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Re-contextualizing indigenous landscape urbanism in relation to contemporary urban projects

Case of Rwanda and Burundi.

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Abstract

During the pre-colonial era, planning was so culturally defined that any changes would be deeply rooted in indigenous culture and local people's aspirations and experiences. During the colonial era, new landscape urbanism ideas began to emerge in Africa, when urban planners from the global north were commissioned to design urban master plans. The past decade has seen an increasing interest and growth of scholarly interest in the cultural neglect of indigenous knowledge by the colonial masters as well as the later neglected 'African' episode of colonial planning whose implementation has slowly thinned away in the post-colonial city. This paper utilizes previously undocumented material on indigenous landscapes (ways of land settling) of Rwanda and Burundi, combined with theoretical underpinnings and complexities of case study contemporary urban project to explore the tensions in re-contextualizing indigenous landscape urbanism. In the post-colonial African city, contemporary urban projects such as the Gahanga cricket stadium in Rwanda and Library of Muyinga in Burundi, present a good laboratory for this exploration, considering the elaborate efforts in learning from vernacular inspirations and the differences in the socio-spatial interventions. In the end the paper concludes that contemporary urban projects exhibit clear elements of context-responsive sustainable planning principles, derived from indigenous architecture and urban form. Finally, the paper suggests how contemporary landscape urbanism for the African city can re-root its mould from indigenous inspiration to achieve socially, economically, culturally, and environmentally-sound of land settling and architecture, while at the same time re-valuing the prominence based on importance of nature in the indigenous models.

Keywords: Indigenous landscape, contemporary urban project, place-based, Rwanda, Burundi.

INTRODUCTION

Rwanda and Burundi are two small countries in East-Africa, which share many social and physical features. Not only has their geography, climate and location similarities but also their languages and history has common roots. It is no wonder then that during Belgian colonization, the two countries were combined together into one territory "Rwanda-Urundi". The spatial size of Rwanda and Burundi is also a factor in their history of colonialism and urban development. They are among the smallest countries in Africa and when combined, they yield to an area of 54,172km^2 which is still much smaller than other countries in the East and central African Region; Kenya (580,367 km^2), Uganda (241,037 km^2), Tanzania (945,087 km^2) and Democratic republic of Congo (2,345,000km^2).

In the 19th century, Rwanda, Burundi and Buganda were the most extensive kingdoms of the Africa's Great Lakes region. They were densely habitated (154hab/ km^2) than surrounding Tanzania (16hab/ km^2) and Zaire(10hab/ km2) (Acquier,1986), they had developed a unique way of settling on the omnipresent hills, with socio-cultural and economic practices centred around a compound, "traditional house", a traditional settlement in the mid-slope of the hills. Rwanda known as a land of thousand hills is, today, considerably shifting away from these settlements due to their dispersed nature that does not respond to land scarcity, while in areas such as Burundi, they are still existent, though in evolved forms. Particularly, due to the similarity between social-cultural and physical land features of the

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two countries of Rwanda and Burundi, there is an almost undistinguishable similarity of indigenous "landscape urbanism" so to say. This similarity proves indigenous landscapes to bear witness of a continual effort to productively adapt and socio-culturally appropriate landscapes in order to guide well their use, occupation and urbanization with the built and the un-built environment working as an ecosystem (De Meulder and Shannon, 2010).
Rwanda and Burundi are experiencing rapid urbanization that shifts away from traditional architecture and landscape urban planning, and a link between the past and present is little to non-existent.

The purpose of this paper is to establish a sustainable linkage between the past and present through embracing cultural inspiration in terms of architecture and landscape urban planning. It focuses on the complex relationship between the social and physical characteristics of inhabited built environments and society. The paper explores the presence and lack of these constituents in contemporary urban projects in Rwanda and Burundi. By doing so, the paper positions the projects, in the context of contemporary urbanization in the continent, where inspirations are largely being borrowed from global knowledge and ignoring rich traditional knowledge and indigenous practice in architecture and landscape urbanism.

THEORY

Meet the 'planning' without planners.

Landscape has been defined as a visible part of the environment or territory, or as an individual perception/mental construction of the environment through their senses. (Menatti & Rocha, 2016). Way before colonial and pioneer planners and architects made entry into Africa, the *mixite* in vernacular architecture was cast in a unique way and deeply embedded on the base of nature itself, indigenous culture and local people's aspirations and experiences.

Even if new urbanism ideas in the post-colonial era came (Mitchell 1989, Myers 2003). Indeed, post-colonial theory recognizes how, on one hand, the dominant culture and language may submerge alternative voices, and how, on the other hand, local histories of places and communities may contribute to the voices of the poor who experienced colonial urban planning from below. (Atkins, 1993). The introduction of tropical modern architecture in 1930-1970 diverting from the pre-existing typologies, is not exactly responding to context-based design since many factors are left out of consideration.

Landscape urbanism, a point of departure

The theoretical underpinning of landscape urbanism points to need for a considerable consensus in conceiving landscaped holistically, therefore going beyond a simple analysis of its elements to in-depth exploration of the natural and cultural interactions between those elements. This way, theory has positioned the holistic view of landscape as influential in stringing together the natural and artificial parts to a single yet evolving system (Marcucci, 2000).

The traditional landscape is disappearing fast in the face of rapid urbanization, while creating opportunities; it destroys nature and culture (Müller, Ignatieva, Nilon, Werner, & Zipperer, 2013). This calls for the need to find new ways of reading and planning for territories.

Even if some new urban projects are quick to claim that they borrow heavily from indigenous planning concept, many fall short of comprehensively considering all aspects of the cultural landscape. Although the cultural departure is evident, the destination/end results may lack important incorporations of the interrelated physical- social aspects of indigenous practices because they merely replicate external form of the traditional built environment. Therefore, these important variables of the traditional architecture and landscape urbanism constitute the study of this paper; time (temporality of the built environment), scale (size and hierarchy of organization of ecological components), social context (built fabric responding to social construct and behavior), physical context (built fabric responding to use of existing natural features).

These variables cover the intertwined complex relationship of social and physical characteristics on any inhabited built environment or society. The paper considers the lack of these constituents in contemporary urban projects and through understanding the ones that have aimed at including them as case studies namely Gahanga cricket stadium in Rwanda and Library of Muyinga

in Burundi, recommendations are extracted for other projects to learn as far as integrating indigenous knowledge about architecture and landscape urbanism is concerned.

The four main variables of this paper as illustrated in **Figure 1** are stemming from the local experience of traditional architecture and landscape urbanisms, are time scale, social context and physical context. They are then applied to make the exploration of the empirical cases studies in this paper possible. The paper looks at how the indigenous landscape concepts are (or not) applied in the contemporary case studies.

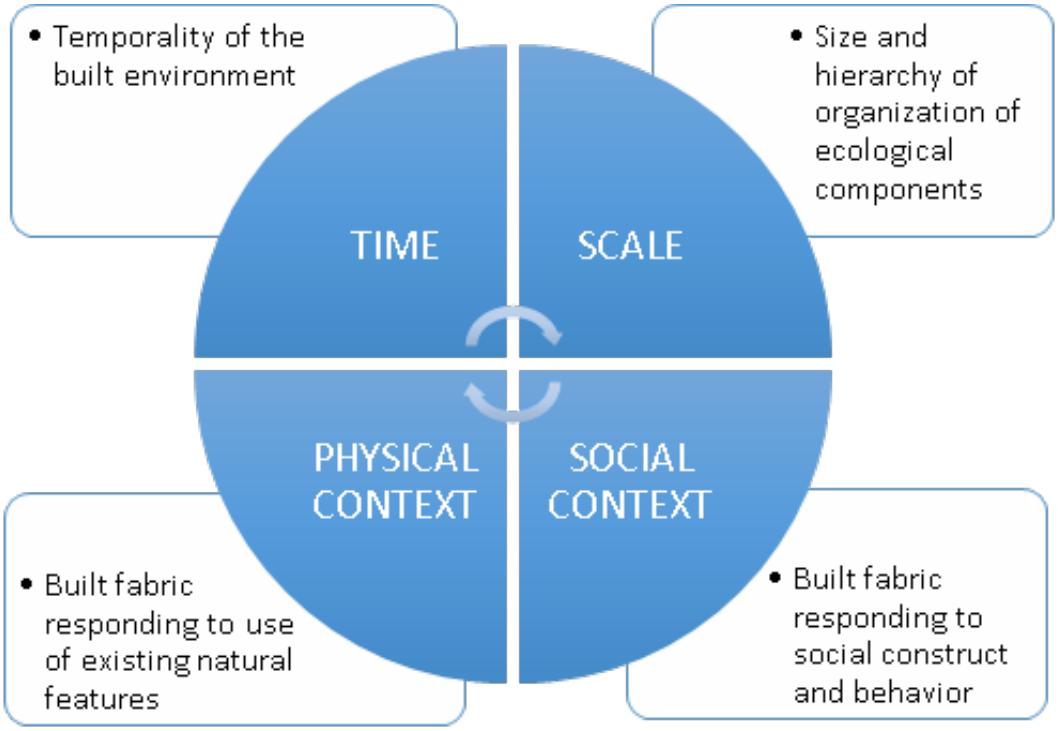

FIGURE 1
Variables and their relationships
Source: Authors, 2022

RESEARCH METHODS

This paper is the outcome of a research that is a systematic and rigorous investigation of an indigenous situation and an (urban) phenomenon and therefore a "systematic inquiry directed towards the creation of knowledge" (Groat & Wang, 2013, p. 26). This further supports the research purpose by enabling the creation of a sound framework for collecting and analysing data (Bryman, 2012).

Exploratory research

The paper takes the starting point in exploratory research, based on the problem statement that has been defined by the researchers to gain additional inputs into the phenomenon under study for a three reasons; First, the research is concerned with specific contemporary projects in an urban setting, drawings parallels to past landscape urbanisms. Secondly, the research aims at unpacking the rather complex and rapidly transforming urban could still find relevant inspirations from the past by painting a complete picture of the interface, and thirdly, since the research interest is in providing deeper understanding of qualities within a socio-spatial phenomenon, beyond the simple measured components of quantitative research.

Case study

The traditional qualitative research of case studies was used to connect this study's empirical data to its initial research questions and ultimately to help the research achieve its objectives. Flyvberg (2011) has highlighted that the main strength of the case studies is the depth, which translates to

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detail, richness, completeness and within-case variance (Flyvberg, 2011).

Case study was selected as the primary method of investigation since it focuses on contemporary phenomena of place, which is rather complex. According to Flyvberg (2011), case studies help research to better understand context and process hence achieving high conceptual validity, further facilitating the research to link causes and outcomes (Flyvberg, 2011).

Observational integration

Any scientific investigation is supposed to be a rational activity with seven elements of study: imagination, intuition, observation, insight, introspection, inference, and supposition (Gelfert, 2014; Kriegel, 2016 & Given, 2008). These observational integration tools were applied in the analysis of the traditional/indigenous landscapes of Rwanda and Burundi.

For the contemporary case study projects, an observation with a reasoning backwards form the effect caused by educated guesswork (Montgomery, 1998 & Walton, 2014). This is complemented by Douven's (2011) argument that much of the logic of urban planning and urban design thinking is neither deductive nor inductive but what Peirce originally defined as *'abduction'* (Douven, 2011).

Finally, Since the research is studying and analysing the combination of physical and social aspects of place, "triangulation" through varying perspectives, was used the to test how ideas are applied to both projects (Gray & Julian, 2004, p. 31).

Document analysis

The researchers found rich documentation of the two case. Elements of the historical approaches were then used to access evidence from the past and to critically examine past events to gain insights for future planning (Given, 2008). Further, document analysis helped the research to achieve the comparative analysis of the case studies, by clarifying and answering the questions from different perspectives drawn form the documentation, in order to enhance the validity of the research findings.

RESULTS

In this section, the indigenous landscape of Rwanda and Burundi are used to set the scene. The section looks at the settlement patterns, as guided by topography and agriculture, further informing the functional and hierarchical ecology of place

Settlement patterns guided by topography and agriculture

The settlers of the Rwanda and Burundi regions lived in huts of straw surrounded by live hedges, as shown in **Figure 2.** They practiced cattle keeping or farming, with their social life geographically crafted at the level of different hills, which are predominant features of the landscape. Valleys were for collective interests such as hunting and construction materials, and later for agriculture too (Acquier, 1986). This way of settling justify the lack of villages close to each other but a system of few settlements on each hill separated by 20 to 450 m or more depending on regions, thus the occupation of the whole territory.

The networks of paths for cattle and humans existed in small amount of connections to homes, pastures and rivers (Acquier, 1986). The reason of dispersion was due to living in the middle of the agricultural property for both control and easy access to all the property which would be very huge in the past. This traditional way of settling defies the hidden aesthetic agendas of contemporary urban landscapes, in which the re-invention of the natural world requires more design (De Meulder & Shannon, 2010).

FIGURE 2
Typical indigenous settlements in Rwanda and Burundi
Source: DouceCahute, n.d.

A functional and hierarchical ecology of place:
Settling on the hill led to three divisions, the hill top, mid-slope and the hill bottom, as shown in **Figure 3.** The settlements were adapted to the type of soil, thus different vegetation covers. Generally, the traditional home compound was placed at mid-slope of hills in the middle of the property because, the top of the hill was stony and windy and therefore, mostly covered by forests for firewood and religious rituals while valleys were marshy, with cold morning mists. The compounds were usually surrounded by useful trees such as ficus or edible such as bananas forming patches of mini- forests along the hill. This localization favoured flow of manure from cattle to fields usually under the home (Acquier, 1986).

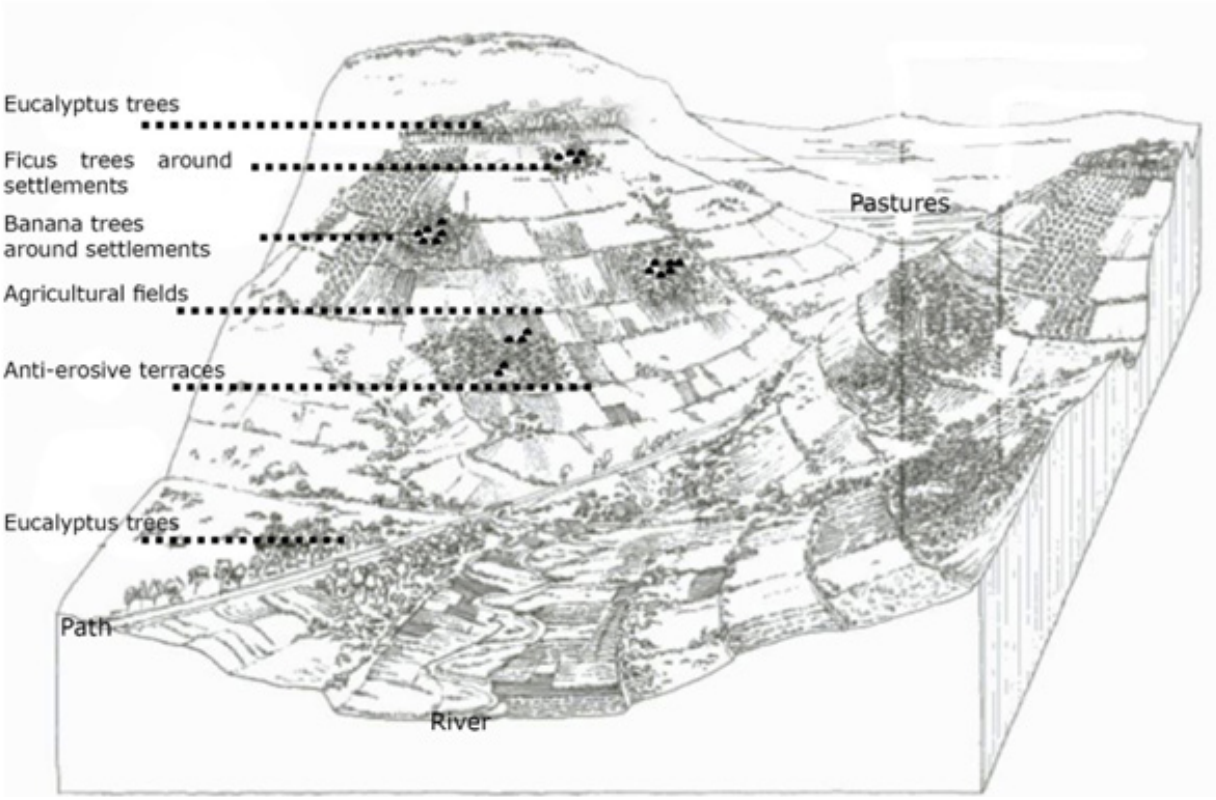

FIGURE 3
Hill settlements and ecological distribution
Source: Adapted from Acquier, 1986

Figure 3 presents a zoom into the typical dwelling compound.

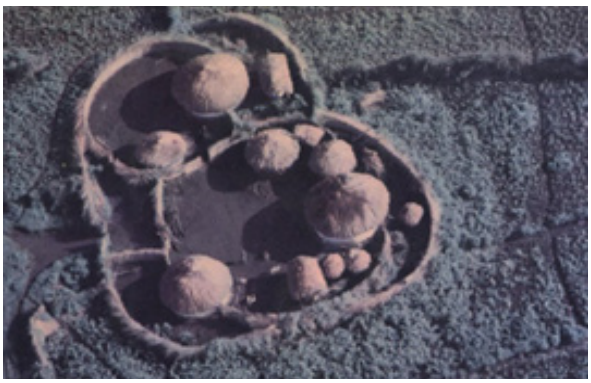

FIGURE 4a
The "traditional" compound
Source: Adapted from Acquier, 1986

FIGURE 4b
A typical Rwandan traditional compound
Source: Kanimba and Van Pee, 2008

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In terms of function, the planning layout of a typical home would be informed by the occupation of the household. In this logic, a layout of the compound for farmers (grain and plantain eaters) is illustrated in **Figures 4 and 5.**

FIGURE 5a
Plan and 3D view of a livestock keepers' compound
Source: Adapted from Kanimba and Van Pee, 2008

FIGURE 5b
Plan and 3D view of a livestock keepers' compound
Source: Adapted from Kanimba and Van Pee, 2008

Likewise, a layout of the Compound for livestock keepers is illustrated in **Figures 6 a and b.**

FIGURE 6a
Plan and 3D view of a livestock keepers' compound
Source: Adapted from Kanimba and Van Pee, 2008

FIGURE 6b
Plan and 3D view of a livestock keepers' compound
Source: Adapted from Kanimba and Van Pee, 2008

Therefore, even from a micro-scale planning perspective, there were the clear differences in the socio-spatial layout of a farmer's and livestock keeper's compound, as illustrated in **Figures 7 a and b.**

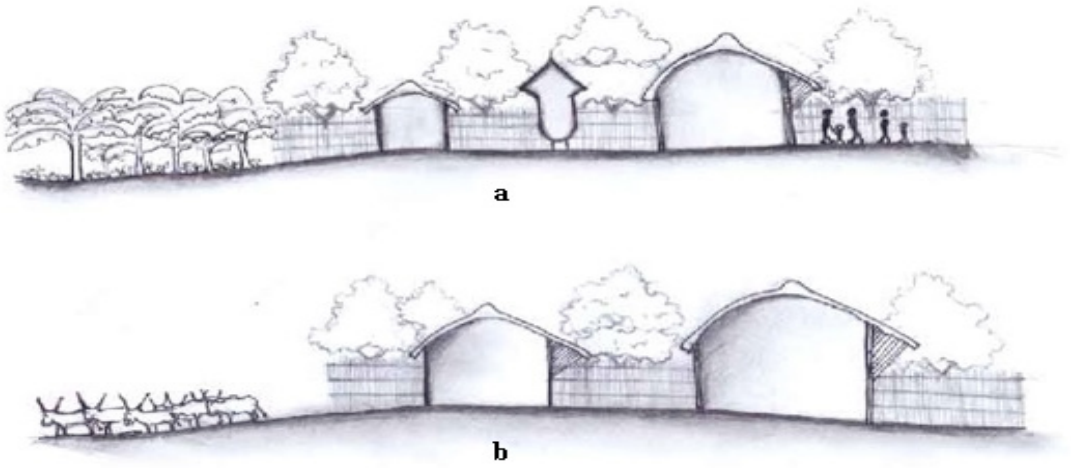

FIGURE 7
Sections through compound of Umuhinzi – Farmer (a) and Umworozi -Livestock keeper (b).
Source: Adapted from Kanimba & Van Pee, 2008

The ecology of scales under *"casco"* approach:

All life was around this traditional compound that controlled all the domains (Acquier1986), with hierarchical vegetations ranging from forests at the top of the hill, patches of useful and edible trees around the compounds in the middle of agricultural fields at mid-slope, while papyrus and bamboos for construction dominate the bottom and valley of the hill. This arrangement based on soil types, living conditions, and micro-climate conditions is a feature of the *"casco"* design approach to uncertainty as defined by Smets(2002) in which the programmatic arrangements are framed within the rules of the territory on different scales. This generates settlements and vegetation patterns, establishing order on a larger scale for "higher" nature as fundamental to landscape formation, in this case the hill, allowing flexibility for "lower" nature on a smaller scale, in this case the compound and its surrounding vegetation. The housing model consisted of several huts, with fence not only to protect the cattle but also to express family cohesion. The construction materials were wood from eucalyptus, bamboo, reeds, papyrus and live trees and hedges. The non-use of soil as a construction material is justified by the abundance and variety of rapidly growing vegetation in the region (Acquier, 1986). As illustrated in **Figures 8 a and b,** this dwelling model transcends the societal hierarchy as it is nearly the same for kings, chiefs and citizens. It is dependent upon a unity of cultural practices, ceremonies, crop exchange economy generating this architectural model focused on the cow, and thus designated as a model for a breeder (Acquier , 1986).

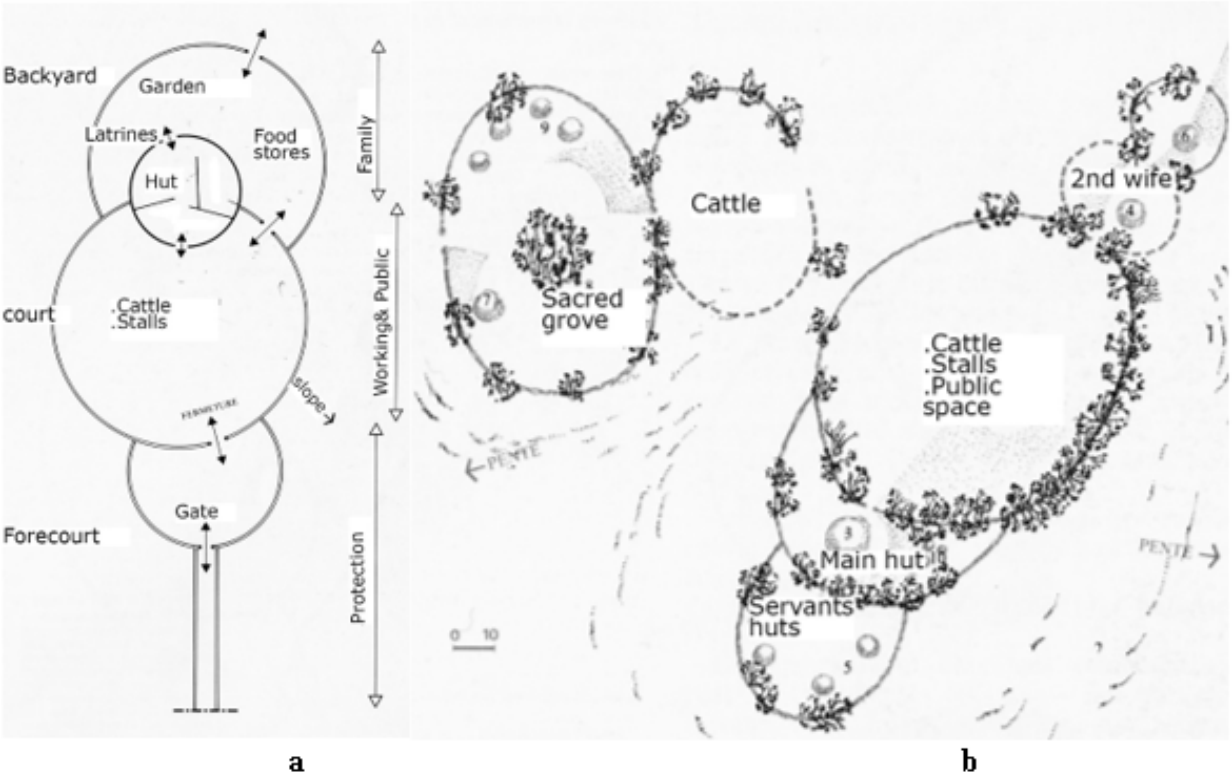

FIGURE 8a and b
The organization of a typical(a) and dignitary (b) Compounds
Source: Adapted from Acquier, 1986

Trees as building elements:

At the construction of the new compound, sacred massive trees for religious purposes such as *erythrin* were planted, and had rules against cutting them, and other useful trees such as *ficus* were planted for protection and banana plants for food. The compound generally had three unequal

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courts preceded by a green corridor with thorny hedges that extends through the fields to limit animals to go into crops, as illustrated in **Figures 9 a and b.**

That corridor opens up to the front court for protection buffer and guest's reception which precedes the grand circular court with cattle under tree fern for the animals to rub their skin. The second half-moon court behind the main hut is only for family and some friends, an intimate area for female, for rituals and food storage. Occasionally, the last court had gardens with extra huts, for children, grandparents, or visitors. All huts were built using reeds, bamboos, papyrus which could be easily replaced with time while, permanent trees were used for defining boundaries, religious ceremonies and provision of shades. In this case, the ecology is seen as a symbol of both nature and culture (Latz, 2000), a design strategy that exploited the temporal qualities of the landscape as a dynamic, per formative, open-ended process medium. (Meyer, 2007)

a b

FIGURE 9a and b
a) King's Palace at Nyanza, Rwanda and b) Buruhukiro Palace, Burundi
Source: a. Owen, 2011; b.Augustin, 1980

Temporality of built elements

The compound had a fence of bamboos joined by papyrus cords. As shown in **Figure 10,** it would incrementally evolve from a single unit for a couple to host an extended family including son's families.

Because the fence was made of wood/bamboo which after drying was good for fire, people used it for firewood and would be reconstructed periodically. As all other building types, the entire hut was a basketwork dome on a superstructure of bent poles woven by papyrus leaves and reeds. The interior had hoofed pillars, these elements could be movable in case of need. Red reeds, and papyrus intensive in marshy valleys were used for weaving the dome. All these elements would eventually decay and be re-used as organic materials in nature while grown vegetation are used to replace them. This process of the temporality of built elements exemplify what Branzi's projects propose as an urbanism that is a critique of environmental, economic and aesthetic failures of the contemporary city, with an embodiment of potential parallels between agricultural and energy production (White and Przybylski, 2010).

The extrapolation of this compound model in what Branzi calls "weak urbanization" would mean settlements that are organisms on extensive fields, consuming the products of nature, and becoming food for nature as they grow and decay or become sources of energy, thus, being parts of a system that generates no waste and no threat to the natural environment.

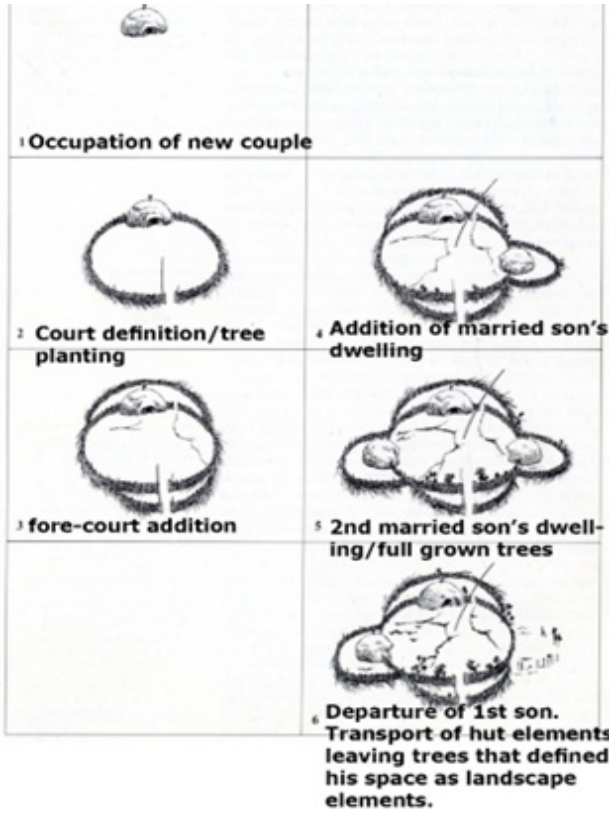

FIGURE 10
Life of a living compound
Source: Adapted from Acquier, 1986

DISCUSSION

The below section discusses the two selected contemporary urban projects in Rwanda and Burundi. The research sites were selected since the authors reside in Rwanda, and have had successful architectural practice in both Rwanda and Burundi and hence familiar with the two projects.

Gahanga cricket stadium in Kigali. The landscape turn

Figure 11 shows the site of the Gahanga cricket stadium in Rwanda, as well as the topography land-use hierarchies in the land of a thousand hills. The stadium is in mid-slope.

FIGURE 11
Gahanga Cricket Stadium, Rwanda
Source: Johnson. and Temidayo , 2018

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Completed in 2017, the project is the first Cricket Stadium in Rwanda built in the periphery of the city in Gahanga town, 12 km south of Kigali, the capital city. Gahanga is strategically located as a significant entrance into Kigali city and well connected to both Kigali and the upcoming Bugesera international airport. The town gradually developing into a unique city of the future (Karuhanga, 2017). The project was designed by Light Earth Designs, designed by team of Peter Rich, Timothy Hall, Michael Ramage.

Architecture and tectonics.

The hilly landscape is manifested in the project by both the form and the inscription of the project in the existing context (ArchDaily, 2017). The project is indeed a manifestation of landscape urbanism's ability to synthesize landscape, architectural and urbanistic fields into fused practices that invent new built fabrics and new landscapes (De Meulder and Shannon, 2010).

The built form is a pavilion covering three buildings whose rooftops are terraces under shade. It extends behind terraced seats overlooking a circular green pitch defined by a slightly modified topography. The eloquence of the postmodern approach in which hyper-design is usually disguised in non- design and vice- versa (De Meulder and Shannon, 2010), is silenced in the project by a distillation of the built fabric from nature while keeping a symbiotic relationship of the two in a way that design borrows the random spectacular constructions of the non- designed nature.

Breaking down the elements of place.

Building with/for nature

The built form of the pavilion physically follows the logic of hills undulations and topography as ketch in **Figure 12** shows.

FIGURE 12
Vaults sketch
Source: Castro, 2017

The amphitheatre terraces which are carved out in the topography, used also as access to the building from the pitch make the topography not a challenge to overcome but a reality to be embraced and enhances the building performance. Physical laws of nature are followed by using a parabola with resolution of forces toward the ground making it a stable expressive monument mimicking a bouncing ball and the hilly topography, as shown in **Figure 13.**

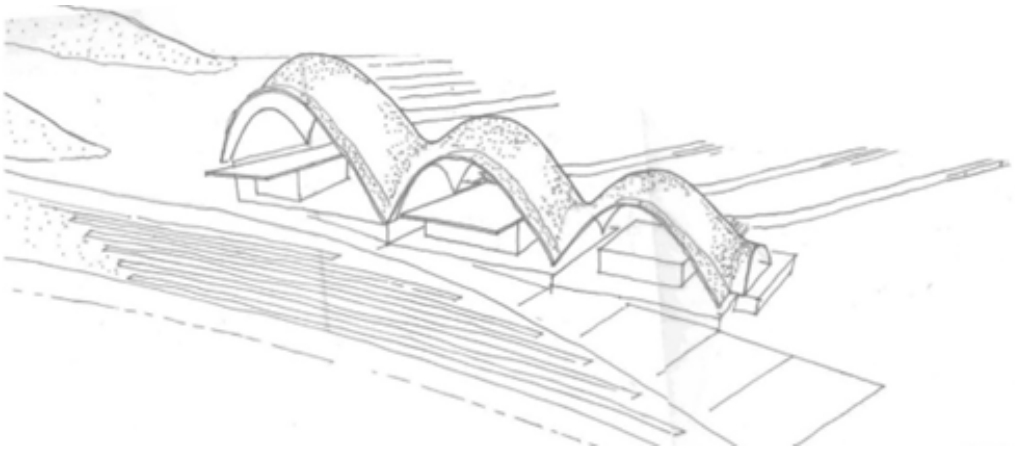

FIGURE 13
Vaults/terraces sketch
Source: Castro, 2017

Built-form as a contextual product:

The vaults are a revival of the Catalan vaults, masonry layered thin shells of tiles under compression as shown in **Figure 14,** and the tiles produced on site and by low skilled locals (King 2016). As Czerniak (2006) argues, "to think about landscape is to think about site", addressing bigger urban social and urban fabric concerns is key. The building construction involved local people in need of work, used local materials, systems of rainwater harvesting for addressing water shortage and introduced new building technologies that could re-orient the construction industry to more sustainable practices with social impact in mind (King, 2016).

FIGURE 14
Vaults sketch
Source: Castro, 2017

Multiplicity of functions, the permanent vs. temporal:

Beside being a stadium for professional sporting, the project is an open urban asset, enhancing recreation from all walks of life in the city due to supporting facilities such as cafes and community health supporting initiatives and its physical openness as it is, now, not defined by constructed walls and gates but by a manipulated topography. Thus, fulfilling its purpose of being social place.

The functionality of this project provokes the non-opening of beautiful landscapes enclosed and protected from the public in the city and shows, what they can be and do if they embrace the same urbanism. The houses below the sheltered terraces are used as permanent spaces for the service areas, the changing rooms, an office and a restaurant. The open access to the mezzanine-terraces under the open vaults create a sense of impermanence, due to the feeling of absence of built edges that normally buildings delineates their boundaries with, as illustrated in **Figure 15.** In this perspective, the built generates an ensemble whose differentiation of the built and the landscape is nearly impossible.

FIGURE 15
Stadium multi-use
Source: Johnson. and Temidayo , 2018

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The library of Muyinga in Burundi. Starting from a vernacular inspiration

Completed in 2012, the project is the first library in Muyinga, Burundi built in the country's small city of Muyinga, which is located 200km North of Bujumbura, the capital the city. It was designed by the Belgian practice BC Architects as the first instalment of a school for deaf children, built with local materials and techniques and more importantly constructed with the help from the community and local cooperation with: Odedim Muyinga NGO, Satimo VZW, Sint-Lucas Architecture University, Sarolta Hüttl, Sebastiaan de Beir and Hanne Eckelmans (deisgnboom.com)

Architecture and tectonics.

The design inspiration in vernacular. The design and construction process, while heavily driven by participatory process attempts to interpret history and vernacular to inform the contemporary urban project (archdaily.com).

FIGURE 16a
The longitudinal hallway
Source: BC Architects, 2012

In the indigenous setting, it is common to find children reading lying or seated on the floor and/ or playing by climbing trees. This common form of entertainment has been interpreted in the design using a suspended mezzanine floor made of woven hammock and stepped cozy seats, which allows children and young readers to dream away with the books. (archdaily.com, 2012).

Breaking down the elements of place.

Building with/for nature

The project accommodates existing slopes and trees with local available construction materials,

It has longitudinal hallway like portico, which is heavily characteristic of the Burundi-an traditional house, still largely used in the region, as a not only a connector space between the rooms but also a buffer protected form heavy rains and pounding sun common in the region, hence creating a nice shaded area for social interactions to occur.

"Life happens mostly in this hallway porch; encounters, resting, conversation, waiting - it is a truly social space, constitutive for community relations" bc architects.

The hallway porch flows into the streets, where blinders control access and children are given the opportunity to enjoyably read form a variety of positions as illustrated in **Figures 16 a and b.**

FIGURE 16b
Stepped reading areas at entrance to the main space
Source: BC Architects, 2012

as shown in **Figure 17,** using local techniques. For walling, compressed earth blocks (CEB) were reinforced with a series of columns and in-filled walls to give it the structural soundness. CEB ensure a short supply chain and lowest embedded energy in the construction.

For roofing, wooden members make up the rafters with sun-baked clay tiles on the roof. For the interiors, the flooring and bookshelf steps were made form locally available timber, whereas a handmade net hammock for reading was weaved from locally available sisal fibre and woven by local communities.

FIGURE 17
Building from nature, construction works in progress
Source: BC Architects, 2012

The project strikes a balance in its composition, with the volumes sitting in comfortably within its surrounding context. As illustrated in **Figures 18 a and b,** the everyday community life continues to happen around the library and evidently both human and livestock life remains vibrant in the library's front street.

FIGURE 18a
library of Muyinga and its immediate environment
Source: BC Architects, 2012

FIGURE 18b
library of Muyinga and its immediate environment
Source: BC Architects, 2012

Natural ventilation and ambient reading space inside the library are achieved through perforations and tall street-side openings with manoeuvrable wooden screens.

The built-form as a contextual product:
Beyond the celebration of local materials, in both use and exposure which respond to natural and climatic conditions of the context, the library's primary arrangement of spaces and delineation is inspired from the Burundi-an definitions of spaces. In vernacular Burundi, houses were small rectangular units. The non-existence of the cold season allows the presence of large open and semi-open spaces for daily activities for these housing units, (Kavakure, 2015). The later type of open space became a characterizing feature of the library, as a social space rooted in local culture (BC Architects, 2012).

In Burundi, as well as Rwanda human settlements exhibit a very important element of the African architecture, which is the clear demarcation of property. It is a design feature that goes as back as to indigenous family-based settlements. For the library of Muyinga, a compound wall of natural stacked stone, acting as retaining wall is extended above ground as illustrated in **Figures 18 a and b**; long enough to define spaces and provision of seats, but short enough to allow views to the valley. This wall serves the traditional role of defining the property and a cherished privacy and safety from the streets by the locals (BC Architects, 2012).

FIGURE 19a
The stone wall demarcating the property
Source: BC Architects, 2012

FIGURE 19b
The open and semi-open spaces
Source: BC Architects, 2012

Multiplicity of functions, the permanent vs. temporal:

The discussed feature of the portico, which is a social space and a connecting element is an obvious manifestation of concept of the multiple functions of the spaces of the library. This multiplicity, is in the interior too; wooden platforms and the sisal mezzanine do by providing both a recreation and reading space. In both design features, the multiplicity depends on the qualities of the spaces which are able to be one space for one activity, or more, either simultaneously or one after another, which make their permanence an accommodation for temporality, as shown in **Figures 20 a,b,c and d.**

FIGURE 20a
The portico social space
Source: BC Architects, 2012

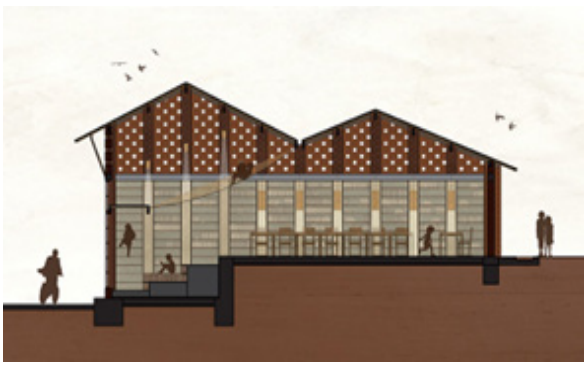

FIGURE 20b
A section of the library, wooden platform and sisal mezzanine
Source: BC Architects, 2012

FIGURE 20c
The main reading hall
Source: BC Architects, 2012

FIGURE 20d
The suspended hammock reading area
Source: BC Architects, 2012

A synthesis of the two landscape urbanism projects in time and place

Through the lens of the indigenous settlements especially the "traditional compound" in Rwanda and Burundi, and the two contemporary urban projects; Gahanga cricket stadium and Library of Muyinga, this section frames the findings vis a vis the theoretical discussions of their landscape urbanity.

The two contemporary projects selected are unique in a way as the design stems from a vernacular inspiration, which is not the case for many urban projects in the African city today.

The case studies share common points converging to ecological considerations such as adaptation of the built fabric to time, context in both the social and physical realms, the understanding of ecology of scales, the use of the built aspects in the natural and vice- versa. Moreover, even when these points differ in terms of the specific approach of each project, they both help explain landscape urbanism as an urbanism that provide a comprehensive response to time, scale and context by carefully forging the natural landscape elements with built structures as shown in **Table 1.**

TABLE 1

A comparative Summary of the indigenous and the two contemporary cases.

Adaptation to	Indigenous landscape	Contemporary case 1 (Gahanga cricket stadium)	Contemporary case 2 (Library of Muyinga)
Time	Changing of the built with landscape through birth, growth, death and re-use	The flexibility of the built with landscape to fulfil needs of different people at different spaces	The possibility of one space/design element within landscape to serve different purposes
Scale" casco"	Ecology that works on the level of the hill complemented by that of the compound	The project relates to the immediate contextual topography and connects to extended views	The project relates to the immediate contextual topography and connects to extended views
Social context	The built and the manipulated topography highly depend on socio-cultural practices	The landscape features with innovative built forms open the new spaces to the society in need.	The building process address socio-economic concerns of the locals, through enhancing local economy and involving locals in construction, and the building is a response to an existing social need.
Physical context	Not only the built relate to nature but the created landscape relate to natural features of land	The built fabric is integrated within the landscape, seeming to grow from it	The built is articulated to respond to topography, views, climatic conditions with honesty to materials that expose the natural beauty of the area.

Source: Authors, 2022

In the comparative summary, the contemporary designed cases of Gahanga Stadium and Muyinga library reflect the traditional ways of landscape settling, in a sense that is not literal as in for example; adapting to different needs at different times in contrast to the traditional ones that change even built elements according to needs. However, the key elements that were highly appreciated in the traditional, the trees, in both physical definition of space, usefulness for food,

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shelter in both modified and natural form have lost its importance in the case of the Stadium and the library, as an interpretation of the traditional. There is no doubt that the social life, activities, space definition, and sense of place would be radically enhanced for better fulfilment of its role as unique public spaces in the city.

The case of Gahanga cricket stadium highlights how the traditional embedment of the built into the landscape can be re-interpreted from mere placement of the built in landscape. The project misses trees from a landscape urbanism perspective. Trees, not understood as decorative elements only as those in the Rwanda's capital city's roads. Given that shading, is a necessity for such kind of space. Natural shading of trees would have complemented the minimal vault shading. What if these trees are fruit trees whose harvest is for the public, the intended creation of a unique social space would be accentuated?

The case of Muyinga library was used to highlight how even a small urban project, an extension to a school infrastructure can incorporate transformative ideas about traditional practices of place-making. The project illustrates various ways that place-based and heritage-led architecture and urbanism have been applied in contemporary projects. The participatory processes engaging local communities and stakeholders in the conceptualization and realization of the project as a societal glue- that puts everyone and everything together as opposed to most top-down non-participatory architectural and planning practice, dotting most urban projects in the context. However, it embraced the same neglect as Gahanga stadium, of the role of nature elements such as trees as part of the whole landscape urbanism idea. Trees remain a different entity, or another spatial component defying the logic of their usefulness in both shading its open spaces and space definition in the traditional spatial configuration.

CONCLUSION

This paper makes enquiries of how the traditional landscape was composed, in order to shed light onto how to better visualize contemporary landscapes, utilizing the past as a medium of visual communication. This offers a rich laboratory for debate around the importance of indigenous knowledge and the evident intuitive ecological-planning, which are not very evident in many current research and practice.

Evidently, colonialism significantly impeded the evolution of traditional African architecture and planning, by the weak acknowledgement of the pre-existing architecture and local knowledge by the local communities. However, it was conjectured that years preceding colonialism were characterized by pre-existing local knowledge on architecture and planning.

After an in-depth exploration of the key design paradigms using two case studies, the main argument this paper makes is that the combination of place-led and heritage-led strategies offer contemporary projects the best chance to integrate indigenous knowledge through modern architecture and planning, in a re-weaving of ideas and actions that point to a promising future of sustainable place-making.

Indeed, successful efforts in re-contextualizing indigenous landscape urbanism are witnesses in both the contemporary urban projects analysed. As discussed, on one hand, the process has made both bold interpretation of ideas and implementation techniques, and on the other, there are still areas of improvements in the way vernacular inspirations and modern techniques can be better adapted into the local context.

The two projects reassure us that the otherwise often overlooked components of heritage and place, can still be re-weaved back into the contemporary urban development processes by embracing an integrated approach that harnesses the best attributes of each paradigm. This supports the generic principal that 'good' urbanism and place making ought not to ignore the local situation and contextual realities in favour of dogmatic design practices in the chase for urban fantasies.

RECOMMENDATIONS

From the findings, we argue that it is important for policy and practice to embrace the idea that every landscape has something generative, that should be preserved and cautiously grown on. This position does not necessary support freezing projects in pace and time, but rather promoting the culture of looking backwards for inspiration

to move forwards. Additionally, the application of this logic across small to medium to big projects is equally important.

We end by suggesting that contemporary landscape urbanism for the African city can still profitably re-root its mould from indigenous inspiration to achieve socially, economically, culturally, and environmentally-sound architecture and planning.

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