

Cultural landscape value and spatial representation of trees in a rural Nupe community of Nigeria

Isa Bala MUHAMMAD

PhD candidate, Faculty of Built Environment, Universiti Teknologi Malaysia, 81310, Johor Malaysia, ibmuhammad3@live.utm.my

Ismail Bin SAID

Associate Professor, Faculty of Built Environment, Universiti Teknologi Malaysia, 81310, Johor Malaysia. b-ismail@utm.my

Trees have been a subject of interest in most environmental scientific studies. These studies are mostly on the effect of trees on the environment, their functions as source of fuel and construction material. However the values of trees in cultural landscape go beyond quantities as they can also have intangible values which can only be expressed but not displayed physically. The importance these intangible values brought about UNESCO's modification of its criteria for the choice of world heritage sites to include values as expressed by people. The Nupe ethnic group in Nigeria has a rich cultural heritage; however, scholar's interests have been on three major ethnic groups of Hausa Yoruba and Igbo. This study therefore explores the cultural landscape values of trees and its spatial representation in a rural Nupe community in central Nigeria. The study mapped out the location of trees, followed by an open ended interview with the compound heads and the data content analyzed. The results showed some consistency in the location and the preference for choice of fruit trees within the compounds. However a further analysis shows that there are more varieties of trees fulfilling the needs of the community than those found within the compounds.

Keywords: Cultural landscape, Trees, Space, Values, Nupe

1. Introduction

Cultural landscape is made up of physical settings of the built environment and activities of a given community. It is an environment where people interact with natural and man-made features such as buildings, streams, footpaths and roads (Rapoport, 2004). People relate with their environment to confer meanings and values in such a way that it becomes culturally influenced (Bergeron, Paquette, & Poullaouec-Gonidec, 2014; Lin, 2012). In cultural landscape, these values could be tangible and

intangible (Nunta & Sahachaisaeree, 2010). For example a particular tree could provide a tangible benefit of fruit and shade for a particular locality while in another community its value could be for spiritual benefits (Gunner, 2005). Trees are important vegetative feature especially in rural communities where they fulfil the requirement of shelter, food, economic and also spiritual needs (Barau, Ludin, & Said, 2013; Said, 2001).

Human interactions were perceived as negative to the ecosystem, but overtime the importance of socio-

cultural interaction of people and their landscape began to gain prominence because human cultural actions are now seen to have their own positive attributes on the landscape (Gunner, 2005; Ina Gavra, 2012). In fact the importance of cultural values brought about the UNESCO's 2005 improvement on its criteria for the choice of heritage sites (Rössler, 2006). In its resolution, UNESCO stated that amongst other criteria to be included in the choice of heritage sites is people's identity as expressed in their landscape both in tangible and intangible forms (Gullino & Larcher, 2012).

Ecologists have also joined the trend of advocating for an understanding of people's perception towards the conservation of the ecosystem. Traditional values are now seen to be complimentary in the restoration of the ecology and its viability. For example, indigenous values associated with landscape features including trees have helped in the protection of biodiversity across the globe (Phuthago & Chanda, 2004). Such example is found in the Himalayan mountain landscape of Tibet (Salick et al., 2007). The local people have spiritual values associated with the forest and thus some rare tree species in the forest have been prevented from being cut. Also in South Africa, Zulus known as Inkanyamba have values associated with mountains and its features, such that activities of the people that displease the hill could lead to hurricanes (Gunner, 2005). This belief is strongly held such that trees in the forest are not cut. Again, in southern Nigeria, some species of monkeys inhabiting some forest were believed by the people to be sacred and so the whole forest has been guarded by the indigenous people against deforestation (Baker, Tanimola, Olubode, & Garshelis, 2009). These types of values associated with trees are found in various communities in Nigeria (Adedayo *et al.*, 2010). These narrations are not only centred on cultural values associated with landscape features, but also indicate that human cultural activities could be agent for the preservation of the landscape. What is needed is the understanding

of how such values are represented in the culture of the people especially trees.

Nigerian rural communities like many other African rural communities rely on trees as a major source for fuel wood (Tabuti, Muwanika, Arinaitwe, & Ticktin, 2011). As such most studies on trees focused more on the effect on the environment and also the benefits for the provision fruits, and shades (Pote, Shackleton, Cocks, & Lubke, 2006).

Furthermore, the concerns of most cultural research works in Nigeria are centered on the three ethnic groups of Yoruba, Hausa and Igbo (Adegbija, 2004). The Nupe ethnic group with a considerable population of over 1.5 million is devoid of cultural landscape studies. Moreover, the Nupe ethnic has rich cultural values and practices so much so that each Nupe community is characterised with its uniqueness in cultural practices and norms. This was asserted by Nadel (1942) in his pioneering anthropological work on Nupe community. This study, therefore, explores the cultural landscape values of trees and its spatial representation in a rural Nupe community in Nigeria.

2. Values of Trees

Trees have different modes of assessment by people in the physical, biological and human landscape studies (Harden et al., 2014). The value and its interpretation therefore depend on the inclination of the assessor. For example, the physical scientist trend of concern in the value of trees are mostly on their function as agents of carbon sequestration, air quality improvements, storm attenuation and energy conservation (Roy, Byrne, & Pickering, 2012). To the ecologist the value of tree is more on its affordance for the survival of specific organisms or, on smaller plants which depend on them for their survival, (Ódor, Király, Tinya, Bortignon, & Nascimbene, 2014).

Sociologist's value of tree focusses on how it affects human social behaviour, for example a street lined up

with trees would be valued for its affordance to encourage socialisation of people within the community or how it affects the movement of people from one point to another (Elings, 2006). Psychologist value of tree can be on its therapeutic effect on people such as relief of stress and anxiety (Adevi & Mårtensson, 2013). All the foregoing modes of assessments on the values of trees do not put into consideration people's perceptions and what it means to them. However, with the emerging relevance of human interaction with landscape towards the sustainability of the ecosystem, the assessment of values on trees would need to go beyond its external attributes on human behaviour (Linehan & Gross, 1998; Stephenson, 2005). There is a need, therefore, to include people's cultural values and perceptions. These perceptions are however best understood through the people who inhabit the landscape (Blommaert & Jie, 2010). the understanding of landscape through the indigenous people therefore forms the premise for the study of the cultural landscape values of a Nupe community in Nigeria.

3. Nupe community

Nupe communities are located within the middle belt of Nigeria (Figure1). It is situated within the lower basin of river Niger and Kaduna (Idrees, 1998). Substantial numbers of Nupe communities are found in Niger state with a spill into the neighboring states of Kwara and Kogi. The most noticeable natural landscape feature is river Niger that cut across Nupe communities. Nupeland is characterised with both hinterland and riverine settlement. This makes the Nupe people amiable to farming and fishing. Nupeland is characterised with plants found in the Northern Sahel Savannah and also the southern rain forest region of Nigeria. This also exposes the Nupe communities to a wide range of natural landscape (Blench, 2008). The variations in landscape of Nupe community also come along with different unique cultural life of the people. A traditional religion

called *gunnu* was seen to be fairly represented in most of Nupe communities (Nadel, 1937). Anthropological studies have also buttressed the diversity of cultural values amongst Nupe communities. The varying cultural norms found in each Nupe settlement offer opportunities for the study of its cultural landscape.



Fig1: Nupe land in Nigeria

3.1 The study community, Doko

Doko is one of the twelve main towns that constitute the nucleus of the Nupeland (Idrees, 1998). The town was formed from the fusion of several clans who settled on the hill for protection against the early 18 century raids on Nupe communities. The hill as shown in Figure 2 is a dominant feature in the community landscape which also formed part of the ancestral homes of the community before they migrated down to the lower plains



Fig 2: Doko community surrounding hill landscape

The people of Doko are mostly farmers who live in an extended family system with the oldest extended family male member as *emitso* (head of the compound). The compounds are laid such that the

individual nucleus family courts sum up to form the main compound (Figure 3). *Emitso* represents the family in the council, as such all the affairs of the extended family are referred to him. He also holds the key of information on the values and activities of the compound.

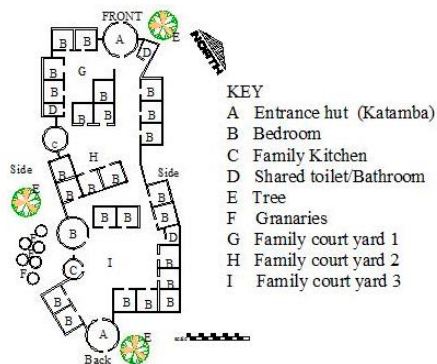


Fig 3: A compound layout in Doko community

4. Data collection

The community is made up of about one square kilometer with 61 recognized compounds. Firstly, an outline of the community was mapped out through the use of Google map. The mapping of the community was then followed by physical verification of the location of tree types in each of the compound. Fifty one (51) compounds out of the total 61 compounds were verified. Furthermore an open ended interview was conducted with the compound heads (n = 51). The interview questions were on their everyday useful plants. This is to allow for the generation of a value count of plants used by the individual compounds within the community. Each time a plant is mentioned for a particular use, it is given a count of one. The values of trees as fuel wood were not considered because it is established to be the major source of energy for rural communities in Africa (Damnyag et al., 2013). Interviews were conducted in Nupe and recorded in voice recorders for transcription and content analysis.

5. Results and discussion

5.1 Distribution and location of trees

The largest percentage (88%) of the compounds was planted with trees and the highest percentage (26%)

was in front of the house (Figure 4). Combination of trees planted both in front and at the back of the house was 51%. The results suggest that the most preferred location for trees was the front of compounds near katamba (the entrance hut). *Katamba* marks the entry point into each of the compounds. It is a space where the male members of the compound rest and relax in the evenings after the day's work at the farm.

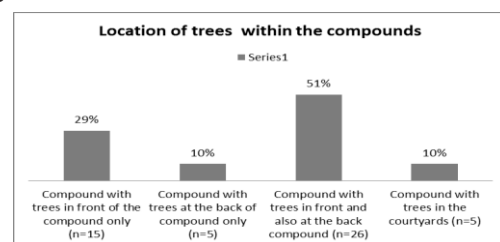


Fig 4: Location of trees within the compounds

5.3 Types of trees planted

The species of trees found within the compounds are illustrated in Table 1. Nine species of trees were planted in the compounds.

Table 1: Species and percentage of trees in the compounds

Sn	Local Name	Scientific name	%
1	Lemu	<i>Citrus sinensis</i>	39%
2	Gbanchi	<i>Ficus platyphylla</i>	12%
3	Mungoro	<i>Mangifera indica</i>	11%
4	Kochi	<i>Butyrospermum parkii</i>	9%
5	Goyiba	<i>Psidium guajava</i>	8%
6	Nimu	<i>Azadirachta indica</i>	8%
7	Yikunu	<i>Elaeis guineensis</i>	5%
8	Yaba	<i>Musa specie</i>	5%
9	Konkeni	<i>Carica papaya</i>	3%

Seven out of nine species were fruit producing trees, while 80% of the compounds visited have at least one fruit tree planted. *Lemu* (*Citrus sinensis*), was the most common tree because it provided fruits and shades all year round. The only non-fruit trees planted were *Gbanchi* (*Ficus platyphylla*) and *Nimu* (*Azadirachta indica*). The choice of *Gbanchi* is due to its fast growth while *Nimu* provides shade all year round. The preference of *lemu* over other fruit trees is explained by a respondent in this anecdote;

"We need the shade from the orange tree"

because, it grows fast and also produces fruits, so we planted it”

Cultural landscape entails how people interact with their landscape and what it means to them. (Stephenson, 2005). As such for an effective cultural landscape values, the people who inhabit the landscape are better situated to give their cultural values and what the landscape means to them. The results (Table 2) shows more species of trees valued by the community members aside from those physically seen (table1) within the vicinity of the compounds.

Table 2: Location, values, and uses of trees

Item	local name	Scientific name	Location found		Traditional values		Uses		No*
			Ho	Fa	Med	Spr	Eco	Shd	
1	Wuchi	<i>Khaya senegalensis</i>		x		x			42
2	kulanchi	<i>Crateva adansonii</i>		x		x			24
3	Goyiba	<i>Psidium guajava</i>	x	x	x		x	x	22
4	Nambi sunsun	<i>Crossopteryx febrifuga</i>		x		x			18
5	Nimu	<i>Azadirachta indica</i>	x	x	x			x	16
6	Kpache	<i>Terminalia schimperina</i>		x		x			10
7	Konkeni	<i>Carica papaya</i>	x	x	x		x		14
8	Lemu	<i>Citrus</i>	x	x	x		x	x	12
9	Yaba	<i>Musa sapientum</i>	x	x	x		x		16
10	Mungoro	<i>Mangifera indica</i>	x	x	x		x	x	12
11	Bafin	<i>Pilostigma thonningii</i>		x		x			8
12	Gbashi	<i>Sarcocephalus latifolius</i>		x		x			8
13	Gbanchi	<i>Ficus capensis</i>	x	x	x			x	6
14	Zanchi kpara	<i>Pterocarpus erinaceus</i>		x		x			6
15	Lonchi	<i>Parkia biglobosa</i>		x		x		x	6
16	Eko	<i>Butyrospermum indica</i>	x	x	x		x	x	4
17	Danchi	<i>Daniellia oliveri</i>		x		x			8
18	Jinjerechi	<i>Spondias mombin</i>		x		x			4
19	Putu	<i>Neocarya macrophylla</i>		x		x			4
20	Kukukpachi	<i>Bombax buonopozense</i>		x		x			4
21	Saachi	<i>Erythrophleum suaveolens</i>		x		x		x	4
22	Yikunu	<i>Cocos nucifera</i>	x	x				x	8

*Indicates the number of mentions from all the respondents (n=51)

Ho=Home location, fa=farm location, med=medicinal value, spr = spiritual value, eco = economic value , shd = shade value

A total 22 tree types were mentioned by the respondents (n=51). The tree with the highest count is *Wuchi* (*Khaya senegalensis*), followed by *Kulanchi* (*Crateva adansonii*) both indigenous with a count of 42 and 24, respectively. *Wuchi* is traditionally valued for its medicinal properties, the bark which is made into decoction for the treatment of fever, skin diseases, body pain, and blood stimulation and also in the treatment of menstrual cramps.

The root of kulanchi is culturally believed to cure skin cancer. The roots are dried, milled and taken with porridge and also applied to the affected area of the skin. The next set of trees with high count values are *Goyiba* (*Psidium guajava*), *Nimu* (*Azadirachta indica*), *Kpache* (*Terminalia schimperina*) and (*Kokeni*) *Carica papaya*. The decoction of leaves from any three of the four aforementioned tree species is also used culturally to cure malaria.

Deductively, trees with the highest cultural values are those associated with the treatment of malaria. This is because; malaria is endemic in rural flood plain paddy growing communities (Namsa *et al.*, 2011). As such all trees associated with the treatment of malaria within the context of the cultural landscape are valued more.

While trees valued for their spiritual benefits are *Bafin* (*Pilostigma thonningii*), *Gbashi* (*Sarcocephalus latifolius*), *Zanchikpara* (*Pterocarpus erinaceus*), and *Saachi* (*Erythrophleum suaveolens*). *Bafin* is used spiritually to treat people that always quarrel with each other. The anecdote from a family head buttresses this;

“*Bafin had to be prepared to treat my two wives that are always quarrelling with each other*”

Seven leaves from *Pilostigma thonningii* is plugged and dried for seven days, the leaves are then grounded and mixed with honey. The decoction is then shared into two and then individually given to the contending parties. It is a cultural belief that continuous fight and quarrel between two parties can be caused by evil spirits and thus curable through

traditional medicines. Nightmare is also a traditionally treatable ailment; the bark of *Saachi* (*Erythrophleum suaveolens*) is dried and grounded into powder form and taken orally before going to bed.

Furthermore there are also trees which on their own do not constitute spiritual values because they have to be mixed with other condiments. The final products are thus given local names, a 68 year old native barber who also serves as a native doctor to the community explains:

“We have these medicines called efo yikere, waka, tasubu, etun, and wasa, they are all made from the combination of different roots leaves and barks”

These medicines mentioned, are said to have multiple functions, for example *wasa* is on one hand is said to serve for the treatment of snake bites, while on the other hand it is associated with being used spiritually to wade of thieves. *Etun* which is also made up several different tree parts is used by the community to guard against natural phenomena, such as thunder strikes.

“The drinking of etun prevents thunder strike on the person that takes it”

Thunder is prevalent in the community and thus it is believed to be associated with evil spirits and therefore preventable. More of these are *tasubu* for spiritual protection of properties against thieves, and *echa* for the quick acceptance of prayers offered to the gods. The knowledge of this category of traditional medicines is mostly limited to the native doctors and as such most community members refer to them for this type of medicine.

It can be surmised that, spiritual values of trees in Doko community are mostly associated with the products of trees such as the bark, the leaves and the roots. This is however different from what is obtainable in Hajong community in India where medicinal trees are found planted in the compounds (Sharma, Pegu, Hazarika, & Das, 2012).

Trees with economic values within the Nupe community are *lonchi* (*Parkia biglobosa*), and *Eko* (*Butryspernum parkii*). *Lonchi* is a native tree that grows up to 12 meters high. It is deciduous with a very thick bark and produces fruits in form of pods which contains yellowish floury pulp. The seeds are used locally in the preparation of *kula*, a traditional soup seasoning condiments, while the yellowish powder from the fruit is used for the preparation of porridge called *elonuwa*. *Elonuwa* is prepared by the mix of guinea corn flour into the hot extract of the yellowish powder.

Butryspernum parkii is traditionally popular also for its edible soft skin and the nuts use in the preparation of shea nut oil. It is a tree that produces its fruit at the beginning of the raining seasons which is between March and April every year. The fruits are allowed to fall naturally and they are picked by women in their respective family farms. The nuts are dried and the shells removed through shelling to expose the soft seeds. It is from the pounding and grinding of the seeds that shea oil is produced which is both used for cooking and cosmetics. However most families do not go into the stage of oil production, rather the seeds are sold due to its high economic value in that form.

Spatially, within the community's cultural landscape, there exists a disparity between the number of species of trees found within the compounds and those valued by the community members. The non-representations of medicinal and spiritual trees within the compound were explained by respondents with this statement:

“We fetch leaves, barks or roots of these trees once in a while, which lasts for some months and sometime it could last us for a year”

Even though these medicinal trees are used by the community members, they do not need to have them within immediate reach since they could fetch enough to last them for some time. This is also reinforced by another respondent who gives the

reasons for not having such medicinal trees domesticated as

“We go to farm every day and therefore we can fetch these medicines on our way back home”

This suggests that medicinal plants are not planted within the compounds because harvesting them is considered as part of the daily routine of going to the farm. Fruit trees are therefore domesticated while the cultural values of the non-fruit trees are derivable from their locations at the farms.

6. Conclusion

The cultural landscape of Nupe community shows that most compounds have trees in front of the compounds near the katamba (entrance hut). They are mostly fruit trees and also trees that provide shade for the male members of the families who rest the day's work at the farm. However, a greater percentage of medicinal and spiritually valued trees are not seen within the immediate vicinity of the compounds, rather they are located at the farms. The spiritual and medicinal values of such trees are more on the products of the tree parts such as the roots, leaves and the bark. For these reasons there is a difference in the spatial distribution of trees found within the compounds and the actual species of trees fulfilling the community's daily needs. This implies that, trees with multifunctional attributes of providing fruit and shade are more likely to be nurtured within the compounds while those with spiritual and medicinal values are more likely to be protected at the farms.

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