

Traditional Wisdom in Land Use and Resource Management Among the Lugbara of Uganda: A Historical Perspective

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Abstract

This article is the result of PhD research work into traditional and modern law, order, and judicial systems among the Lugbara of Uganda. Although a segmentary society, the Lugbara used indigenous wisdom and lived experience to develop traditional law to guide in the management of land, flora, fauna, and water for posterity. Cultural beliefs, values, norms, and practices that guided land use and resource management were handed down by word of mouth through generations. Clan elders were the custodians of clan resources, guiding the people in negotiating the pitfalls and contradictions of human life. Development and its associated problems could be addressed using indigenous knowledge and wisdom. The beneficiaries need the capacity to sustain development by using the available local knowledge and resources. Rethinking traditional knowledge and wisdom could act as a strategy for sustainable development.

Keywords

traditional wisdom, Lugbara, land use, resource management

Introduction

Modern African states rely on state law and policies for natural resource control and management. Precolonial societies developed norms and rules out of traditional wisdom to regulate human conduct in the use of socioenvironmental resources. Traditional wisdom, the creative practical knowledge used to solve life challenges, was developed through socioenvironmental experience. It was based on established cultural norms, values, beliefs, customs, and practice passed through generations. Traditional wisdom is part of a people's traditional knowledge system. Knowledge is a body of systematic thinking about a subject matter (Fox, 1999, p. 2). Therefore, traditional ecological knowledge is the "advanced knowledge systems highly specific to local environments and ecosystems" (Mueller & Tippins, 2010, p. 994). Environmentalists and academics have questioned the relevance of traditional practice to contemporary society. Although considered to have a negative effect on natural resource conservation, research clearly demonstrates that traditional resource management methods were still valuable means of managing resources. As a contribution to the ongoing debates, this article reports on a historical study that explored traditional law and order system among the Lugbara to address land use and resource management issues.

The Lugbara are a Sudanic-speaking subgroup of the Moru-Madi group of the Eastern Sudanic group, classified by Greenberg's linguistic classification as the Chari-Nile group (Atkinson, 2010, p. 62; Middleton, 1999; Shiroya, 1984; Sutton, 1968, p. 94). Their origin is traced to the Bari land in the modern-day Rejaf-Juba region in South Sudan. Between 1000 and 1500 AD, the Moru-Madi group displaced by the Lotuko and Bari invasions finally settled in the present-day Lugbara territory (Shiroya, 1972). The ancestors of the Lugbara might have arrived in their present homeland from 1600 AD to 1650 AD (Middleton, 1999; Shiroya, 1972, p. 23). The Lugbara ethnic group is said to have emerged in the second half of the 19th century (Shiroya, 1972). Oral tradition among the Lugbara alludes that the indigenous inhabitants of the area were the Lendu (*'bale*) and Okebu (*Ndu*) hunter-gatherers. Place names such as *Kuluva*, a misnomer of the Okebu word *kuluruva* ("the enemies have arrived"), are cited as evidence of their earlier occupation.

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Oral tradition among clan elders states that the Lendu and Okebu were skilled in iron smelting, hunting, and traditional medicine. The Moru-Madi, a sedentary farming group growing finger millet and pigeon peas, depended on them for iron implements such as bows, arrows, hoes, ornaments, and traditional medicine. A patronage–client relationship developed between the Moru-Madi groups and the indigenous inhabitants who had sought for security and over lordship from the sedentary group. It resulted in the assimilation process through which the Moru-Madi acculturated the Lendu and Okebu, often adopting aspects of their way of life. The intermingling between Moru-Madi and the Lendu and Okebu resulted in the emergence of the Lugbara as a new group and culture. Shiroya (1984) described the cultural unification and assimilation process as the “Lugbara-isation” process that might have occurred from 1790 to 1850 (Shiroya, 1972, 1984, p. 28).

Nevertheless, the unification and assimilations witnessed population increase and pressure on the environmental resources, which often caused conflicts. The Lugbara from their lived experiences and wisdom developed practical solutions to socioenvironmental problems, guided by custom, values, morals, and beliefs accumulated over time. This wisdom progressed into recognized social norms and practice used to maintain order and stability among the Lugbara. Society, being rational, used cognitive senses and intuition to adapt to the environment and circumvent socioenvironmental challenges arising from land use and resource management.

This study was inspired by the belief that modernity was undergoing a crisis. Modernity is viewed as the modern, industrial, and urban way of life (Appleby, Hunt, & Jacob, 1994). It is specifically a Western notion that took root in the 18th century, historically periodicized as “modern,” the period when reason and science triumphed over scripture, tradition, and custom. Modernity is influenced by the notion of the freely acting, freely knowing individual whose experiments can penetrate the secrets of nature and whose work with other individuals can make a new and better world (Appleby et al., 1994, p. 201). Society and culture is dynamic, changing in time and space, and therefore impacts on land use and natural resource management. Clan elders’ narratives point to the depletion of wetlands and species, drought and famine, decrease in soil productivity, and diseases, which are threats to human and wildlife security, as effects of the changes. With modernism and development, tradition is being neglected. Yet tradition is the epitome of social identity, and traditional ecological knowledge defines a people’s identity. It raises the question, whose development? Although a Western mode of thought, modernity, and development should be contextualized to a people’s culture by bearing their social values, norms, attitudes, beliefs, principles, and practices. Modern science and technology could explore traditional wisdom and knowledge of the environment to develop specific explanations.

The study into indigenous wisdom and knowledge in natural resource use and management is based on the historical reconstructionist (contextualist) theory. It maintains that history is still objective and forensic research into the sources, the reconstruction of the past as it actually happened, and the freedom of the whole process from ideological contamination, and the linguistic manipulations (Munslow, 2006). Reconstructionism is built on the belief that truthful meaning can be directly inferred from the primary sources and therefore the more accurate we can become or know history as it really happened (Munslow, 2006). To understand traditional wisdom in resource management, this study explored the Lugbara people’s traditional ecological knowledge as recorded and transmitted through oral tradition.

Concept of Traditional Wisdom

Hornby (2000) defined Wisdom as “the body of knowledge and principles that develops within a specified society or period.” It was used to develop norms and rules that guided resource use and management. Wisdom is inbuilt and develops spontaneously. To van Binsbergen (2008, p. 50; 2009, p. 281), “wisdom is the creative practical knowledge that allows one to negotiate the pitfalls and contradictions of human life (especially in less rule-governed domains manifesting uncertainty and incompatible multiple truth).” Intuitive wisdom is characteristic of traditional and nonliterate cultures (Capra, 1982, p. 41). “The term wisdom has often been used as a respectful evocation of the cultural achievements of the ancestors” (van Binsbergen, 2008, p. 61). Although unwritten and preserved in oral form, traditional wisdom still holds a central position in contemporary African societies such as the Lugbara. In the African context, traditional wisdom is as old as society and existed from the period of early migration and settlement of societies, which in Uganda occurred between the late 15th and early 16th centuries to 1850 (Karugire, 1980). Narratives by the elderly respondents suggested that traditional wisdom (*ondoa*) was the preserve of elders who had accumulated experience.

The value of traditional knowledge of indigenous peoples, and particularly their traditional environmental knowledge, has been recognized (Capra, 1982, p. 41; Johnson, 1992, p. 3; Quanchi, 2004, p. 3). Traditional wisdom could complement modern technology and science as it is based on parallel and similar modes of thought (van Binsbergen, 2009, p. 284). The thought aims at solving ecological problems facing human lives to improve societal livelihood and welfare. The entrenchment of capitalism, secularization, urbanization, modernization, and scientific and technological advancement has witnessed the destruction of traditional wisdom. As colonialism collapsed, globalization led to the destruction of traditional wisdom (van Binsbergen, 2008). The shift from communalism to individualism, a feature of capitalist ideology, has changed the land tenure system from communal or customary tenure to individual ownership. This

has weakened social bonds and collective responsibility over land and environmental resources affecting sustainable resource use and management. “These ancient wisdom traditions must also be recognized as empowering peripheral local communities and reducing their vulnerability and dependence vis-à-vis the encroachment of a global capitalist economy and ideology” (van Binsbergen, 2008, p. 55). Traditional wisdom could be relevant among the Lugbara, 90% of whose population is rural with only 10% urban (Uganda Bureau of Statistics, 2016).

Paradigm Shift From Traditional History to Environmental History

Land use and resource management in the 21st century has given rise to concern among activists and academics. The shift from the traditional approach of studying land and environmental resource within specialized disciplines is attributed to the diverse and complex nature in which contemporary societies view land and land rights. Land and natural resource and their management were viewed from a cultural perspective. An ecological relationship exists between a people or culture (Johnson, 1992; Klingle, 2003). This raised the question of how traditional institutions enforced traditional law and order in land use and resource management.

To understand the relationship between society and the environment, a historical study was undertaken. This article makes a shift from the traditional history of the study of class to society and environment in which the common man lives and interacts. It asserts a relationship between environment and culture, viewing culture and traditional wisdom as key in land and natural resource management. African historians have written a great deal about environmental history, but the relationship between space, natural resources, and culture was not eminent (Klingle, 2003, p. 94). Beinart and McGregor (2003, p. 8) observed that environmental history based on the Marxist philosophy of social class relations in production, rather than interaction between people, culture, and the natural world, was often integrated with agricultural history. The form of environmental history aimed at class emancipation of the peasants and workers from class exploitation through radical revolutions.

This article historicizes man and environment by examining the pattern of behavior, belief system, thought, practices, and meaning to the historical accounts of the use of traditional wisdom in the conservation of environment. Land use and environmental resource management are linked to and influenced by a people’s history and culture, demonstrated by their cultural continuity through time and space. Although environment and culture are dynamic, man’s developmental activities under the capitalist mode are more a threat to the environment than an opportunity. Strategies of coping with development challenges and conflicts have been historicized by rethinking indigenous knowledge and practice an integral part of traditional wisdom. This article neither seeks to

romanticize the African past nor criticize science but provides possible alternatives to African socioenvironmental challenges using the Africanist approach. “People need knowledge of the past, and everybody uses this cognition in his or her own way” (Kalela, 2012, p. ix). Historicizing the local environment provides an understanding of the cultural practices and possible alternatives. The article concurs with Ranger’s (2000, p. 211) notion that the European-invented tradition and colonial-codified African “tradition” (customary law) provided models of subservience that weakened the African form of tradition. The British indirect rule in Uganda invented customary law and customary land rights, which subdued the African and consolidated the European control of power and wealth. The invented tradition from Europe offered Africans models of “modern” behavior and distorted the past (Ranger, 2000, p. 212).

Personal and group narratives by the elders and literature identify key agencies in the invention of European tradition among the Lugbara as the colonial administrators, missionaries, and chiefs. A. E. Weatherhead, locally referred to as “*Jerekede*,” the first district commissioner for the West Nile District, brought the Lugbara people into the tradition of governance and colonial agriculture economy. A retired colonial village chief observed that colonial agricultural law defined land use and resource management based on European modes, eroding traditional resource use and management practices. The study attempts to retrieve and reconstruct the African tradition in land use and resource management.

The paradigm shift in this article was influenced by the idea that invented European tradition has caused the neglect and peril of traditional knowledge and wisdom in land use and resource management. The resultant effect is drought and famine resulting from unsustainable use of resources, leading to decline in environmental resource and productivity. Ranger (2000, p. 262) urged historians to appreciate the effect of invented tradition on African history and tradition. Therefore, the Africanist approach to land use and resource management needs to be reconsidered.

Methodology

This article is the product of PhD research conducted between 2012 and 2015 among the Lugbara people of northwestern Uganda. They are indigenous people organized into five major clans: Aringa, Ayivu, Maracha, Terego, and Vurra within which are subclans and minor clans.

The research explored the Lugbara traditional law, order, and judicial system in the face of modernity. Exploratory research delves into an area where little is known, therefore creating possibility for further research (Kumar, 2005, p. 10). The qualitative orientation of the research aimed at bringing out Lugbara society and culture as realities, placing emphasis on the voice and authenticity of human experience (Silverman, 2013, p. 6).

Sources of history such as oral tradition, written materials, personal testimonies, ethnography, and anthropology were used to retrieve past practices, custom, and traditions on land use and resource management. The relevance of historical studies favors “cultural relativism” that “can lead to tolerance rather than intolerance to understand the position of the other side” (Ghasemi, 2014, p. 4).

The progressive nature of history (Carr, 1987, p. 109) across the three historical periods—precolonial, colonial, and postcolonial—required the use of a historical approach to the study of traditional law and order that addresses the land use and resource management components of society. To understand the changes in contemporary society, the precolonial and the colonial pasts need to be explored.

Anthropological research reports on the Lugbara were analyzed to retrieve past resource management practices. Written documents were used to corroborate oral tradition and personal narratives on the precolonial and colonial periods as the past could not be accurately recalled.

Oral tradition was used to retrieve information about the preliterate past stored in memory. It thrives in the environment that gave rise to it (Vansina, 2009, p. 1). Traditional wisdom among the Lugbara was preserved in memory and transmitted orally and through apprenticeship by clan elders and elderly persons to the younger generation. They conveyed moral lessons on land use and resource management. Oral tradition is an unwritten source about peoples without a writing and is based on unrecorded tradition which was still alive among a people. Historical narratives, legends, myths, fables, anecdotes, and proverbs were the forms of oral tradition used to retrieve the past. However, oral tradition exhibited inconsistencies in the narratives caused by memory lapses due to age. Similarly, the lack of oratory skill among respondents who had the historical knowledge hindered effective narration of oral tradition. The gaps were filled through triangulation and corroboration.

Personal narratives by the cultural leader (*Agoffe*), clan elders, elderly men and women, retired civil servants, and politicians on traditional wisdom were recorded. The elderly respondents shared their wealth of knowledge, experience, and opinions, providing insight into traditional resource management as practiced among the Lugbara. Discrepancies and biases were detected and therefore necessitated the validation of information with written documents and other sources for accuracy and authenticity.

Group narratives by clan elders provided collective thought on traditional resource management as practiced by specific clans. The opinion of the council of elders who were the clan custodians and had knowledge of clan history and traditional wisdom was sought.

The nonstatistical method was used to arrive at the sample size of 108 respondents. The saturation level defined by the point at which no new information could be gleaned from the respondents influenced the sample size used (Kumar, 2005, p. 179). Interviews were conducted in three data sets. The

first set had retired civil servants and politicians who provided insights into traditional resource management from the colonial and postcolonial perspectives. The second set, comprised of the cultural institutional leaders which provided their perspective of traditional resource management as the “invented” cultural leader who came to existence in 1986. The third set had respondents who either witnessed or played a role in the traditional resource management. Personal and group narratives as primary sources were transcribed and analyzed to arrive at the data at hand.

The snowball technique was used to identify informants who had knowledge of the study (Kumar, 2005, p. 179). The traditional clan elders and “invented” Lugbara chiefdom institutional leaders—the paramount chief (*Agoffe*) and the prime minister—were identified. The term *invented* refers to the cultural leaders of the Lugbara chiefdom created in 1986 under a paramount chief called *Agoffe*. Retired and active civil servants and politicians, elderly men, and women with knowledge about the recent past were interviewed. The younger men and women were interviewed to gain insight into their perception and the relevance of traditional wisdom among contemporary Lugbara.

Results of the Study

The precolonial Lugbara society was a segmentary society organized on clan (*suru*) basis. They lacked any form of kingship or even chiefship and had no codified law. However, traditional courts headed by the male adults existed in the household (*aku*), minor clan (*enyati*) and clan (*suru*). Proverbial words and rebukes, caning, curses, and in extreme cases excommunication and mob justice were used to deter unaccepted behavior. Compensation was made to victims to restore relations.

Traditional wisdom and mechanisms were applied in land use and resource management as a means to maintain social and environmental order. Traditional wisdom was an integral part of Lugbara sociocultural life. It was transmitted to the younger generation by elders who were advanced in age, had knowledge of clan history, and were wise and culturally experienced. Traditional wisdom was transmitted through informal mediums such as personal narratives of experiences, clan legends, myths, anecdotes, folksongs and proverbs. Often the young were placed in a practically difficult situation so as to enable the individual or group to discover a way out. Through experience, survival skills were acquired.

Precolonial Lugbara had norms, values, sanctions for orderly conduct, institutions, and practices of social ordering that were mystical and associated to the ancestral spirits. These mechanisms enhanced the resolution of conflicts, administration of justice, and ensured the safety and security of the family and clan members. Traditional wisdom and law were used to regulate the use of socioeconomic resources such as labor, land, water, grazing, and hunting grounds for societal harmony. Societal rules and norms guided individual,

family, and clan behavior and attitude, strengthening the social bond and the sense of social responsibility in the use of environmental resources. Although disputes occurred over rights to land, resources, and livestock at all levels of the lineage, they were settled by the elders.

Lugbara society was organized on a clan basis, with the settlements taking the form of villages settled by a “family cluster” composed of men who were patrilineally related as members of a subclan. Elders (*‘ba ‘wara*) were the principal holders of authority, and the family cluster was under the authority of the genealogically senior man called *ba, ambo*, who was considered an elder and by age was regarded as being closer to the ancestors. His authority was limited to his close lineage, clienteles and the poor without wealth who would live with him. The authority of the elders was socially and geographically limited to the family cluster and village. This enabled them to have control over land use and environmental resources within their traditional jurisdiction. As custodians of the clan resources, the elders regulated the use of environmental resources and its preservation for posterity.

The principle of communalism guided social relations in the clan system where the clan interest overrode that of the individual. The purpose was to collectively share resources and minimize risks, which would otherwise be enormous for an individual. This confirms the Duignan and Gann (1975, p. 51) observations that “African social structures were organized to ensure against loss of income and to share the risk of food production.” They further noted that African kinship systems were, in an economic sense, a means of spreading costs. Kinship obligations based on a system of reciprocal rights required entire families, rather than one individual, to share burdens and ensure security for all. Accepted conduct and a high sense of family duties were the ideals of village and kinship community. This had the effect of instilling in the members of the clan a sense of co-existence and social cohesion for the good of all. The collective strategy of minimizing environmental destruction and loss of wealth and enhancing food production was the African means of ensuring law, order, and stability in the society. Collectivism made members economically productive and self-reliant, thus minimizing the element of socially unwanted habits that would lead to social deviances and disorder.

The traditional law and order enabled sustainable use of the limited resources such as land, water, and grazing land through rules and norms guiding their use. Personal narratives appreciate that as individualism gains ground, the principle of communalism is slowly fading out among the Lugbara people. This has affected resource use and management as the individual personalized ownership and control of resources. A common example cited was the cutting down of the cultural shea tree (*komora pati*) for burning charcoal and curing bricks. Yet shea trees were culturally valued for their fruits, butter, and as landmarks. Individualism is used to explain the disappearance of the shea tree species.

Traditional wisdom enhanced the conservation of natural valuable forest trees for their medicinal, timber, food, and ritual value. Destruction of shea trees was prohibited for they were valuable source of fruit and seed from which shea butter was processed for consumption, ritual, and body oil. Shea trees were important landmarks for families and the clan. The market-oriented neoliberal market model and the privatization of the tenure system have witnessed the destruction of shea trees and mahogany trees to create land for farming. Population pressure, urbanization, and the lack of alternative energy source have increased demand for charcoal fuel, causing the destruction of shea trees. The boom in urban construction has increased demand in local building materials, threatening the depletion of valuable trees and forests and degrading the soil.

Land (*angu or nyaku*) was considered a gift from the creator (*Adro*). It comprises the soil, water, animals, forests, hills and mountains, and valleys and plains, and rivers and streams. A mystical relationship existed between the clan and land. The narratives held the belief that resource management was intertwined with traditional religion and that the misuse of resources caused the wrath of the gods and ancestral spirits.

To showcase the wrath of the gods and ancestors upon those who destroyed the environment, the Ayivu clan elders cited the incident of a strong storm that ravaged Arua town in the 1990s when the Municipal authority destroyed the trees that had existed long before the town was established in 1914 by A. E. Weatherhead, the first colonial district commissioner. The elders observed that the trees were situated at the cultural ritual area of the indigenous Ayivu-Onzivu clan. Another incident was in 2003 when a prison inmate cutting down a culturally revered tree was struck to death by a tree branch. The elders associated the two accidents with the wrath of the gods and ancestors.

The clan elders observed that sociocultural significance was attached to land, for it gave a sense of identity and belonging to the individual, family, and clan. An individual or the clan was referred to by the name of land inherited from their ancestors. Land was regarded as a cultural asset to be guarded and sustainably used by the family and clan. An elder noted with regret that “our clan identity as Aroi and Agondua’s descendants will soon disappear because our sons have sold off most of our clan land and the elders, due to greed for money, have failed to protect our clan land.”

The Lugbara viewed land and the resources as an economic asset and a gift from “mother nature” handed down to the contemporary generation by the ancestors. It was a source of life, food, water, and a place of abode in which clan activities supporting life were undertaken. Therefore, home-grown resource management rules and practices were developed as a mechanism for sustainable land use and resource management for the present and for posterity. The rules defined the accepted land use practices and values, which were passed down through the generations.

Clan elders who were regarded as closer in age to the ancestors were granted social authority and power as custodians of the clan land and resources. A respondent noted that elders who exhibited integrity, wisdom, articulateness, hard work, hospitality, the ability to resolve conflict, ownership of ancestral shrine (*orijo*), and knowledge of the clan history (*adi*) were entrusted the custody of the clan resources. The clan elders exhibited wisdom (*ondua*) to manage the environmental resources and diligently performed their responsibility as clan custodians and instilled in the young the value to guard the environment and resources. By their power to curse, the elders deterred the misuse of resources. However, the misuse and depletion of resources were attributed to the failure of elders to perform their traditional role as custodians of the clan.

The elders observed that modernity had undermined their traditional authority to control resources. Resource management had shifted to the local government authorities who attach no cultural value to the environmental resources. It has led to the depletion of the culturally and ecologically valuable tree species and inselbergs around Arua town. Cultural ritual sites conserved in their natural state were destroyed to create land for urban expansion.

The narratives observed that land was inherited through the male lineage and identified the traditional land use practices: settlement, burial, ritual performance, crop production, grazing, hunting, and natural valuable forest reserves. Land use rules were observed, enabling the sustainable use of environmental resources. From field observations, settlements were characterized by a concentration of family or lineage in an area reserved on the upland, leaving the lower slopes and wet valleys for crop production. Orphans inherited their father's land, and nonclan men of good character were often given land for settlement and enculturated into the clan. The elders lamented the changes over the years as the population increased and land was commoditized. The clan elders observed that land use demarcations are no longer considered, causing unplanned land use and the inability to replenish the resources.

According to the elderly female respondents, the cultural practice was that women were given the backyard garden for growing vegetables, and arable land in the valley and upland. The well-drained valleys were used for growing sugarcane, bananas, vegetables, sweet potatoes, and yams in the dry seasons. Cultivation in the wet arable valleys was guided by traditional rules. Men provided labor for tilling the valley and dredging the valleys to enable the flow of water to the surrounding fields. From field observations, the wet valleys have been encroached upon by construction of settlements and bricklaying, affecting the ecosystem and balance.

From the narratives, the belief system prohibited land conflicts, for it caused bad omen. The belief was "the earth had ears," a metaphorical expression that land conflict was associated with misfortunes believed to stem from the wrath of the ancestral spirits. Clan elders resolved land conflicts by

tracing the history of the land at hand, and the party that forcefully occupied the land was cursed and suffered a mysterious sickness or death.

To the elderly respondents, traditional wisdom was used to conserve the soil quality. Emphasis was placed on deep plowing to conserve soil water content and nutrients. Deep plowing was meant to remove plant roots and shoots competing with crops for soil water and enable the rain water to penetrate into the soil. It also softened the soil to allow plants to establish firm roots.

Through land fallowing, known as *kula*, land was plowed and left to settle for 2 to 4 weeks to enable soil chemical and nutrient composition to stabilize. An elder described the process as "allowing the soil heat to reduce." Through observation and experience in crop production, early preparation of land and planting was thought to produce good yield. The crops that turned yellowish were an indicator of unsuitable soil for the crop growth. Such conclusion was reached without any scientific knowledge of agriculture but rather by practical wisdom acquired through the long experience gained from the environment. The Lugbara applied "indigenous science," which lacked scientific theories and methodologies but was based on observation. Modern scientists are better positioned to ground practices and observations on theories as a means of improving farming practices. It therefore becomes the role of the scientist to explain in the simplest manner the circumstances under which the crops would turn yellowish.

Improving soil fertility was a key aspect of soil conservation among the Lugbara. The peasants showed awareness of the soil needs of specific crops. An elder observed that weed burning in the garden was good for the growth of millet and sorghum because it enriched soil nutrient and destroyed the weeds such as coach grass (*odro*), spear grass (*yebi*), and blackjack weed (*ojjia*). Spots in which weeds were burnt had dark-green, healthy, leafy, and tall-growing millet plants. Although he showed no awareness of the danger of burning for the microorganisms in the soil, he had thought that microecological stability was maintained. The peasant's inability to give scientific explanation on the effect of weed burning on soil nutrient does not make the practice wrong but rather should provide the scientist with the task of carrying out further research on the content of the ash and its value to specific crop nutrient requirement.

A retired village chief observed that the practice of weed burning was discouraged in the colonial period as the Colonial Agricultural Department introduced modern farming practices and crops. This is corroborated by Middleton's report that new crops were introduced: maize in about 1925, cassava between 1944 and 1945, and tobacco (Middleton, 1971, pp. 16, 27). The introduction of tobacco as a cash crop to generate revenue changed farming practices to boost yields. The use of scientific farming practices such as the use of artificial weed killers, pesticides, and fertilizers were emphasized. An elder detested the use of artificial fertilizers

in the production of tobacco for it affected soil nutrients and fertility in the production of traditional food crops such as millet, beans, and cassava. The soil became loose and bare, exposing it to the agents of soil erosion. He preferred the use of traditional methods in preserving soil fertility without adding chemicals in the soil.

Fauna was a source of food to the clan and land was preserved for hunting. Through traditional wisdom, hunting activity was regulated to preserve wildlife. Communal hunting was practiced for bigger animals such as antelopes, buffaloes, rhinoceros, and elephants with the approval of the clan elders and the keepers of ancestral shrines. Spiritual guidance was sought from the clan oracles before the hunting activity. According to the Ayuri clan tradition, before a hunting activity, a senior clan elder performed a ritual on an ant-hill called *igberece otoko*. He created holes to represent fortune and misfortune and then slaughtered a chicken and left it flapping. When the chicken fell into the hole of luck, the clan men were permitted to go hunting. But if the chicken fell into the hole of misfortune, the hunting activity would be canceled as it was a prediction of misfortune to the hunters. Hunting of smaller animals and birds such as rabbits (*eto*) and guinea fowl (*ope*) was unrestricted because those species were plentiful as they breed faster over a short period. This helped to regulate and replenish wildlife stock among animals with a long gestation period. Traditional wisdom that enabled the preservation of fauna for posterity has been weakened by socioeconomic stress that has caused indiscriminate hunting of wild game for food and money. A respondent recalled the unregulated poaching during the military regime of Idi Amin (1971-1979), characterized by lawlessness and a wide circulation of small arms, which led to indiscriminate hunting. The Lugbara territory, originally known as the home of the White Rhinoceros, witnessed their extinction. Although the Uganda Wildlife Authority is making effort to revamp wildlife preservation in the area, it is challenged by the continuous poaching.

Zoning the hunting area was another form of traditional wisdom in regulating hunting and preserving wildlife as a resource. The Ayuri clan, for instance, had major hunting areas with specific types of wild animals hunted. The mountain areas of Eti (Wati) and Odra were known for gazelle (*ndiria*) hunting. The plateau thickets of the tropical savanna vegetation locally called *oce* and the riverine were areas for hunting gazelles, kobs (*Iba*), bushbucks (*Yere*), rhinoceros (*Ibirio*), and elephants (*ewa*). Rotational hunting in the key hunting zones of Anamgba savanna thickets, Cina, Kulumgbu, Ana'bi, Ariaze, and Suru regulated hunting. Clan-specific and general traditional rules were developed out of experience to minimize conflicts during hunting. Neighboring clans adhered to the general traditional rules guiding the usage of the common hunting areas. During hunting, the hunter who first spears the animal makes a loud yell of victory and excitement (*cere*) and the kinsmen join the chase. His effort was appreciated and recognized when

sharing the hunt by preserving specific body parts of the carcass for him. Hunting was seasonal, with low hunting activities in the rainy season (March to October) when farming is undertaken, and reaching its peak in the dry season stretching from December to March. This helped to replenish the wildlife stock and enabled sustainable hunting throughout the year.

Bush burning was regulated to protect crops in the field and preserve seasonal resources such as elephant grass and spear grass for thatching huts. Traditionally among the Lugbara, burning the environment was regulated by the elders. It was not allowed before women had gathered spear grass and reeds for thatching huts. Burning before harvest was outlawed because it would destroy crops in the field. Burning was selectively done by zoning the area to safeguard the vegetative cover from depletion. The young men were directed by the elders to burn the environment to allow the growth of fresh pasture for grazing animals and allow women to collect wood fuel to be stored for the rainy season. When unpermitted burning of environment damaged property, clan members would complain, bringing a curse and misfortune upon the culprit. A ritual of sheep killing was performed by the elders to remove the misfortune. In the situation where there was persistent unrestrained burning with extensive damage, the rain maker known as *etufe* (giver of sun) who was an elder with powers to curse and hold rain (*etu so*) would intervene. By his mystical powers, he performed a ritual using smooth, white, round- or oval-shaped quartz stones to hold rain as punishment for disobedience. The power was inherited by the direct descendant of the clan founder and handed down through generations. However, the changing socioeconomic conditions and land tenure system have weakened the clan elders' and rain makers' social control mechanisms. It has resulted in unregulated environmental resources exploitation, threatening to deplete the existing resources.

Outside the homestead was the ancestral burial land for the members of the lineage. On the grave of the great ancestors and elders was planted the perennial fig tree (*Laro pati*). It was a taboo to use wood fuel from such a tree for domestic purpose as it was considered sacred and a source of bad omen to the family and clan. An elderly female observed that often when such a tree was cut, the spirit of the ancestor would possess and speak through a young child, stating that he was being scorched by the sun. This enabled the preservation of such perennial trees, which became land boundary demarcations, cultural landmarks, and family or clan identity. The trees at the ancestral grave sites played an incidental role of conserving the tree species and environment.

Ritual sites were reserved for constructing clan ancestral shrines. Clan elders performed rituals and made offering sacrifices to the ancestral spirits, the living dead. This maintained the bond between the dead and the living. Rituals were performed to appease the spirits whenever disaster associated with the wrath of the ancestral spirits occurred. Such

ritual sites were declared sacred and human activities around them were prohibited. Oral narratives among the Ombia clan elders in Maracha confided that any member of the family or clan who trespassed into the ritual land risked being stung by a swarm of bees or would meet a huge beard-snake with tufts of hair on its head. Elders associated such a snake with the ancestral spirits and the snake was never killed because it was a revered spirit. Some clan members confirmed having encountered the ancestral snake in the village. In the Paranga clan of Terego, the ancestral spirits would appear in the form of a leopard. The mystical relation with certain animals had the effect of preserving natural fauna and flora in the ritual areas. The narratives in rural Lugbara territory admit that ritual leaders and rain makers still exist but their influence has declined. With urbanization, the ritual sites of the Ayivu-Onzivu clan neighboring Arua town have been destroyed. The vegetation has been transformed from an indigenous primary vegetation to artificial secondary vegetation. The effect has been the extinction of the rare snake and bird species only heard of in the Lugbara oral narratives.

Part of clan land was reserved for communal grazing. Land with poor soil, low productivity, and stunted vegetation was used for animal grazing. Communal livestock keeping was practiced in the minimal lineage with elders taking overall control over livestock use for marriage, funeral, compensation, and ritual. As a means of coexistence, elders allowed the neighboring clans access to the communal grazing land. Water sources for the animals were communally owned and shared. Although occasionally skirmishes with neighboring clans occurred over the water sources, the elders generally discouraged such conflicts over resources for they could strain interclan relations and cause the wrath of the gods (*adro*).

Traditional wisdom was used to predict the microclimate and determine the nature of land use and crop type to be planted. Traditional environmental knowledge of the cloud type and wind system acquired over time aided the prediction of the microclimate, especially the beginning of the new rainy season. The light, low white clouds across the sky symbolized the coming of the rains. The gray cumulus nimbus clouds denoted the onset of the rainy season and families begin to prepare their farm land. The direction of the winds determined the rains. During the field work, an elderly female using the local temperature and wind direction precisely predicted that it would not rain in her village because the cold winds were blowing toward the west where it would rain. She further observed that the coldness was a sign it had rained elsewhere. Warren, Eastman, and Hahn (2007, p. 717) confirmed that "Clouds are important in the earth's climate system because of their effects on solar radiation, terrestrial radiation and precipitation." Prediction of the microclimate was made without the scientific knowledge of meteorology in which "satellite data is used for rainfall monitoring for many years . . . and in particular the use of geostationary Meteosat infra-red imagery to estimate convective rainfall

by monitoring the presence of cold cloud tops" (Tucker & Sear, 2001, p. 107).

Traditional wisdom is challenged due to climate changes as in many other parts of Sub-Saharan Africa (Thornton, Erickson, Herrero, & Challinor, 2014). The rainfalls do not come in the usual way. The planting of crops has failed in several places during the last couple of years in the Lugbara territory because of unpredictable rainfalls. Traditional meteorological science is at the same time restricted because very few weather stations are placed in Sub-Saharan Africa, though new modeling methods based on satellite observations are showing promising improvements (Maidment et al., 2013). Modern sensor technology and access to cell phones in even the most remote areas could be a way to establish a connection between traditional wisdom and modern technology (Masinde & Bagula, 2011; Soropa et al., 2015; Ziervogel & Opere, 2010).

Historical Context

Traditional wisdom in land use and resource management should be viewed from its historical perspective. To have a conceptual understanding of its influence on contemporary society and development, it is important to gain insight into its usefulness and relevance to the indigenous people as a valued tradition, which enabled them to manipulate their socioenvironmental challenges and promote social cohesion and harmony.

The narratives revealed that Lugbara society was acephalous, without a king, and lacking a single-spine hierarchy of authority such as in a kingdom society headed by a king. It was organized on a clan basis and its affairs managed by a council of elders—"ba- 'wara." The council of elders comprised persons who bore socially accepted qualities: belonging to the clan lineage, age, and knowledge of clan history, wisdom, oratory skill, hard work, generosity, conflict resolution skills, and hospitality. The clan members relied on the elders for leadership, security, and social needs.

The interviews revealed that traditional wisdom, which was the source of traditional knowledge, resulted in the establishment of societal law and order mechanisms to regulate social conduct and interaction with the environment. The cultural leaders observed that traditional law and order was a tool for social ordering, an instrument of power and authority for the clan elders. As custodians of clan law and resources, the elders ensured culturally accepted norms and practices in land use and resource exploitation.

The narratives pointed to the existence of a spiritual relationship between the ancestors, clan, and resources. The Lugbara perception of the earth and land was mystical in the sense that they were perceived as a sacred gift of nature. Its sacred nature was enshrined in their traditional belief system, which influenced the nature of land tenure and land use system. Land and resources were communally owned for the benefit of all clan members and for posterity. The earth was

perceived as the source of life and land was for settlement, grazing, fishing, farming, and hunting. Land and the natural resources were to be easily accessed by clan members and sustainably used for posterity. Their misuse and abuse were traditionally regarded as sin (*ezata*). The belief was that the misuse of land resource brought upon the clan the wrath of God the creator (*Adro*), the gods (*Adroa*), and ancestral spirits (*Ori*). It was therefore a collective social responsibility to sustainably use land and resources. The weakened belief in traditional religion and the mystical powers has changed societal perception on land and resources and therefore affected land use and resource management.

A retired teacher observed that land and resource defined a people's sociocultural identity. Land, an inheritance from the great mythical ancestors Jaki and Banyale, provided their social identity as indigenous people. The African perspective of "indigeneity" is attributed to the group identity of people who claim descent from peoples who inhabited the territory in the precontact or precolonial period. As descendants, they retain some or all of their own social, cultural, economic, and political institutions and practices as handed down generations ago. They exhibit historical continuity of the precontact and precolonial period viewed in their durable cultural values, norms, customs, beliefs, attitudes, habits, practices, and institutions rooted in the historic past by which they identify (International Labor Organization, 1989, C169, Article 1.1). Land use and resource management was therefore adapted to the existing physical and social environmental conditions.

The Changing Land Use and Resource Management and Its Effect

Society has experienced a new form of materialism since the colonial period. Precolonial Lugbara society was self-sufficient, depending directly on land and the environment. Land was both a subsistence base and a sociocultural identity. Materialism has distorted the traditional outlook on land use and resource management.

Since the colonial period, the traditional value of land and resources has changed. The transformation of the traditional economy from a self-sufficient subsistence to a peasant economy weakened traditional land use and resource management practices. The introduction of a cash economy destroyed the traditional mode of trade, the barter trade, the basis of the self-sufficient traditional economy. In 1915, Baluchi, Arab, and Indian traders established the first shop in Arua town, supplying soap, salt, and cloths (Middleton, 1971, p. 16), therefore integrating the traditional Lugbara economy into a global monetary economy. To raise revenue for the colonial office, the District Commissioner Weatherhead introduced taxation among the Lugbara in 1918, increasing the demand for money (Middleton, 1971, p. 16).

The cash crop economy in Uganda witnessed the establishment of coffee, cotton, and sugarcane plantations in the south. The West Nile region was gazetted as a labor reserve

for the south plantations. Labor was commoditized and economic and monetary value was attached to land, a shift from the traditional perception and value of labor and land. The existence of alternative means of survival other than depending on land weakened social responsibility for the sustainable use of land and resource management, especially among the young generation. Society exchanges its labor and resources for money in order to meet its material and financial needs, causing excessive exploitation of resources, resulting in their depletion.

The interviews appreciated that the emergent colonial political and socioeconomic development brought in new forms of land use and value. Narratives among Ayivu clan elders indicated that land use and value changed when Awudele, a clan elder, granted A. E. Weatherhead, the first district commissioner, land for establishing the district headquarters. More land was later granted for the establishment of a Catholic mission station west of Arua town in 1918 by the Comboni Missionaries under Fr. Zambonardi (Amone & Indeanyiya, 2013), and in the same year, the African Inland Mission (AIM) missionaries established a mission station, hospital, and schools east of Arua town (Obetia, 2008). These developments witnessed the clearance of the environment for construction and urban development. Christian converts and colonial workers were provided with land around the mission stations and district headquarters, causing pressure on available environmental resources such as land for agriculture, settlement, grazing, and forests. An elder observed that the new mode of land use caused shortage of land and pressure on the natural resources. The indigenous Ayivu-Onzivu clan was displaced and valuable indigenous trees were depleted, fertile soils degraded, and the wet valleys formerly used for dry season farming dried up due to the large-scale bricklaying for the construction of the mission station.

The new mode of economic development required a legal framework upon which it would thrive. The declaration of the British Protectorate over Uganda in 1894 subjected the administration of justice in Uganda to the 1889 Africa Order in Council. It empowered the Secretary of State to declare effective any law in force that was consistent with the original Order but was subject to modification. The purpose was to introduce a uniform set of regulations and land tenure applicable to the whole protectorate (Ingham, 1958, p. 84) as Uganda was multiethnic. The result was the enactment of law to ensure state control of land and resources. The Rivers Act 1907 regulated the dredging of rivers as defined by the statutory orders. The Forests Act 1947 granted the colonial governments control over forest resources and spelt out penalties for breach of the law. The Lugbara by this Act lost their traditional right to forest resources. The Game (Preservation and Control) Act 1959 regulated the hunting of birds and animals (The Uganda Legal Information Institute [ULII], n.d.) The British Colonial government introduced customary laws as a strategy to subdue the African people and establish effective control over the subjects and resources.

The indirect rule policy was the basis of the colonial legal framework. It was founded on the assumption that every group of people possesses some form of native or natural authority normally symbolized in a person, or some individual or individuals. For a group, clan, or people to have an identity, it must possess some form of social and administrative practices and customs—a common law (Hailey, 1951). To minimize possible resistance from the indigenous people, the British Colonial administration introduced the Native Administration in their African colonies. The Native Administration defined the procedure by which a Colonial Government, challenged in numbers, provided itself with the administrative machinery to administer and supervise a society and institutions which regulate its affairs. Through the Native Administration, law and order was ensured, the assessment and collection of a native tax was provided for and local Government services and tribunals for the adjudication of disputes between natives was put in place (Hailey, 1951). This resulted in the establishment of customary laws.

A retired politician observed that the postindependence constitutional developments affected land use and resource management. Postcolonial Uganda inherited the colonial land law and recognizes four land tenure systems: customary tenure, registered freehold tenure, Mailo tenure, and leasehold tenure (Uganda Government, 1995). The Land Decree of 1975 granted the State powers over the control of land and resources. The Constitution of the Republic of Uganda, 1995, (Article 237, clause 3) provides for the customary, freehold, Mailo, and leasehold land tenure and allows for land under customary tenure to be converted into a freehold tenure. The customary land tenure system promoted the use of policies that ensured land ownership and usage were in accordance with existing traditional customs and norms. The Customary land laws declared cultivated or waste land equally owned by the government and the indigenous ethnic group occupying it. It transformed the nature of land rights as it allowed for both the private and communal land tenure system. This removed the traditional authority to control land use and resource management from the clan elders, giving the individual more authority over land, land use and resource management. The effect has been uncontrolled land use and resource management, leading to depletion. Because the law narrowly defined land rights, it led to land conflicts and legal battles over land. The 1998 Land Act was passed to streamline the tenure system, land ownership, and broadly define land rights and administration. The provision by the constitution allowing customary land to be registered interfered with the traditional land use and resource management as individuals shift from communal ownership to private ownership. The effect has been uncontrolled resource management and the misuse of resources, leading to their depletion. The individual having claimed the right of ownership also decides how to use and manage the resources.

With the advance of secularization, modernization, urbanization, and globalization, there have been increases in land

competition. “The increased competition for land is linked to the desire of private investors, whether national or international, to gain access to land for a variety of purposes, ranging from commercial production to speculation to mining” (Nyukuri, 2006, p. 10). “Increasing individualization and commoditization of land rights has occurred, and private rights of use and occupancy within customary tenure have become increasingly the norm” (Daley & Englert, 2010, p. 94). This has witnessed a growing disregard for traditional law guiding land and resource use, further weakening traditional knowledge and wisdom in land use and resource management.

Uganda has adopted land reforms under the neoliberal economic market model which has affected land rights (The 1995 Constitution of Uganda, 2010 Land Act, and 1998 Land Act). The land Act defined the land tenure held by lawful and bona fide occupants of land. It stipulates why, how, and when a tenant could be evicted by the Land Board structure put in place. The land reforms have weakened ethnic attachment in an ethnically polarized nation—Uganda. For instance, Article 237 (4) stipulates that “land under customary tenure may be reverted to freehold land ownership by registration.” The effect has been the weakening of the traditional land institutions, land management, use, and practices. The land reforms have led to private land tenure that has witnessed the shift from communal land control under the customary law to private individual tenure with the community losing its grip on land use management. The personal narratives reflect that the individualization and commoditization of land has caused irresponsible and unsustainable use of land, and chunks of their ancestral land have been sold off, leaving the younger generation with no land to inherit. The fear is that with rapid urbanization, the future generation might lose both land and social identity. Urban displacement and the sale of ancestral land will create a new emerging social problem of homeless children and juvenile criminals, something which never occurred in traditional Lugbara society due to the sense of social bond and collective responsibility developed over a period of time to overcome their eco-sociological challenges.

Discussion

This article attempts to respond to the paradoxical question, how did traditional institutions enforce law and order in land use and resource management? As society progresses into modernity, it is plunged into an environmental crisis characterized by the depletion of species and resources. The negative impact of change needs to be explained in terms of the former. This discussion is conscious of the methodological gap in the acquisition and verification of traditional knowledge in land use and resource management. It is cognizant of the challenges in the preservation and transmission of traditional knowledge. It therefore provides possibility for future scientific research to verify and test traditional knowledge in

land use and resource management to ascertain its applicability in contemporary society.

Indigenous society without the benefit of scientific knowledge and technology, modern law, and institutions exhibited effective control and management of environmental resources. The establishment of a modern state system based on the Western form of knowledge and law systematically weakened traditional knowledge and practices in land use and resource management. The unsustainable exploitation of natural resources for subsistence and commercial purposes, hampering the replenishment of the resources, is attributed to weakening traditional environmental knowledge. The influence of modernization and urbanization has separated the contemporary generation from their indigenous cultures, making it difficult for society to enculturate the young generation. Enculturation imparts knowledge of the culture and accepted behaviors, values, and norms of the society. The physical and mental distance between the young persons and the rural elderly who are the source of indigenous wisdom and knowledge creates a bigger challenge in the acquisition of indigenous wisdom and knowledge stored in memory and which is orally and practically transmitted. The danger is the extinction of traditional wisdom and cultural heritage for posterity. The future generation may not have a past to identify with and therefore become a social peril to the ethnic societies. As cited by Popper, Plato attested that “moral degeneration and lack of knowledge is due to racial degeneration” (Popper, 2013, p. 19).

Popper’s idea of “scientific community” and “falsification of truth” disregards the role of traditional wisdom. In the absence of modern science, society used localized experience to produce knowledge which Immanuel Kant *termed* “*a posteriori*”: knowledge obtained through experience (Kant & Gregor, 1999). Indigenous peoples used a lower order science developed from lived experience and observation. Gramsci (1926, as cited in Gottlieb, 1989) observed that all men are intellectuals but not all have functions of intellectuals, and therefore “non-intellectuals” do not exist as each historical period has its own intellectuals (Gottlieb, 1989, pp. 113-117). Indigenous peoples such as the Lugbara ethnic society had the clan elders as the intellectuals of the traditional wisdom and knowledge used in land use and resource management, although the level of specialization, schooling, and application is higher in modern society than it was in indigenous societies.

This article further refutes Kant’s idea of a “universal history with a cosmopolitan aim” in which he argues that the historical development and progress of the human species and the social and political conditions are destined for a universal community—collective teleology (Kant & Gregor, 1999). The idea of universality may not effectively apply in land use and resource management because of the diversity of the universe exacerbated by the diverse environmental conditions and endowments, which impacts directly on the people living in a specified environment.

Historicizing land use and resource management is not aimed at romanticizing traditionalism, but rather it arises from the desire for continuity as aspects of indigenous knowledge and practices are not found in the scientific and modern modes. Although this article is in agreement with Popper’s criticism of historicism preserving the role of tradition and attaches importance to specific historical period, geographical place, and indigenous culture, it disagrees with his view that historicism overlooks the presence of genuine alternatives in history, existence of plural causal processes in historical pattern, and the role of human values in redetermining the future (Popper, 2013). Multiple intelligence becomes a necessity to a people if environmental resources are to be sustainably used. Traditional wisdom or knowledge is one among the multiple intelligences. Each localized environment has its own uniqueness, and society adapts to such uniqueness that defines its identity. Environment influences a people’s culture as well as the prevailing local knowledge on the surrounding and its resources.

Rapid urbanization and modernization is negatively affecting the younger generation who are experiencing modernization shock and social crisis due to their inability to synchronize the benefit of modernization and the values of tradition. Advancement in electronic and social media exacerbates the situation by transforming the world into a global village. Western electronic media inadequately provides positive coverage on traditional knowledge and practices in indigenous societies, yet African scholars’ capacity in research and publication is limited.

Subsistence and commercial exploitation of the resources have been without any traditional knowledge and skill. Traditional resource management systems that have developed over generations are being lost when men and women die in their prime years before passing on the knowledge to their sons and daughters. A generation of orphans is growing up without knowing how best to work the land and use resources sustainably (Oglethorpe & Gelman, 2008). This calls for an intervention in the preservation of traditional knowledge and wisdom for life and sustainable rural development.

Conclusion

Traditional wisdom still plays a complementary role in contemporary societies where state institutions and services are not functioning to the expectation of the masses. This is not void of the fact that traditional wisdom has its own challenges, but it is still applied in contemporary rural societies. Development and its problems could be addressed by using the people’s indigenous knowledge and wisdom, science and technology, resource use practices and decision-making, and sociocultural value systems. This strategy would answer the question, “development for whom?” as the development beneficiaries own it and build capacity to sustain it using the available local knowledge and resources. It calls for the need

to localize development by integrating local knowledge and practices. There is a need to rethink traditional knowledge and wisdom in strategizing development. It requires the scientific study of traditional wisdom ideas and practices.

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