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Mapping Socio-Cultural Influences in Contemporary Urban Public Open Space: The Case of Biryogo, Kigali City

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Abstract

This study aims at exploring the existence of the characteristics and concepts of the traditional Rwandan Public open space (POS) within the contemporary urban neighborhood of Biryogo in Kigali city. The study hypothesizes that the vibrant use of POS is influenced by both its physical dimensions; space and environment and social dimensions; users and activities. The Rwandese traditional human settlements, like other indigenous settings was planned through harmonious interactions between man, nature and culture, which in turn translated into the design of homes, compounds and their surroundings. POS in the form of courtyards was very valuable and influential in the planning of traditional Rwanda. However, rapid urbanization has transformed the concept of the traditional POS, to an extent that the same is evidently missing in current cities and urban towns in Rwanda. Interestingly, in the native settlement of Biryogo, located right next to the heart of Kigali city, concepts of the traditional POS are still visible. This paper therefore explores the existence of the concepts of the traditional Rwandese POS characteristics within the contemporary urban neighborhood of Biryogo through a study on preferences and factors influencing their use. Two case studies have been compared to a traditional reference case study, involving both quantitative and qualitative inventory processes in understanding the how the social and cultural dimensions' influences preference and use of urban courtyards. The research methodology consists of surveying the reference case study of king's palace museum and two contemporary case studies in Biryogo neighborhood. The resulting data is then processed in matrix analysis and overlay mapping to correlate the data by using both macro and micro socio-spatial

elements. This in turn helps the study to make interpretations of the urban structure of POS, through which the socio-cultural influences are highlighted. They reveal that the specific physical characteristics of POS as well as the users and activities account for a vibrant use of the same through attracting and retaining people in space. In the finding of the study, significant similarities have emerged between traditional and contemporary POS, which reveal that characteristics of a peoples' socio-cultural identity can still be visible and relevant today. The same, if adequately synthesized could significantly inform the design and planning of POS in the current urban development processes in Kigali city.

Keyword: *Public Open Space, Indigenous, Contemporary, Biryogo.*

INTRODUCTION

Public open spaces (POS) are fundamental to establishing the image of the twenty-first century city and contributing to the enjoyment that people, youth and old, gain from urban life (Lang & Marshall, 2017). POS plays a vital role is the social life of communities throughout the world. As a result, POS became an integral part of cities, so much that without it, it is said that human settlements would be unimaginable. Throughout history, there is evidence of the social, economic, political and environmental benefits of POS to any city. Since the earliest forms of civilization, POS is indeed seen as a major element of the urban structure. It defines the city's basic structure providing identity and meaning (Carmona, Tiesdell & Heath, 2003; Lynch, 1984; Carr, Francis, & Rivillin, 1992). The identity and meaning of POS consequently result to economic, health and environmental benefits to the city (Gehl & Gemzoe, 1996; Madanipour, 2003; Wooley, 2005). Tying all these together, Nevanlinna (1996) has argued that the understanding of reality is based on a frame of interpretation which carries philosophical presuppositions of reality. He further advances the idea that built forms carry values of society and culture, and that the 'concept of the city, as a frame of interpretation within which urban practices can occur, may be described as the particular way of thinking.

Kigali is the capital city of Rwanda; a small landlocked country located in Central-East Africa, sharing borders with Burundi in the South, Uganda in the North, Tanzania in the East and the Democratic Republic of Congo in the west. Kigali city covers an area of 22,336 km^2 and is said to be the most densely populated country in Africa. Kigali is said to be growing at a rate of about 6% per annum (MININFRA, 2008). **Figure 0** demonstrates Kigali's spatial growth from 1979 to 2012.

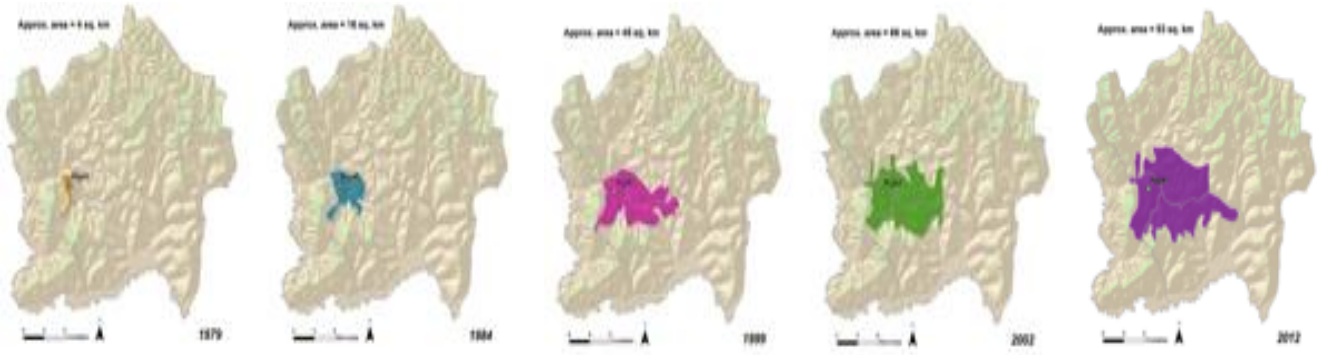


Figure 0: Kigali's spatial growth 1979-2012

Source: REMA 2016

Rwanda has seen a robust economic growth and rapid urbanization which in turn put considerable pressure on land. In Rwanda, land is not only a valuable natural resource but also the engine of the nation's economic development. Rapid urbanization has resulted into land scarcity which when paired with high population

density indeed pose a multifaceted challenge to urban development. Of focus to this study is the diminishing POS, a domain that seems neglected by urban planners and designers.

Historically in Rwanda, POS dominated the landscape and was very influential in the everyday living of Rwandans. However, in the current times the trend seems to have faded away, so much so that Rwanda ended up with the capital city Kigali without sufficient urban POS and the few existing ones are still largely characterized by low social interaction (Malonza & Rukwaro, 2017). However, there are few urban courtyards in the informal neighborhood of Biryogo that have shown consistent vibrancy. When it comes to current planning, provision and use of POS, urban planners and designers in Kigali city have evidently been confronted by the issue of land scarcity which when paired with high population density pose a multifaceted challenge to urban development.

The study attempts to bridge the gap of the lack of POS in Kigali by mapping the socio-cultural influences visible in contemporary POS, which help the study to clarify, evaluate and analyze interpretations of the urban structure, which in turn can therefore inform urban design and planning of POS on Kigali city today.

For POS to be effective, several theorists have agreed that there is need for a balanced interrelation between the spatial and social dimensions of the same, which in turn leads to the magnetic attraction of people to POS (Whyte, 1980; Carmona, 2010). Indeed, the importance of appropriate knowledge of the relationship between space and user activities has been argued by several other scholars including (Lynch, 1960; Gehl, 1987; & Montgomery, 1998).

The main objective of the study is to find out the socio-cultural influences in the composition of contemporary urban public open space in Kigali city. The paper begins with literature review, which explores how POS has been conceptualized in global literature and the origins of POS in Africa and Rwanda to highlight the socio-cultural components of the same and how they have evolved with time. Further, the paper examines the status of POS in the contemporary city of Kigali and Biryogo neighborhoods to establish what gaps have been created in this transformational phase as well as what socio-cultural influences are still visible and relevant.

THEORY

Conceptualizing POS: Origin, Theories and Concepts

Cities and their public open spaces have a relationship. Public open spaces play a role in the life of urban areas, whether as memorable, accessible, or meaningful places (Madanipour,2006). There has been growing concern in urban design and urban planning as regard creation on urban public open space and place to primarily improve the qualities of urban environments. As a consequence, there has been significant advances in research on the conceptual, theoretical, and practical knowledge on the use of these places. Earlier investigations on urban spaces aimed at finding out people's activity patterns within these places (Cooper & Francis, 1998; Montgomery, 1998) believes that active and vibrant urban spaces are associated with the knowledge of how to manage, develop and design cities. In this regard, these authors use the term "Urbanity", which is consists of a city filled with activity, street life and urban culture. The physical attributes of an urban public open space may indicate particular meanings to the people, having a significant impact on people's perceptions, interactions and activities (Canter, 1977). According to Montgomery (1998) designing, developing and managing urban place requires an understanding of the impacts on its characteristics and the amount of people using it.

The interrelation of physical space and peoples' activities is evident in the global history of human civilization. The first example of public open space is said to have been the ancient Greek *agora*, which served as the main public square and the meeting place of the town; serving as a place of assembly, ceremonies, and the overall social life of the city. Starting as a mere open space, it was soon surrounded by several public buildings, generating an urban centrality and drafting the central square that would be born

several centuries later across European cities. The concentration of civic activities in the center and leaving the rest to residential uses was a feature that Greek cities shared with the older civilizations of the Near East (Madanipour, 2003).

Following the *agora*, were the Roman planned fora. Technically speaking, the 'Roman Forum' may not have been considered 'public' since it was not accessible to all but it remains an important plaza. The medieval European plazas served various purposes the town's social and economic spheres (Carmona, De Magalhaes, & Hammond, 2008; Carr, Francis, & Rivillin, 1992).

Norberg-Schulz (1980) believes that a place is a space with a distinct character. Evidently, Madanipour (2003) broke away from Eurocentric discussions of the plaza to study Chinese and Asian cities in an attempt to broaden the scope and expand parameters around which to discuss public life and public open space (Madanipour, 2003). In this perspective, alternative cultural concepts and historical usage of plaza and public open space becomes important, since their interpretation and better understanding would generate design considerations useful in appropriate design of urban public open space.

Concepts and theories as used by urban planners and urban designers provide a foundation for discovering the socio-cultural influences in urban spaces. It has been argued that POSs cannot be seen as just particular spaces with physical attributes, but more so that they accommodate different activities and allow interactions to take place within them. Indeed, the link between the space and users cannot be ignored in any process of designing or planning urban public open space.

Logically, theories offer a prescription on how to create quality urban spaces for the people, therefore principles set by key thinkers in urban planning and design offer a satisfactory base for this study. For example, in terms of fundamental theories of place, after Lynch (1960) defines, describes and evaluates several physical characteristics of a city, while Canter (1977) and Gehl (1987) later demonstrate how to investigate components of place. Drawing on their work, Punter (1991) and Montgomery (1998) later attempt to understand why a place is being used and how its characteristics can be improved by establishing the principles for place making based on specific components of place: physical setting, activity and meaning.

According to Whyte (1980), several major factors cause the use of the area at various times, which he referred to as positive factors; including facilities such as accessibility, seats, activities, vending, food and beverages as well as amenities. Whyte (1980) also found out that negative factors tend to be climate and undesirability.

According to Carr, Francis, & Rivillin (1992), public open space is characterized in three main categories. Places as being "meaningful", allowing people to make rich linkage and attachments with place, being "democratic", protecting the right of user groups, being accessible to all groups and providing for freedom of action and thirdly being "responsive" in order to address residents' needs (Carmona, 2010).

De Meulder and Heynen (2003), came up with three conceptual models within the role of space; space as neutral, receptor and reflector of socio-economic processes, space as a possible tool in the launch of certain social processes and space as a scene in which social processes occur. They argue that when space is viewed as neutral receptor and reflector of socio-economic processes, space is not "a determinant experienced", but instead the focus should be on the "influence exerted" by social mechanisms in the field of labor, capital movements, social relations and discriminatory practices. The second conceptual model sees the 'spatial articulation' of space "as a possible tool in the launch of certain social processes", while the third conceptual model views "space as the scene in which social processes occur." They capture the actions and interactions between the scene and the play, as would be applicable in the spatial organization of most neighborhoods and cities in the world (De Meulder, 2003). This analogy is well in line with Barr *et al.* (1991), who has argued that there exists a relationship between space and the people using it, as illustrated in Error! Reference source not found..

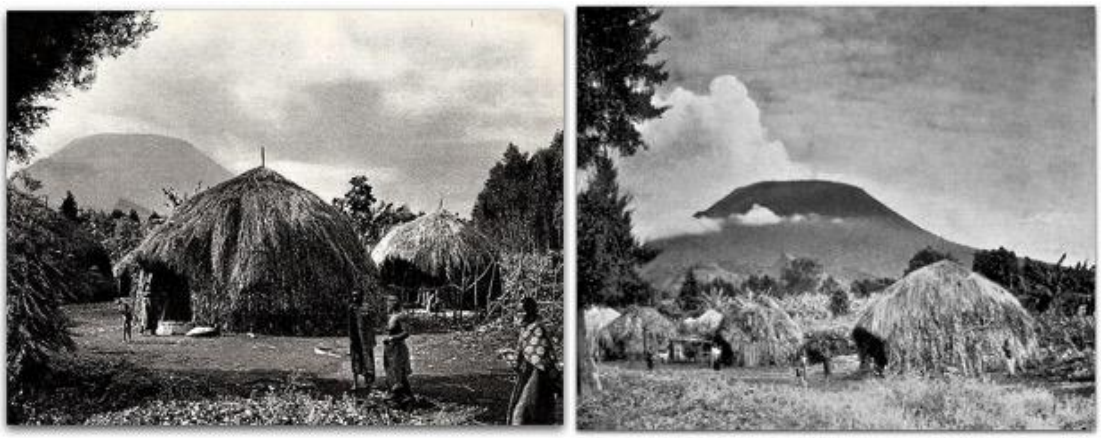
Table 1: The relationship between people and space

Relationship	The reason for the process
Biographical	The involvement of people and the place acting as an integral part of their past lives
Iconic	An iconic place. People keep a strong memory of the place because it is meaningful to them.
Functional	Transactional needs. People's needs are fulfilled in the place
Experiential	People like the environment of a place. The place offers a new and unique experience to them.
Social	There are vibrant activities and active social relationships in the place
Dependent	People are forced to be in the place and want to stay longer.

Source: Adopted from Barr *et al.*, 1991

Indigenous Public Open Space in Rwanda

In terms of their socio-cultural life, historically the Rwandan people settled on the hills with their settlements surrounded by agricultural fields. Almost every family had their own land to cultivate and keep livestock. In Rwanda, the entire traditional landscape was dotted with POS. As illustrated in **Figure 2 a & b,** public open spaced was highly emphasized in the planning of homes and traditional villages. The huge open space in front of the king's palace had one entrance that people used to get through to a big open space -*imbuga ngari*- where Rwandese used to meet for traditional concerts and other social activities.



a **b**

Figure 2 a & b: Rwandan Traditional Villages at the foot of Nyiragongo, in 1950's.

Sources: Kanimba & Van Pee 2008

It was not until the colonialist era that 'cities' were established (Manirakiza, 2014). Rodney (1973) has argued that offering the view that colonialism was negative is aimed at drawing attention to the way that previous African development was blunted, halted and turned back and in place of that interruption and blockade, nothing of compensatory value was introduced. **Figure 3** illustrates the homesteads and King's compounds maintained a rural characteristic.

Figure 3: King Kigeli V's compound.

Source: Sabar, 2014

The social production of space in pre-colonial Rwanda was so influential that a social hierarchy could be traced in the Rwandan traditional settlements in terms of size, form and planning. Kanimba (2008) states that: "for the poorest, it was a matter of one small, rudimentary house without an enclosure" and for the wealthy people "the houses were of a size and complexity commensurate with the owner's position in society" (Kanimba & Van Pee, 2008). In a closer look at the then built environment, one can also trace lots of inspiration from nature and objects of daily use, as is similarly the case with other traditional built forms across the continent. Construction materials are all from the natural resources, soil and vegetable fibers. The idea of a common social space is emphasized in this settlement since historically, the Rwandan people can be said to be a social people. The entrances to the settlement as well as that to the house are also treated to accomplish several goals viewed of paramount importance to society.

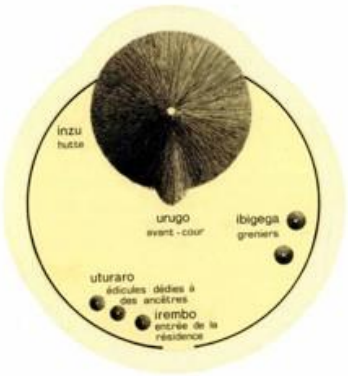
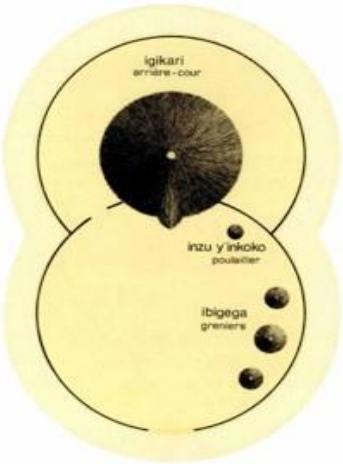
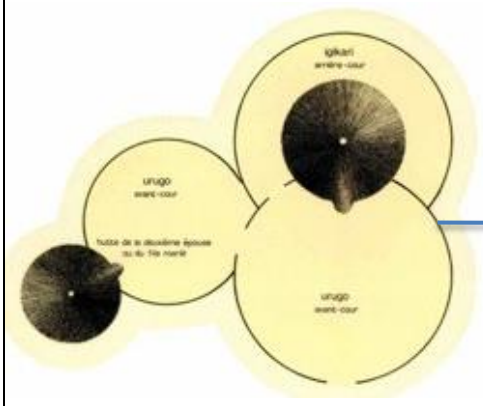
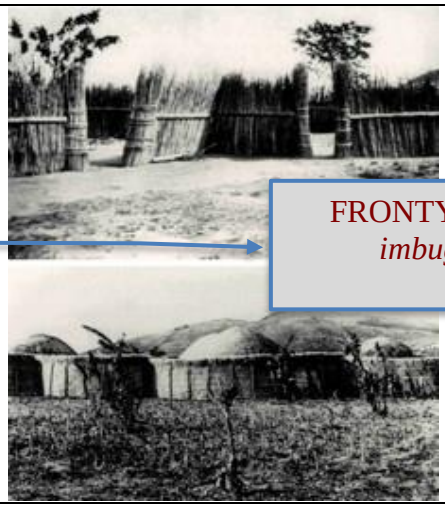
The materials used in construction were locally sourced in a process that allowed people to inter-mingle. In this perspective, construction itself is seen as a *tool* that launches certain social processes. In fact, the absence of durability becomes an advantage; the resulting repetitive maintenance needed for such settlements generate patterns of social events which provided more chances for social interactions. For instance, women association that has to provide chances for social interaction. For instant, women association met each two weeks to replace a roof of one of the members. In this sense, periodic socialization becomes a way of life; people meet to create spatial space and enhance 'social space' simultaneously.

Social events and celebrations involved the population coming from various areas of the country to pay homage to the King **(Figure 3).** These celebrations marked the largest gathering of the biggest part of the nationwide society. Therefore, it was felt as an opportunity and honor for each citizen to be able to attend the festivities (Adekunle, 2007). With the above-mentioned celebrations on a national scale went various performances and activities that accompanied them, the most noted being the sharing of traditional beer, dancing, storytelling and other traditional performances.

Apart from the celebrations, the ancient Rwandans had other social activities that took place in the *akarubanda*. It was, as the name indicates, an absolutely inclusive public open space for all, the place where all had free access. This was a place where people from a village met to hold general discussions on matters concerning the village. The matters that were discussed in these forms of spaces had to do with the judging,

bringing to matter a persons' character and the general situation of the village. Other forms of interactions that took place between people from different families had to do with the youth; whereby they went to hunt in groups or to learn high jump communally. The path ways within the village were important junctions *(Ihuriro)* points of people interactions. The junction forms the node.

Table 2: Typologies of Rwandese traditional dwelling

Type	Configuration	Image
A		
B		
C		

Source: Adopted from Kanimba & Van Pee 2008

Conceptual Framework

Conceptual frame in **Figure 4** serve as a base for the analysis of socio-cultural influences in urban public open space in Rwanda. Montgomery is three main categories of urban public space namely; form, activity and symbols, with each of them branching further into five sub-categories as illustrated in **Figure 4.** This framework provides toolkit factors to observe into the urban public open space. As Illustrated in Error! Reference source not found., a typical traditional dwelling was usually characterized by two circles; the first was that of a round house and the second was a large circular enclosure containing both the house and its front yard. The entrances of both the compound and the house were located on the same axis. According to household preference, other smaller buildings inside the compound would be granaries, kitchens, hen houses among others. This is illustrated in typology A **(Table 2).** There also existed more elaborate homes that had an additional enclosure at the back, that served as backyard or a garden as illustrated in typology B **(Table 2).** For rich persons or kings or other community leaders, the compound was larger with large open spaces for socialization. This is illustrated in typology C, which was an administrative unit in Butare prefecture before 1929 (Kanimba & Van Pee, 2008).

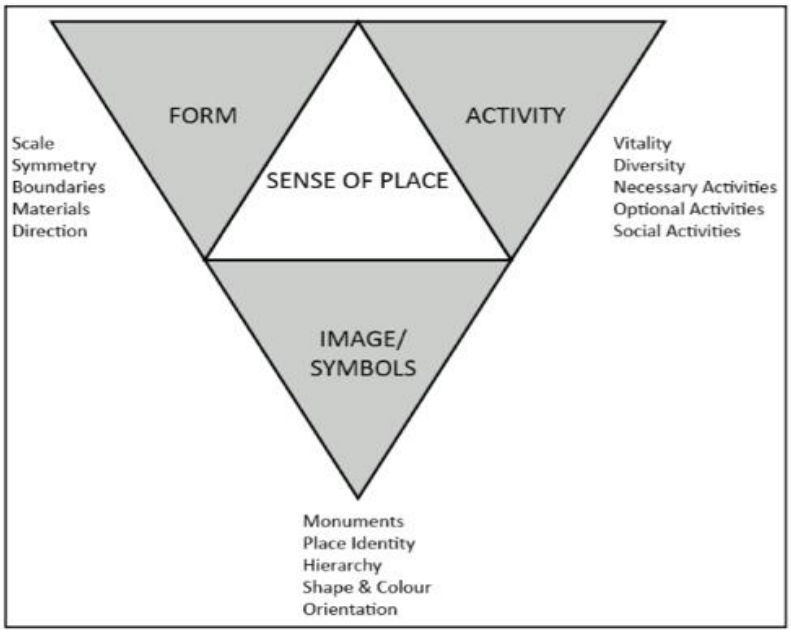


Figure 4: The conceptual model

Source: Adopted from Montgomery 1998

Ching (2007) defines 'Form' as a three-dimensional mass or volume and a term that could have several meanings, both internal structure and external outline or the whole unity together. He further highlights that form is established by the shapes and interrelationships of the planes, that describe the boundaries of the volume (Ching, 2007). Through this lens, form is therefore an essential part of architectural meaning which is conveyed by the human senses.

Activities play a significant role in the definition of urban public open spaces. Montgomery (1998) and Gehl (1987) have argued that a space of high quality is more attractive to people, and a space where multiple activities takes place brings vitality and diversity to the space. A mixture of many activities together, not separate uses, is the key to successful urban places (Gehl, 1987). Moreover, the actual use of the space does not definitely have to be the same as the function it was originally planned for. This confirms that POS cannot remain constant. They ought to be flexible enough to support diverse activities to attract as many users as possible. It is this vitality and diversity of activities that generates the socio-cultural influences that this study aimed to investigate.

All urban environments contain important symbols, meaning and values to the people that live in them or visit. These signs have been interpreted and understood as a function of a society, culture and ideology (Carmona, Health & Tesdell, 2003). Carmona *et al.* (2010) divides different signs into three different categories; Firstly, iconic signs which have a direct similarity with the object such as a painting. Secondly, indexical signs which have a material relationship with the object such as smoke signifying fire. Thirdly, symbolic signs which have a more arbitrary relationship with the object and are essentially constructed through social and cultural systems, such as classical columns representing grandeur. (Carmona, Health & Tesdell, 2003). The symbols and images related to the built environment just like in language, the built environment often carries a fixed message determined by the architect or the constituent but the reader of the environment can construct a different meaning (Carmona *et al.*, 2010).

This framework indicates that urban design must pay attention to the human since people and built environment are obviously related. It is practically impossible to see a 'urban space' and not see 'the people'. Therefore, space is in itself a social context, just as equally, a social context would not be without a spatial component. People and their environment are interactively related and affect each other. In this perspective, this study believes that socio-cultural factors are based on human factors, which largely involve the use and meaning of UPOS with concern on how people make social contacts with each other as well as relate to the place at various levels of interaction on a wide array of social activities.

RESEARCH METHODS

The traditional qualitative research of ethnography was employed for understanding how shared spaces were conceived and used in ancient Rwanda, but also to analyze how communal spaces are represented and used in Kigali today. These qualities that were looked into consist of commemorations, celebrations and rituals that took place in early Rwandan shared spaces. In most cases these social activities either were in honor of the King or between related individuals (families, marriage base relationships, etc.), or sometimes were conducted for entertaining the King (Adekunle, 2007).

This research seeks an insight on how the socio-cultural influences urban public open spaces. Therefore, the study is mainly based on observation and mapping. Interviews were used to collect narratives of the users of space on the values they attach on the UPOS, which translate into its socio-cultural influences. The study used qualitative data. Whyte's (1980) work on field observation and Golicnik's (2011) work on mapping informed the techniques used in spatial analysis.

Mapping links the data collected from direct observations with the maps by marking individuals' value points and relating them to space and place theories and concepts. The resulting spatial analysis was therefore helped to reveal the areas that were used most or remain unused, had memorable socio-cultural elements that attract and kept users in space. Through mapping and spatial analysis of collected data, it was therefore possible to arrive at a critical discussion about how the socio-cultural influences of POS affect its use.

The mapping employed a typology of 12 variables for mapping special places of personal significance as illustrated in **Table 3** (Brown, 2005; Brown & Raymond, 2007). The 12 variables are aesthetic, economic, recreational, life- sustaining/biological diversity, historic, cultural, spiritual, future, therapeutic, learning/creative expression, existence/intrinsic, and wilderness. These variable used by Brown (2005) and Brown & Raymond (2007).

Table 0: Landscape variables

Code	Variable	Conceptual Definition
A	Aesthetic	Attractive architectural scenery, sight smells, sound and silence.
E	Economic	Economic activities such as tourism, agriculture or other commercial benefits
R	Recreational	Provision of opportunities for outdoor recreation.
LS	Life sustaining/Biological Diversity	Production, preservation and renewal of air and soil, maintain ecological balance and provision of a variety of living things
LC	Learning Value/Creative Expression	Provision opportunities to learn, working, playing, imagining and creating
S	Spiritual	Sacred or places of religion, a belief system or spiritually special places.
EX	Existence/Intrinsic	Valuable for their own sake, or valuable that exist, on their own purpose.
H	Historic	Personal memories, or past events in human activity or in nature.
F	Future	Provision of benefits (e.g.: financial, educational, spiritual) for future generations.
T	Therapeutic	Feeling better physically, mentally or emotionally.
C	Cultural	Physical or symbolic features that help people to pass down wisdom, ideas or ways of life.
W	Wilderness	Land, relatively wild, uninhabited, or unspoiled by human activity.
SP	Special places	Special places

Source: Adopted from Brown 2005

The study adjusted the existing explanations of the values to provide examples typical of socio-cultural characteristics in Biryogo to clarify the meaning of the various variables and make them contextually relevant. The selected valued are: economic, recreational, historic, cultural, future, learning/creative expression, and existence/intrinsic.

Case study was selected as a research design for the following reasons. As per Yin (2003), research questions such as why and how are most appropriately answered through the case study method. Since this research is attempting to investigate the socio-cultural influences of tradition POS into contemporary POS, the case study approach therefore becomes appropriate.

The case study is Biryogo, which is the native neighborhood and one of the richest informal settlements in Kigali and with a high population density and comprised of courtyard housing as illustrated **Figure 5**. It is located next to Kigali's CBD, a juxtaposition resulting from a colonial construction, whereby Rwandans living in Muhima, now part of 'Kigali city' were relocated to Biryogo, to pave way for Richard Kandt's colonial quarters to be installed in Muhima. A military installation had also been intentionally placed in between for security purposes. The camp Kigali military installation was thereafter in 1997 changed to a technical university, which is now the College of Science and Technology under the University of Rwanda (Malonza, 2015). A 104 year-old Mzee Ausi Madjutu is one of the key informant interviewees in this research and was around six-year-

old when this transition was happening in the 1920's and now lives in Biryogo with his children, grandchildren and great grandchildren.

Figure 5: Case study location and surrounding urban fabric

Source: Google earth modified by Authors 2018

The questionnaire was designed to support the mapping exercise and requested basic demographic information from participants. This allowed the study to check whether the sample was representative of the local population. These data were also used to probe the influence of various demographic factors (gender, age, income, occupation, education) on the quality, quantity and geographic distribution of points mapped, which would in turn inform how demographic factors influence the socio-cultural impact of a POS. The questionnaire data was later compared with data from email interviews and face-to-face interviews to determine whether particular demographic groups respond differently to the different mapping approaches.

RESULTS AND DISCUSSION

Spatial analyzing use of space in the case study node in Biryogo

The case study node was central in a mixed-use neighbourhood and is spatially framed by four restaurants in Biryogo namely: *Kwa Youssouf, Kwa Issa, Café Resto* and *Mountain Coffee. T*he study keenly examined the behavioral studies in the four restaurants forming the node as illustrated in **Figure 6**.

Figure 6: Case study land use

Source: Google earth modified by Authors 2018

a **b**

Figures 7 a & b: Case study activities at Kwa Youssouf and Kwa Issa

Source: Authors (2017)

a **b**

Figures 8 a & b: Case study activities at new Mountain coffee and Café resto

Source: Authors 2018

Kwa Youssouf, which is located inside a courtyard that has been in existence since 1930's (**Figure 7a).** The settlement started as a family home with a front yard to the path and a backyard and the rear. The backyard transformed with time into an Islamic prayer square in 1980's and later it opened up to the neighborhood and visitors. It is currently a public open space with a cafeteria and seating space for social interaction. *Kwa Issa* is currently the most vibrant street cafeteria in this node; it has no barriers-or screens at all so people just walk in (**Figure 7b).** There are many people always and a broad diversity in activities; playing games, eating food, fruit salad, drinking coffee, tea, milk. The study found out that people stay longer. *Mountain coffee* experienced a big transformation during the study in August 2018 **(Figure 8a).** The one meter tall solid screen that allowed users a visual connection to the street only through a window opening was demolished. This enhance a stronger visual and spatial connection to the street. *Café Resto* is a street cafeteria, characterized by a half meter tall porous screens made of steel bars **(Figure 8b).** These screens act as physical barriers even though the restaurant is visualy porous. The study found out that there are fewer people compared to other restaurants in this node and that over lunch hour, the space in front of the restaurant becomes a motobike parking.

The study however noted a range in the choice of use of the new mountain coffee restaurant. Whereas some users preferred to sit facing the street, to observe street life and make a connection with it, a bigger percentage preferred to sit with their backs on the street, which enabled them to frame sub-spaces within the restaurant creating a more social space for chating and playing traditional games as illustrated in **Figures 7b and 8b**. The study argues that this evident use of space is a reflection of the indegenous setting where the centrality of activities shaped the events concentrically sorrounding it.

Analyzing transformation in the use of POS in the case study node in Biryogo

The study used a list of significant activities to trace their evolution from the traditional setting to the transformative setting to the contemporary setting as illustrated in **Table 4.**

Table 0: Activities of Rwandan culture and changing phases of transformation of POS

	Phase of public open space		
Activities	**Traditional/indigenous**	**Transformative**	**Modern/Contemporary**
Living/dining	Combined	Separated, same level	Separated, on two levels
Sleeping	Living room & Bedrooms	Bedrooms & Guest rooms	Master bedroom, Bedrooms & Guest rooms
Family gathering	Living room/ courtyard	Living room/ family room/ courtyard	Living room/family room/ meeting rooms
Ceremony and rituals	Backyard/ front yard	Courtyard/living room	Courtyard/living room/indoors spaces
Housework	Backyard	Courtyard/living room/ outdoor kitchen/ backyard	Living room/ indoor kitchen/ indoor laundry
Gathering	Courtyard; front yard	Courtyard; back yard/ living room	Courtyard/ restaurants/ churches/ mosques
Food and drink	Backyard/ courtyard	Courtyard; back yard/ living room	Dining room/Courtyard /restaurants/ street cafeterias
Storage	Granaries	Outdoor storage space/ facades of buildings/	Indoor storage space/ under seats & beds/ kitchen cabinets/ backyard

Source: Authors 2018

Analyzing socio-cultural influences in the case study node in Biryogo

The socio-cultural influence is concerned with the way users interact with the space. The socio-cultural senses of belonging, security, privacy and safety are intermediary variables in the provision of usable space, while cultural values and guidelines are major factors in providing liveable public open spaces, due to their embedded influence on people's lives and beliefs.

After a series of observations and mappings, the study found evident patterns of use of space, which helped to unpack the various socio-cultural characteristics in Biryogo as illustrated in **Figure 9.** The selected values were economic, recreational, historic, cultural, future, learning/creative expression, and existence/intrinsic various values. Their location and frequency was mapped on the site to allow the study to draw contextually relevant interpretations.

The maps generated in the study show the centrality of the node as a magnet of attraction and the concentric patterns generated by the users of the space as they experience the various restaurants in the area from time to time as illustrated in **Figure 10**. Even without the specific characteristics that each of the four restaurants may have or the quality of the adjacent urban fabric, the collective composition generates the concept of the node as a public space and a social space, whose level of attraction and vibrancy render the roads invisible.

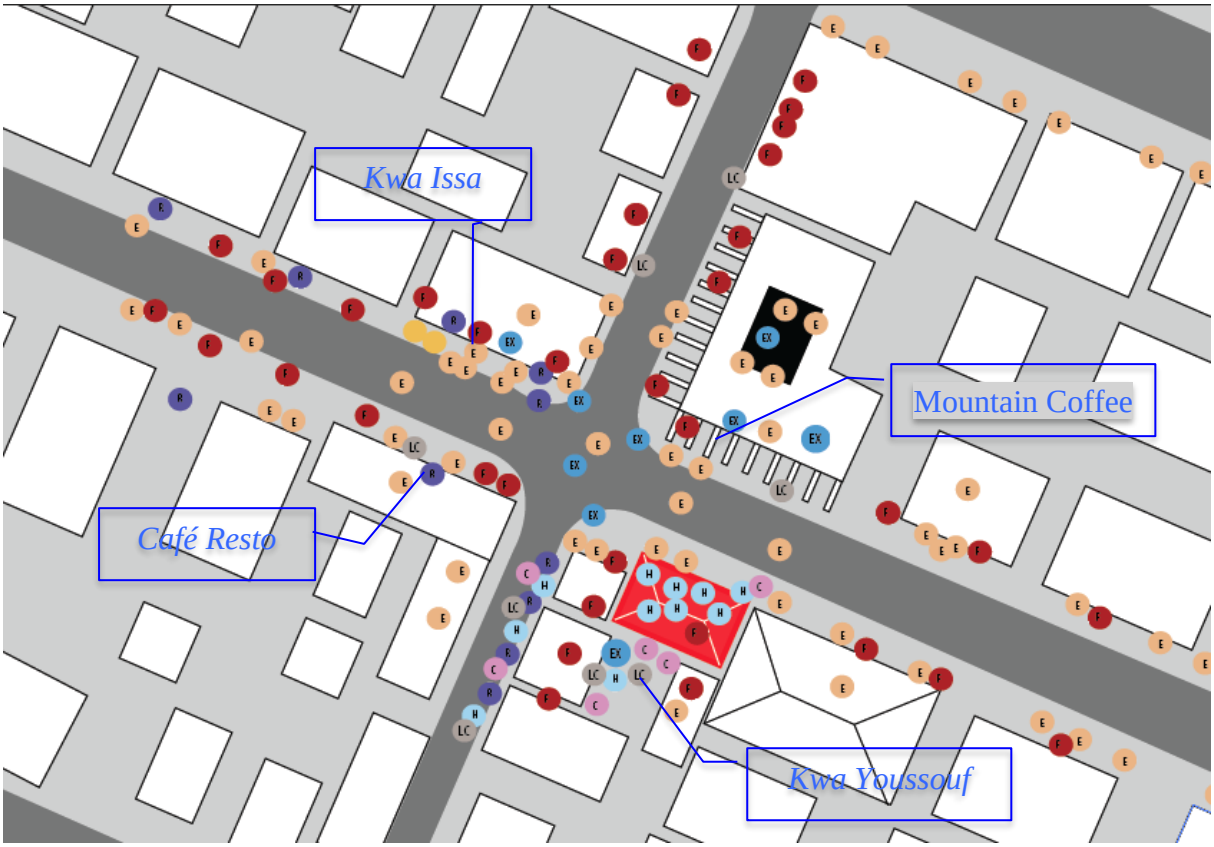


Figure 9: A map of selected landscape values in the case study node

Source: Authors 2018

This resonates with the socio-cultural construction of *ihuriro*- junctions as social spaces, where people would chat longer when they either met afresh or as they planned to part ways.

Traditional POS was instrumental in holding together the social fabric and catalyzing gathering and social interaction. The case study node and the entrances were observed as a communication spaces, which was in agreement with the concept of POS as neutral, receptor and reflector of socio-economic processes, that in turn launch certain social processes, catalyzing a socio-cultural influence of space.

The study argues that as illustrated in **Figure 11,** the entrances to the various restaurants and shops in the case study node compare with the homesteads of households in the indigenous setting. This also agrees with (Jacobs, 1961) vibrancy in POS enhance the notion of 'eyes on the street' catalyzed by active frontages and social spaces.

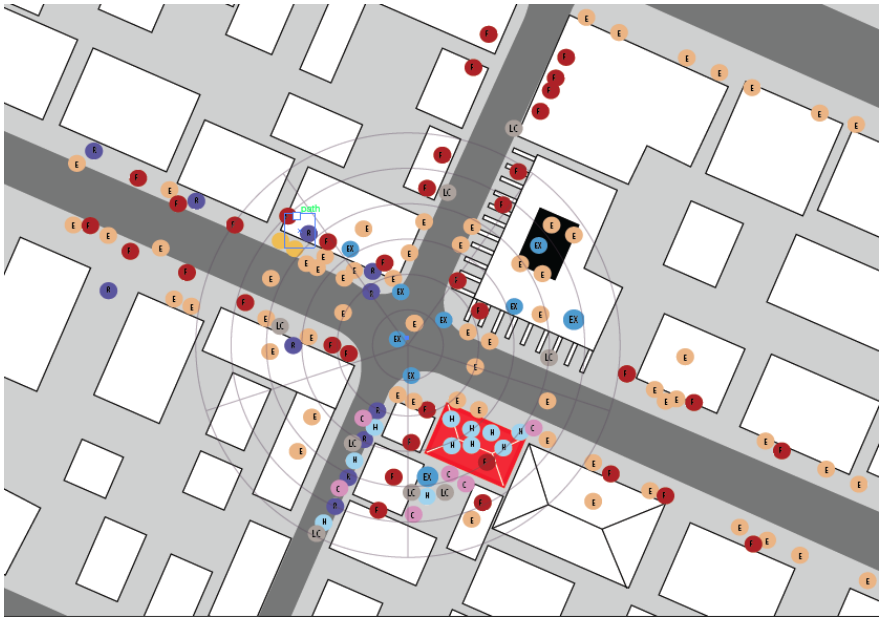


Figure 10: The case study node as a centrality and a magnet

Source: Authors 2018

Figure 11: Case study node and entrances as communication spaces

Source: Authors 2018

The findings from the field survey indicate that even though the case studies are attempting to follow the trend of modern times, they still retain some significant socio-cultural elements and concepts that had influence on the indigenous setting. This influence has evidently affected the level of satisfaction, which in turn impact on the number of users and patterns of use. Throughout the study, it was found that the majority of users enjoyed gathering around activities such as traditional games or food and drinks.

Socio-cultural activities such as playing *igisoro,* Rwanda's famous traditional game helps to improve the image and sense of place of the node (Noberg-Schulz, 1980). Participant attached a value to it for not only being able to play it but watch others playing as well. The presence of people matters if POS has to succeed (Whyte, 1980). This proves that 'what attracts people most are other people' (Whyte, 1980) and that the presence of life in POS improves its livability. The opportunity given to people not only comes into POS, but also stays longer for the success of the same. This is found people give it both a cultural and recreational value.

Spatially, a node is formed by an intersection of two streets (Lynch, 1960). However, socio-culturally the success of node as a social space is powerful to an extent of diluting the presence of the otherwise linear streets. The node indeed allows interaction between a diverse species in the urban environment; cars, trees, people, bikes, motorbikes etc. This makes people value it as an existence as an intrinsic place.

The commercial value that participants applied the buildings alongside the street was more influenced by the city's urban vision. Most landlords hope to get more money to construct high-rise commercial blocks and get richer. This hope can only remain a wish for a span of time during which their businesses; cafeteria, restaurants, urban courtyard remain social spaces that attract all.

In this perspective, the study recognizes that in as much as world over, POS is diminishing new ways of rethinking POS seems to be emerging and the socio-cultural influences in Biryogo neighbourhood (Madanipour, 2003). People still attach cultural value to space, as evident in Biryogo whereby the mural on one of Youssouf's family houses makes users feel happier playing traditional games next a culturally theme painting hence improving the image and sense of place of the node (Noberg-Schulz, 1980).

CONCLUSION AND RECOMMENDATIONS

The current provision and use of public open space has been less successful in offering a new meaning for the residents of Kigali. The study believes that application of the traditional concepts of POS can still offer relevant inspiration to the planning and management of urban space in the current city. Enhancing vibrant use of POS is a crucial element in the structure of any city towards promoting quality urban life that each city admires to have, and whose meaning each citizen aspires to have.

Since the production and use of POS is largely shaped by human needs, it encounters phases of transformation over time. This transformative process dialectically influences peoples 'outlook towards the built environment. The periodic transformations in the people's socio-cultural structures, changing values, and exposure to new technologies and materials could also be utilized to solve the same challenges that the misconception of the same has created.

The research therefore believes that socio-cultural influences remain relevant and useful to people, time and space, since they allow a continuation of transmission of societal values as well as offer a balanced democratic space for building relationships. In this perspective, there are obviously adequate lessons that contemporary urban planning and design can benefit from the traditional concepts of POS. Some of these lessons include; In the traditional setting, courtyards accommodated socio-cultural activity area; People are attracted to public spaces with activities; People like public open spaces that engender freedom of use and are democratic;
People like public open spaces that allow them to interact with varied diverse social and physical features that define space; and people are attracted to public open spaces that have socio-cultural meaning and context in view of defining functions and primary and secondary design elements.

The study recommends; That indigenous knowledge is relevant and timely for not only Rwanda but also the wider region as an inspiration to the investigation into pressing urban issues, public space being a key component of the same as well as a source of knowledge to inform the intervention to these urban challenges.

The public open spaces should offer opportunities to urban users to recreate and draw pleasure from its existence. There is need to create public open spaces that are dynamic and flexible enough to support diverse activities to attract many users.

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