped such periodic demolitions in 1981. In 1993 Mukuru Kwa Njenga had a population estimated at 20,200 (MATRIX, 1993), growing to 66,505 (KNBS, 2009). With the exponential increase of



FIGURE 4
Inside an informal settlement
Source: Fieldwork 2016

the population the slum became impossible to control by the area chief. To solve the problem different villages were created in 2002 as way of providing security and appointing leaders in each village. The settlement was divided into eight villages: Sisal, Milimani, Vietnam, Zone 48 North & South, Riara, Wape Wape, Moto Moto and MCC. A chairman, chairlady and youth leader per village were appointed to be in charge of the indoors issues.

As the settlement was hosting more population the social and spatial structure became more complex. The construction materials changed from cartons to iron sheets more so to prevent robberies, and structures were organized to host several houses under one sole roof (**Figure 4**). The price of construction rose due to the materials used and the figure of structure owners with economic resources loomed up to build households for rent. That, again, became the standard.

The conceived space nowadays

Nowadays before settling in an empty land, official permission is needed from the village chief and chairman. With an official approval (permit) in hand that allows the use of land, the need to build over the night ceased. The newer areas are planned and organized so to avoid land related conflicts, to prevent fires from the illegal wires used for power connections but also to optimize the use of the space. The inhabitants realized that the more organized the urban layout is, the more people can be housed.

With periodical assistance by surveyors, chairmen and youth leaders are the ones who nowadays

have the role of planning. In hand with the new planning methods the chairmen and the youth came up with rules so to reduce land related conflicts. A chairman, Mr. James Onsoti, reported;

Today one is not allowed to build everywhere. The space for roads has to be respected. If you want to build a structure or a kiosk you have to ask the chairman of the area for permission... In the case of a kiosk he has to approve that there is enough space for the other necessary activities to take place on the road. If he concludes that you are not allowed to build in a particular location and you do it anyway the kiosk will be demolished by the youth (Personal communication, February, 2012).

Structure of ownership and conceived space

Despite the conception of the space in informal settlements appearing to be for the welfare of the whole community, truly collective interests are hardly addressed. The urban space is now planned by the community leaders and plots allocated to people that can afford to build up a structure. This means that the ones with more economic resources have the power of shaping the space, and thus influence the living conditions of the entire society in the slum. Therefore private space, and by projection part of public space, is conceived as the structure owner wants, normally to collect the highest possible rent in the minimum space required. The typical housing design is 3x3 metres room configured in a layout of two rows of rooms with corridor in the middle in order keep security (Figure 5). The structure owner decides if there will be a toilet and bathroom inside the structure or not. The use of the rooms is up to people, for residential, businesses, private facilities or mixed use.

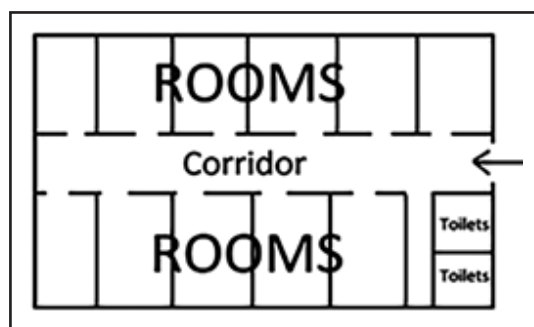


FIGURE 5
Typical floor plan of a structure
Source: CURI 2012

The structure of ownership in Mukuru Kwa Njenga and in other informal settlements in Kenya is a complex system with various layers. It denotes the power relations and wealth ranking within the settlement. The land owner is normally different from the owner of the structure and the household user (Figure 6). In Nairobi, the percentage of tenants among residents in informal settlements range from 83% to 92% (CURI, 2012). The production of the space in informal settlements in Kenya is intrinsically linked with this ownership structure and thus with the structures of power.

The fact that the structures in these low income areas are owned by a minority for economic purposes influences the production of the space in benefit to the powerful, putting aside ordinary people interests. Studies show that structure owners in Nairobi Informal settlements tend to belong to the higher income bracket and are well connected politically (Dave, 2009). There is a direct relationship between the production of the space and the structures of power in the informal settlements. The social structure and hierarchy in the informal settlements are linked to the power acquired through property, but in a symbolic way. For instance, to be a chairman or chairlady one is expected to be a structure owner, so the space making processes are also related to the internal structures of leadership and order. In turn the social structure and hierarchy in the informal settlements serves to undermine any attempts for slum upgrading. It undermines both internal mobilization and support for upgrading from within and any external intervention for upgrading due to vested interests.

The conceived use of the space

Whenever the structure is yours you can use it as you want, nobody will question you. This fact has deep relevance in the production of the space in informal settlements. Free use is what impregnates the settlement of creativity, vibrant economic atmosphere and dynamism; what allows the settlement to be shaped according to the needs of its inhabitants. The semi-public space, space over the road but allocated to kiosks and to the extensions of the shops and households, is conceived by people as the basic rules allow. They will build over the space to run their business with the agreement of the chairman. The conception of these spaces is thus mostly free but subject

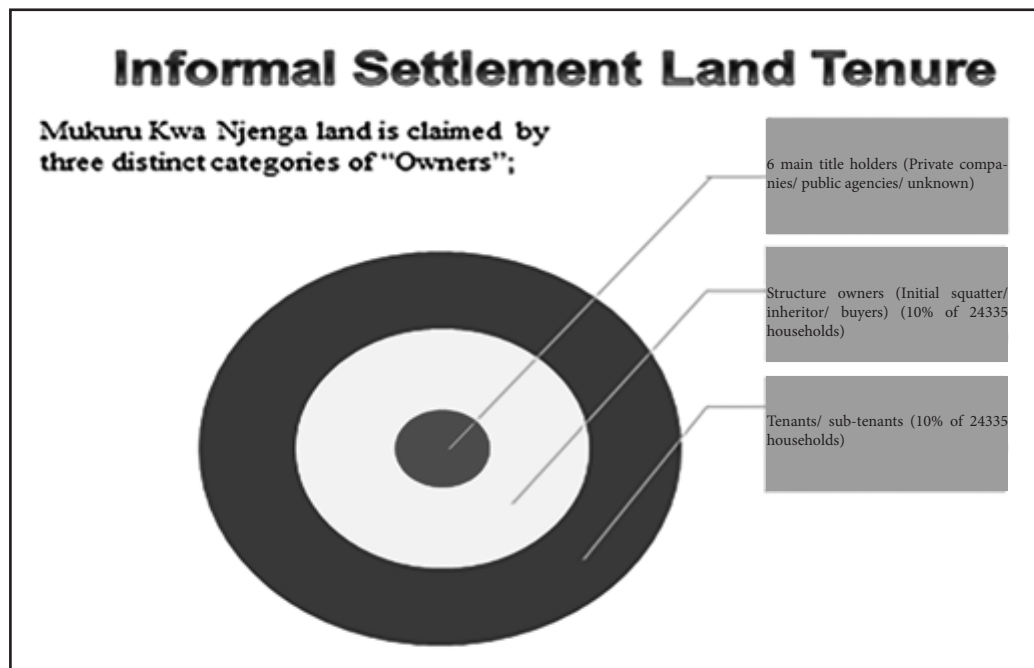


FIGURE 6

Structure of ownership

Source: Authors' archive 2016

to the internal rules of the settlement and the resources that can be invested. Currently it can be said that no formal authority is formally related to the conception of the space in the informal settlements. However, an informal way of abstract space linked to the ownership structure and internal power structures has emerged. There are no representations of the space per se but interests and domination behind the production of space. However there is still space for the free action, concept that will be developed in the following section.

The social space and place: lived or representational space and the conception of place in the informal city

The space shaped by ordinary people differs according to the use they apply to it, what drives the study to categorize the space: public space, semi-public space and private space. Like in other informal settlements around the world (Davis, 2006; Neuwirth, 2006; Nijman, 2009), the use of the space in Mukuru Kwa Njenga is mixed; schools, health care facilities, social halls, businesses, churches and mosques, residential and utilities are all in mixture. The same confers autonomy to the settlement and turn it into a kind of walkable micro system. Schools or health

care centres are often combined with residential. Churches are used as social halls or cinema during the week, and households are, as observed in 23% of the cases sampled, combined with businesses, what stresses the important role they play in the informal economy, similar to Dahravi slum in Mumbai (Nijman, 2009) and informal settlements in Bangladesh (Ghafur, 2001). From this, the high densities and the compact urbanization typical of the Mukuru Kwa Njenga settlement appear similar to most informal settlements worldwide. They are at the forefront of creating a sustainable compact and mixed use city of the 21st century, if not for the low standards and extremely poor living conditions that characterize the area.

The public space

Mukuru Kwa Njenga, like other informal settlements in Nairobi, is a sort of an unconnected urban island in the great city. The city has turned its back to the settlement. The state does not facilitate infrastructures, no paved roads, no sewer lines, water supply or street lights, and no solid waste collection; despite being a hot spot of economic activities that could really enrich the economic formal networks it still is isolated. The authorities reject to see informal settlements as urban spaces and places. But even though the deprivable

conditions of the public space, main roads are buzzing with people doing any sort of economic and social activities. The community has shaped the space and turned it into their place to fit their needs through community work (Figure 7).

In Mukuru Kwa Njenga, as it happens in other informal settlements in Nairobi and in the world (Nijman, 2009), territoriality is a major issue. Public space is controlled by informal security corps, usually composed by youth, what confers identity and security to the neighbourhoods. They control the territory to secure themselves, tracing who is entering their area, when and with which purpose, like a version of the gated communities, as Nijman points in his study of space in Mumbay informal settlements (Nijman, 2009).

The semi-public space

Semi-public space is the space of the free action; extensions of businesses, kiosks, and extensions of the households over the streets that are freely and entirely shaped by people. There is no intervention of the internal structures of power or structure owners. Semi-public space is the transition between the static private space and the dynamic public space. It is the space where most of the social interactions happen, where people meet, chat, do shopping, run open air businesses, fetch water, where small children play, where people just sit to stay. It is where conceived and lived space converges, and a very good example of how place-making processes happen through the use of the space.



FIGURE 7
 Slum infrastructure
 Source: Fieldwork 2016

Secondary roads are where semi-public space is more patent. In contrast to main roads, secondary roads are the space of women. Small kiosk selling groceries or general stuff are run at the sides. Ladies fix and style hair, and tailors make clothing. In main roads, however, semi-public space remains in the shadow of the flux of people going and coming back. Semi-public space in the secondary streets is mainly comprised by kiosks and the extensions of the households in the streets. The spaces are where people sit in the evenings; children play in the afternoons and families brush or wash their teeth in the mornings while chatting with the neighbour.

The private space

It could be said that structure owners build the shell and the users conceive the interior of the spaces where they live or do businesses, leading to a prevalent standardization of the private space no matter who the users are. The space previously created by the structure owners will definitely affect and have an impact on how the space is used and on the life conditions of the users. As observed by De Certeau (1984), spatial practices in fact secretly structure the determining conditions of social life. This claim is an example of the interaction between the informal abstract space and the social space in the informal settlements.

Majority of households are composed by one unique 3x3m room, with some variations of 3.6x3.6m or 4x4m at best, where all the household activities take place. Sometimes partitions within the room are done with a cloth in order to separate the more private space to sleep from the common areas for cooking and residing. Apart from that there are not major variations in the production of the space with exception of the cultural differences between Kenyan Somali ethnic groups and other Kenyan ethnic groups. The Borana culture produces bigger spaces with shared patios. Their communal life, the big families and their tradition of privacy confer vital importance to the communal and open spaces within their households while the other Kenyan ethnic cultures (despite its wide variety and sharp differences) develop the communal life mostly outside the households. Households with more than one room are normally occupied by the structure owners, an example of cases when the conception and the use of the space are intertwined.

The private space is clearly dominated by women. They are the shapers of the indoors space, yet limited by the shell they have to adapt to. Almost one out of four of the households interviewed do different kind of businesses at home, and 90% of them are run by women. In four out of the eight villages the households doing businesses at home rises to one out of three, which states the important role house based entrepreneurship plays in the informal economy of the area and in women's life. The businesses run at home can be general shop, sale of vegetables, tea, cloths, manufacturing of back bags, tailoring, shoe repairing or salon, among the most common.

According to the 84 households interviewed the interior of the house is the place used to rest and cook, but it is also used to meet friends and family, for entertainment, to study and do businesses. Private space is actually characterized by its multi-functionality. The shaping force of society of the private space is greatly limited by the standardization of the given structures. However its value has been constructed in the intangible space, or the third space of Soja (1996). The standardization of the private space makes the place-making processes entirely developed through the use of the space, the personal belongings in place and the memories attached to the inner space, which confers an abstract connotation to it. Even in the private space where the use is conditioned by the standardization, it is precisely the free use of the space that confers the settlement its unique character. Creativity, in combination with the disparate activities and uses, results in a flexible spatiality that allows slum dwellers to develop their life according to the continuous changes.

CONCLUSION AND RECOMMENDATIONS

Despite the apparent lack of control and order, informal settlements have internal structures that resemble the formal city, although in a less systematic way. The informal social structure and hierarchy linked to power and property ownership play a major role in the conception of the space, resulting in what can be called informal abstract space. Therefore life in informal settlements is definitely shaped by the conceived space, but opposite to the formal city, there is a larger scope for the free action where the structures of power rarely intervene. There is a semi-public space and

an intangible space of action where creativity is reflected and retained, where the immense value of the slum spatial dynamics is present. The spatial impact of the free use enhances creativity, and the possibility for the micro-system to exist in balance with the changing needs of people; free use of the space could be seen as a precondition for sustainability in the area.

The path towards transformation and inclusion of the informal settlements in the city may thus be established through urban processes and policies that promote and retain their vitality while respecting their social, cultural and economic values. The study recommends inclusive transformation of informal settlements into the city fabric by addressing the neglect by government of the basic services. It also recommends combining densification with mixed use, and promoting multi-functionality or flexible spatial solutions that allow low income people to have a space and a place in the city.

CITED REFERENCES

- Castells, M. (2010).** *The Rise of the Network Society*. West Sussex: Wiley -Blackwell.
- Clinard, M. (1966).** *Informal Settlements and Community Development: Experiments in Self-Help*. Cambridge: Cambridge and Oxford: The Free Press.
- Cresswell, T. (2004).** *Place. A Short Introduction*. Royal Holloway, University of London: Egham.
- Cresswell, T. (2009).** *Place*. Royal Holloway: University of London: Elsevier Inc. Egham.
- CURI. (2012).** *Mukuru Kwa Njenga Upgrading Project*. Nairobi: CURI.
- Dave, F. (2009).** No Business like Slum Business? The Political Economy of the Continued Existence of Informal settlements: A case study of Nairobi. *Development Studies Institute*. No.09-98.
- Davis, M. (2006).** *Planet of Informal Settlements*. New York: Verso.

- De Certeau, M. (1984).** *The Practice of Everyday Life*. Berkeley: University of California Press.
- Foucault, M. (1980).** *Power/Knowledge. Selected Interviews and Other Writings 1972-1977*. New York: Pantheon.
- Fox, K. & Brumley, K. (2002).** Using space: Agency and identity in a public-housing development. *City & Community*. 1(3), 267–289.
- García, N. (2011).** *El espacio público en los asentamientos informales: factor de encuentro y desencuentro como elemento de la infraestructura urbana*. Ninth LACCEI Latin American and Caribbean Conference for Engineering and Technology.
- Ghafur, S. (2002).** Gender implications of space use in home-based work: Evidences from informal settlements in Bangladesh. *Habitat International*. 26, 33-50.
- Ghafur, S. (2001).** Beyond homemaking: The role of slum improvement in home-based income generation in Bangladesh. *Third World Planning Review*. 23(2), 111-135.
- Githira, D. (2016).** *Growth and Eviction of Informal Settlements in Nairobi* (MSc Thesis). University of Twente, Twente.
- Guattari, D. (1987).** *A Thousand Plateaus: Capitalism and Schizophrenia*. Minnesota: University of Minnesota Press.
- Harvey, D. (1993).** From space to place and back again. In J.B. Bird, *Mapping the Futures: Local Cultures, Global Change* (pp. 3-29). London: Routledge.
- Hossain, S. (2012).** The production of space in the negotiation of water and electricity supply in a bosti of Dhaka. *Habitat International*. 36, 68-77.
- Huchzermeyer, M. (2011).** *Cities with Slums: From Informal Settlement Eradication to Right to the City in Africa*. Cape Town: UCT Press.
- Jones, P. (2017).** Formalizing the informal: Understanding the position of informal settlements and slums in sustainable urbanization Policies and strategies in Bandung, Indonesia. *Sustainability*. 9, 1436.
- Juppenlatz, M. (1970).** *Cities in Transformation: The Urban Squatter Problem of the Developing World*. St. Lucia, Queensland: University of Queensland Press.
- KNBS. (2009).** *Kenya Census*. Nairobi: Government Printers.
- KNBS. (2019).** *Census 2019*. Nairobi: KNBS.
- Laquian, A.A. (1969).** *Informal Settlements are for People: The Barrio Magsaysay Pilot Project in Philippine Urban Community Development*. Honolulu: East-West Center Press.
- Lefebvre, H. (1974).** *The Production of Space*. Paris: Blackwell Publishing.
- Lewis, O. (1959).** *Five Families: Mexican Case Studies in the Culture of Poverty*. New York: New York: Basic Books.
- Mangin, W. (1967).** Latin American squatter settlements: A problem and a solution. *Latin American Research Review*. 2, pp. 65-98.
- MATRIX. (1993).** *Nairobi Informal Settlements: An Inventory*. Nairobi: Matrix Development Consultants.
- Mehrhoff, A. (1990).** *The Phenomenology of Place. Humanities Education, VII*. Bowling Green, Ohio: Bowling Green University Popular Press.
- Muranguri, L. (2011).** Kenya Government initiatives in slum upgrading. *The East African Review*. 44, 1-9.
- Neuwirth, R. (2006).** *Shadow Cities: A Billion Squatters, A New Urban World*. New York: Routledge.

Nijman, J. (2009). A study of space in Mumbai's informal settlements. *Tijdschrift voor Economische en Sociale Geografie*. 101(1), 4.

Rao, V. (2006). Slum as theory: The South/Asian City and globalization. *International Journal of Urban and Regional Research*. 30(1).

Roy, A. (2011). Slumdog cities: Rethinking subaltern urbanism. *International Journal of Urban and Regional Research*. 35(2), 227.

Soja, E. (1989). *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London: Verso Press.

Soja, E. (1996). *Third Space: Journeys to Los Angeles and Other Real-and-Imagined Places*. Oxford: Basil Blackwell.

Tuan, Y. (1977). *Space and Place: The Perspective of Experience*. Minneapolis, MN: University of Minnesota Press.

Turner, J. (1968). *Squatter Settlement: An Architecture that Works*. The John Turner Archive. Architecture of Democracy, Architectural Design.

UN-Habitat. (2010). *Nairobi Urban Sector Profile*. Nairobi: UN-Habitat.

UN-Habitat. (2011). *Korogocho Streetscapes*. Nairobi: UN-Habitat.

UN-Habitat. (2015). *Habitat III - Issue Paper No. 22*. New York: UN-Habitat.

Urry, J. (2003). *Global Complexity*. New Jersey: Wiley.

Wallerstein, I. (2004). *World Systems Analysis: An Introduction*. Durham: Duke University Press.