This chapter will explore the previous and/or ongoing practice of Africa’s indigenous knowledge across selected fields. The chapter will also, where applicable, explore the curriculum of study within the identified fields in order to determine the extent to which the existence and practice of indigenous knowledge is recognized in each.

Indigenous Knowledge in Agriculture

During precolonial and colonial times, British missionaries and later colonial masters, coming with a supposedly superior knowledge of farming techniques, sought to impress the local African farmer to change their centuries old methods of farming. From the time of colonial incursion into Africa, indigenous knowledge of agriculture became the practice of the ignorant rural peasants. Odhiambo (1990) asserts that the education system in Africa has consistently ignored the knowledge, skills, and survival strategies of local farmers, who have successfully managed their farmlands and remained productive for centuries, with little or no external input.

Despite the glaring differences between African and European climates, the subject of agriculture as taught in African schools and colleges relies almost entirely on European models and applications. Agriculture textbooks from which students are taught are in some cases imported from Europe, and when published in Africa, rely on published European texts for ideas. Not much effort is invested in research into indigenous knowledge of rural farmers, and the use of such in formulating science- and technology-based agricultural practices that will work sustainably in Africa.

Efforts towards farmer education in African rural areas have taken the form of attempts to superimpose, in a top-to-bottom, hand-me-down approach, “modern” (European) agricultural technology. Conversely, the increasing realization of the hazardous effects of so-called modern farming methods—such as synthetic fertilizers, and toxic chemicals that act as pesticides—have resulted in European scientists
scuttling through the villages of Africa in search of indigenous knowledge as a “major untapped source for developing sustainable agriculture” (Odhiambo 1990, 3). Odhiambo states that “Indigenous knowledge can reveal missing ecological keys, which may help scientists develop alternative agricultural technologies less dependent on nonrenewable resources (e.g. fossil energy) and environmentally damaging inputs (e.g. chemical pesticides), than conventional technologies” (Odhiambo 1990, 3). Examples abound where indigenous knowledge in agriculture has contributed immensely in the development of that sector in Africa. A few shall be discussed.

**Indigenous Shared Cropping System in Kenya**

In Kenya in 1936, the Kikuyu farmer was mandated by colonial authorities to adopt the neat parallel-row mono-cropping, which was sure to yield immediate, but short-term profits. There was no effort at exploring the perspective of the Kikuyu farmer to understand his reasons for adopting and maintaining the indigenous shared cropping system. Instead, his farmland was described as messy and chaotic. It was Louis Leakey who published as part of his famous memoirs, an account of the Kenyan mixed cropping systems from the viewpoint of the Kikuyu farmer. From the account, it became evident that should the Kikuyu adopt the demands of the British agricultural officers, he would be exposed to countless production risks and severe environmental degradation (Warren 1991, 3). More than 50 years later, Warren (1991) notes that international and national agricultural research centers have scientifically established the effectiveness and efficiency of the indigenous mixed cropping systems of the Kikuyu, although in the Kenyan education curricular, the British imposed model is still being widely studied.

**SR52 Hybrid Maize in Zambia**

In Zambia, local producers were adamant about adopting the high-yielding Zimbabwean developed variety of SR52 Hybrid maize. The planners and extension workers at the Zambian Ministry of Agriculture applied considerable effort, without success, in trying to convince farmers to adopt the maize variety, based on its prospects for achieving food sufficiency in Zambia (Warren 1991). After the top-down effort to change farmer’s perception of the maize variety failed, some officials of the Ministry of Agriculture arranged a meeting with some indigenous farmers in an mphala setting. At the mphala or the indigenous village-level problem-solving meeting, the farmers identified some complex production and marketing risks of the new maize variety. Farmers shared that the new maize variety, unlike the indigenously pollinated varieties, were more susceptible to drought and weevil infestation. The new variety, contrary to the Ministry’s expectations, had very low germination rates in the fields of the Chewa-speaking people, and did not also store well in the indigenous
grain storage mechanisms. Unlike the indigenous open-pollinated maize, the new hybrid variety also required chemical fertilizers and pesticides, which the farmers could not afford, and had implications on the environment as well as human health. Just as in the case of Kenya, the Zambian officials were trained to believe that the foreign European modified maize was better than their local variety. But for the stiff resistance of the farmers, their indigenous knowledge would have been ignored and they would have been made to adopt a variety of maize that would not work to their advantage.

**Traditional Rain-Fed Irrigation Project, Chad**

The experience of local farmers in Chad, in utilizing the traditional *zai* rain-fed irrigation method, as opposed to the World Bank financed and government endorsed modern irrigated agriculture is another notable case in point. The government of Chad was convinced that large-scale commercial irrigation was the surest means of achieving its national objective of food security in the arid West African country. Conversely, the majority of the small-scale farmers whose agricultural production make up over 70% of Chad’s total agricultural production output “have usually sought to include irrigation in a mixed survival strategy, blending recession, flood or small-scale localized opportunities with rain-fed farming and livestock or off-farm work depending on local circumstances” (World Bank 1989, 26).

Farmers were uncooperative towards the calls to surrender villages and farmlands for establishment of modern irrigation methods. The resistance arose after an initial attempt at commercial irrigation failed to generate growth in the productive capacity of a certain segment of the Chadian local farming population, who had given into the government’s call for a conversion from indigenous to modern irrigation techniques. In order to determine the validity of the farmer’s arguments, a financial and economic rate of return analysis was conducted on the cultivation of rice, wheat and sorghum, to identify the difference between the traditional rain-fed irrigation system and the more modern methods. Four models were examined: (a) a gravity controlled flooding technique which allowed for partial water control (b) irrigation based on water pumped with a diesel engine (c) modified rain-fed agriculture derived from bottomland cultivation (d) the indigenous rain-fed irrigation, which accounts for 90% of the rice production in Chad (World Bank 1989, 5).

The analysis revealed that the modified traditional irrigation method yielded greater economic profitability in cereal cultivation, particularly wheat and sorghum, in comparison with modern irrigated cereals. The World Bank in making its recommendations noted that “Governments and donors have tended to assume that farmers were interested in irrigated agriculture and failed to develop an understanding of how irrigation fits into the farmer’s economic strategy” (World Bank 1989, 5). The World Bank advised governments to seriously reexamine the decision to heavily invest in modern irrigation systems on Lake Chad, “which are extremely costly in terms of both investment and operating costs” while yielding very little, noticeable,
economic benefit (World Bank 1989, 28). But for the farmer’s resistance that led to the World Bank studies, the indigenous knowledge of the farmers would have been disregarded. Despite the study, there is no evidence that universities and colleges of education in Chad are seriously involved in researching this unique indigenous irrigation method to scale it up to ensure increased agricultural productivity. On the contrary, the Chadian agriculture curriculum proposes government investment in commercial irrigation as a way to increase yield and combat food insecurity.

**Neem Biopesticides in Togo and Niger**

Several research oriented trials were conducted on the indigenous knowledge of the Neem tree (*Azadirachta indica*) by a team of entomologists and social scientists from the University of Minnesota and from Niger, an arid country in West Africa. For hundreds of years, the seed and leaves of the Neem tree have been used in Niger for storing grains, layering with leaves and mixing with the mud used in the manufacture of earthenware storages. In an earlier study, Neem was established to offer protection from storage pests in the local granaries. The Minnesota and Niger team, therefore, focused their study on its usage for standing crops. The result of the research, conducted in collaboration with Indian scientists, was that the Neem seed kernel, more than any other part of the tree, contained the highest concentration of biologically active constituents (Warren 1991, 14). Armed with this discovery, scientists successfully offered protection to standing crops against invading locusts, by spraying a solution made with 1% Neem kernel extract. Further research established that this feat could be achieved to protect crops against 120 species of insects in a manner that is “exceptionally safe in terms of human exposure or environmental effects” (Warren 1991, 14).

Small holder farmers in Niger, faced with locust attacks, applied the wildly growing Neem tree kernel in a crushed form as an alternative pest control method. The result was the extremely effective and safe elimination of the locust attacks in a remarkably cost effective manner. A similar experiment was conducted among small holder farmers in Togo, where the Neem tree grows wildly as well, with the same level of success recorded. The most important lessons deducible from the experiment are the scientific validation of centuries old “folk knowledge” and the unsophisticated transfer of the technology to “similar agro ecosystems in other parts of the world” (Warren 1991, 15). Unfortunately, school textbooks in Niger and Togo, still advocate the use of expensive harmful pesticides—filled with established carcinogenic substances—for the control of locust invasions and other pest attacks on farms in these countries.
Ethno-Veterinary Medicine and Fishing in the Niger River

Ethno-veterinary medicine has been defined as the indigenous knowledge and practices in the field of animal health care. For instance, the Fulani cattle rearers, by an analysis of soil type, flora, fauna, and vegetation condition, are able to tell the pasture quality of a herd. Peruvian pastoralists are known to rotate the grazing of pasture in altitudes which are elevated, to ensure mixed species pastures and assure grass for the herd even during periods of climate imposed austerity (Warren 1991, 8).

During colonialism, the French colonial authorities radically altered the indigenous fishing methods on the Niger River. The emphasis shifted from the centuries old knowledge of the local fishermen to the European management model, dependent upon imported data. The end of colonial rule did not change this situation, as the incoming administration continued with the modus operandi of the colonial administrators. Teaching and research in fishery and fishing management in African schools and colleges revolved around this colonially entrenched paradigm, and the government in its policies and programs planned around it. The situation was to change in 1983 when the Niger River Fisheries Project was inaugurated with staff from the Food and Agricultural Organization (FAO) and funds from the United Nations Development Program (UNDP), with the assistance of the USAID and the Peace Corps. These organizations, in conducting an independent research study that involved the participation of the local fishermen soon recognized the profound knowledge of the Niger fishermen on things related to river ecology. Senior project personnel requested for cooperation in the way of information provision from these fishermen, which they complemented with information from biological research, fish capture and socioeconomic surveys. The end result was a comprehensive proposition “for future management based on the resulting synthesis of scientific and local knowledge” (Warren 1991, 23). In a series of public meetings, fishermen, and fisheries agents debated the “justifications, means of application and effects of each management approach” as collated in the document (Warren 1991, 23). This was a radical departure from the formerly colonially entrenched practice, and fishermen responded to the final policy paper with much enthusiasm. The paper was based on “respect of their knowledge, in collaboration with government technical services. Project results suggest this approach is a genuine foundation for long term development by and for local populations” (Warren 1991, 24).

In recognition of the need for preexisting indigenous knowledge and its usefulness in agriculture, several development agencies have called for the inclusion of indigenous knowledge in the research and development of agricultural projects in developing countries. The Farming Systems Research and Extension Projects, for example, “recognizes that local farmers know a great deal more about their own situations and needs than does anyone else, and these exigencies can and should form the basis of local development projects in the sector” (Warren 1991, 10). Since 1986, the International Rice Research Institute (IRRI) has incorporated in its research agenda, the inclusion of farmer perspectives in the development of appropriate rice technologies. Unlike what was previously observable, where consultants conducted
their research independent of farmer input, IRRI consultants have been mandated to provide farmer assessments of rice research priorities in all of its country-based projects. Instead of compelling farmers to adopt IRRI developed or promoted technologies, they are encouraged to try it, and compare it with the existing indigenous technology and adopt them if considered worth the while, or otherwise, to assist the IRRI researchers to develop or upgrade it in view of the existing indigenous technology.

**Indigenous Knowledge of the Environment**

Indigenous communities are known to have intimate knowledge of their environment, much more than any well educated foreigner would. This intimacy is a result of centuries of familiarity and knowledge passed down from one generation to another. Indigenous knowledge of the environment takes the form of “intimate and detailed knowledge of the environment, including plants, animals, and natural phenomena; the development and use of appropriate technologies for primary resource utilization; and a holistic world view that parallels the scientific discipline of ecology” (Appiah-Opoku 2005, 103). Indigenous healers, for instance, have intimate botanical knowledge of the environment including of plants and their healing properties. Indigenous farmers are thoroughly acquainted with the vegetation, soil, and climatic conditions of a place. Indigenous hunters have extensive knowledge of the habitat including the “location and timing of a host of biological events unknown to scientists. They know the life cycle of certain animals including the kinds of foods they eat, methods of searching for food, their pregnancy and gestation period, natural habitat and average life-span” (Knudston and Suzuki 1992).

Environmental Impact Assessment (EIA) is a catch all term for any “activity designed to identify and predict the impact on the biogeochemical environment and on human health and well being, of legislative proposals, policies, programs, projects and operational procedures, and to interpret and communicate information about the impacts” (Munn 1979, 17). Any major project that would involve the clearing of an appreciable area of land, or the resettlement of a community or even a number of people, is required to be subjected to EIA. Through conducting EIA exercises, impacts are mitigated on the people and on the environment, and adequate compensation paid, if necessary.1 In Africa, most EIA laws are considered unnecessary and

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1The United States was the first country to establish EIA processes when in 1970, President Richard Nixon signed into law the National Environmental Policy Act of 1969. The law was in “response to the strong protests by concerned citizens and environment NGOs on the pollution of the ecosystem as a result of the implementation of certain government policies. The successes recorded by the United States led several other countries around the world to enact EIA laws, and to incorporate it as a part of pre-conditions for the execution of all projects that would affect the environment in any manner. Developing countries who displayed indifference to such laws at first, were soon to be constrained to enact such laws when the World Bank, other bilateral agencies and intergovernmental bodies incorporated EIA laws as part of aid conditionalities” (Appiah-Opoku 2005, 15).
are only observed for projects being funded by the World Bank, USAID, CIDA and other agencies that demand them. African governments on their own, hardly conduct EIA assessments for projects being financed exclusively by them.

Several policies have been established and executed by governments across Africa, without an analysis of the impact of such on the environment and on the people (Appiah-Opoku 2005, 15). This was very much the case soon after the end of colonialism in the 1970s when most of Africa began the rush towards modernization. In a bid to become “developed” African governments embarked on massive investments in mechanized agriculture, building of industries, and urban centers. In Ghana, for instance, the Ghana Industrial Development Corporation (GIDC) was established and tasked with establishing 600 industries within a period of 10 years. Armed with such a mandate and with the revenue from Cocoa and with funds readily available for borrowing from international financial institutions, the GIDC began to build factories and other “trappings of modernity” at such break-neck speeds without considering the impact on the environment (Appiah-Opoku 2005, 36). The construction of the Akosombo dam, although lauded as the greatest man-made lake, became the cause of river blindness, as the lake became a breeding ground for onchocerciasis: “almost half of the human population over 40 years of age living along the banks of the Volta Lake has lost their sight” (Moxon 1998, 198). Seth Appiah relates the neglect of the impact on indigenous communities in the rush towards a construction of modernity by the government of Ghana; writing about the Tema seaport project, he asserts that.

This project involved a resettlement of 12,000 people living in Old Tema as well as the removal of over 200 communal and family gods. Problems arose as the project officials failed to take into consideration local resource-use and nuances or local values set to interpret the projects impacts. Most of the villages who were resettled lost all that was culturally dear to them, including burial grounds and shrines. This led to feelings of depression, inadequacy and general insecurity, especially among the elderly. Many of them abandoned new core houses provided as part of their resettlement package because the buildings did not take into account their socioeconomic circumstances. This was a bitter lesson for the Ghanaian government (Appiah-Opoku 2005, 37).

By 1994, the government of Ghana found it necessary to enact a legislation making EIA mandatory for all major development projects—it was the first African country south of the Sahara to do so. However, this EIA legislation relied overly on the Western model, which places too much emphasis on the scientific gathering of information while completely ignoring the time-tested indigenous knowledge of the local communities who will be directly affected by the project. Appiah asserts that the practice of EIA in Western nations is fashioned after procedural planning theories developed based on western culture, which like most theories of development, are unsuitable to the socioeconomic and political conditions of the developing countries (Appiah-Opoku 2005, 13).

The Western-based EIA models, as has been argued by certain African scholars, are “technical, reactive and narrow in scope of application,” relying on “quantitative techniques for prediction and evaluation of impacts.” These techniques comprise of such highly scientific and technical applications such as “matrices, impact network,
trend extrapolations, and simulation models” (Appiah-Opoku 2005, 18). Like all scientific methods, the Western-based EIA models in use thrive on certain basic assumptions (i) environmental relationships are identifiable, describable, measurable and subject to monitoring (ii) environmental changes are predictable to such an extent that “cause and effect relationships can be established (iii) it is possible to determine the value placed by stakeholders on the impact of environmental disruptions (iv) “issues of probability and uncertainty can be managed to such an extent that it is possible to decide whether a proposed action should proceed with or without modifications” (Appiah-Opoku 2005, 19).

The basic assumptions underlying the EIA processes betray its reliance on “perfect functioning models,” founded on scientific positivist assumptions which state that with sufficient data and learned interpretation, environmental behavior can be predicted (World Bank 1988, 27). This model also relies heavily on Western-styled and assumable predictable socioeconomic and political conditions, which are often absent in much of Africa. The lack of interest of governments of African countries to independently embark on the implementation of EIA for their major projects is not unconnected to the complexity of the Western dominated EIA procedures in place, which they are forced to practice in Western sponsored projects.

However, there are very strong indicators that indigenous knowledge based EIA will be more useful and functional in the socioeconomic, political and environmental situation in most of Africa. A good example where indigenous knowledge played a crucial role in determining the success or failure of a development project is the James Bay Hydroelectric Mega project in Canada. The EIA for this project, as usual dwelt on scientific predictions, and failed to utilize local resources, nuances, and local value sets to interpret and evaluate predicted impacts. The result was a failure to predict the devastating impact of the project on the native peoples in La Grande River Watershed (Berkes 1988a, b, 201–250). Conversely, the involvement of indigenous knowledge of the native people in the EIA studies of the Beaufort Sea Hydrocarbon Production and Transportation, the Oldman River Dam, and the Norman Wells Oil Field Development and Pipeline projects in Canada “revealed useful baseline and monitoring information for environmental assessment”(Berkes 1988a, b, 201–250). Lalonde (1993) lists the concerns of the native peoples as displayed in several consultative sessions in their communities.

(a) Comments that their ancestors never mentioned moose being as far north as Davis Inlet, where in the last few years, moose are commonly seen.
(b) Observation that fox and mink eat their young when airplanes fly over them at low levels. Also, flying over grazing grounds at low altitude creates stress among female calves
(c) Concern that past recreational and traditional activities around an irrigation well should cease because of the apparent danger of drowning from new whirlpools and increased flow of rivers affected by this (Lalonde 1993, 41).

The above extremely useful information could not have been uncovered by scientific methods without the involvement of indigenous communities in EIA.
Indigenous Knowledge of the Environment

Indigenous knowledge should be incorporated in all environmental decisions, as the local peoples have lived in that area for centuries and are armed with sufficient knowledge regarding the patterns, changes, and outcomes of certain practices unique to the area. This knowledge cannot be simulated or gained by the rigorous methods of science. Indigenous philosophy of life seeks to conserve the earth as a deity which could be helpful if appeased and harmful if neglected—this philosophy keeps resource exploitation in check. Indigenous communities are also repositories of technologies that are suited for the local environment, which, if properly accounted for in the process of EIA, will play a crucial role in complementing scientific data for impact prediction, mitigation, and monitoring.2

Indigenous Knowledge of Trade and Economics

African indigenous economic systems have been portrayed as nothing more complex than hunting and gathering activities engaged in by a group of barbarians. The myth of subsistence indigenous African economies has long been upheld by anthropologists and most European historians studying Africa. These scholars, often times playing to racially motivated stereotypes, insist that indigenous African economy revolved around efforts by Africans to eke out a “pitiful living from primitive subsistence agriculture” and that “trade and exchanges were unknown since self sufficiency and subsistence farming were the operative commands” (Ayittey 2006, 317). In “Traditional African Economies,” Harold Schneider disproves these claims by stating that the economic system that existed in precolonial Africa was legitimate and in line with what is acceptable as the fundamentals of market process. Understandably, the way Africans conducted their economic affairs differed from the way it was done by Europe and America, “but their behavior can still be considered economic and commensurate with market process” (Schneider 1986, 181).

Beyond the display of wares in the marketplace for sale, several indigenous African societies, especially in West Africa and in the Congo or Zaire basin, were involved in complex and well developed marketplace systems. In the market place process in Africa, trade and economics are founded on the idea of production for consumption and exchange. In the West, it is founded on “the worker selling his labor for wages, or by the manufacturer producing goods for profit and then using the profit to obtain other desired items” (Schneider 1986, 181).

Skinner (1961) asserts that Africans were involved in diverse economic activities which basically revolved around “agriculture, pastoralism, hunting, fishing, and

2“Many of the indigenous environment risk-minimizing strategies such as slash and burn and shifting cultivation, which were once regarded as primitive or misguided, are now recognized as sophisticated and appropriate to the local environment. Part of the significance of slash-and-burn method of farming is that it prevents phosphorous deficiency in tropical soils. The burning of slashed vegetation releases oxides of potassium, calcium, magnesium, and phosphorous to the soil to serve as plant nutrients and the heat from the burning also destroys weed seeds and pests.” (Appiah-Opoku 2005, 146).
woodworking”. Such minor industries such as pottery, brass works, iron, copper, silver gold and tin smelting and smithing also thrived. Skinner wrote that West Africa in particular was noted by the complex economic activities that thrived as the people had.

Economies which made agricultural produce available in amounts large enough to be sold in rural and urban markets, craft specialization often organized along the line of craft guilds, whose members manufactured goods to be sold in these markets; different kinds of currencies which were nearly always convertible one to another and, later, to European denominations of values; and elaborate trading systems, external as well as internal. Goods produced in even the smallest West African societies were circulated in local market centers, and ultimately by porters, caravans, and boats, to the large Sudanese emporiums from which they could be shipped to Mediterranean areas in exchange for foreign products (Skinner 1961, 60).

In Nigeria, “the cloth industry was an ancient craft” and the ancient city “of Kano attained historical prominence in the fourteenth century with its fine indigo-dyed cloth that was traded for goods from North Africa. Even before the discovery of cotton, other materials had been used; the Igbo for example, made cloth from the fibrous bark of trees” (Ayittey 2006, 339). The Asante were famous for their cotton and bark cloth (kente and adwumfo). These indigenous materials were made in amounts far over and above that needed for consumption by the inhabitants, with the sole intention of exchanging the surplus for profit and value-add. Communities went out of their way to invest in technology that will increase production beyond the subsistence level in order to increase means of exchange. Schneider explores the technological innovation of the Haya people southwest of Lake Victoria in overcoming severe environmental challenges posed by the unsuitability of the soil, to increase the cultivation of bananas for exchange.

the enterprising Haya overcame the problem by constructing compact circular villages inside which they dump mulch, mainly cattle manure, but also the leaves of dead banana trees, whereby they have built up the soil to the texture and fertility necessary for growing bananas. Rather than being determined by the habitat the Haya have overcome a constraint to achieve their goal. But why did they do it?… The answer surely must be that for reasons peculiar to the Haya situation it was worth the cost in terms of the “profit” to enrich the soil (Schneider 1986, 189).

We shall briefly explore indigenous knowledge in the three major means of production: land, labor and capital.

**Land**

Land is the major means of production in any society. Western view regarding the ownership of land is capitalist by definition. Capitalism considers land as a commodity with property rights attached, and which is tradable in the open market. Conversely, indigenous Africa views land as a communal belonging, where every member of the community by belonging to a family is assured of access to adequate land to secure his livelihood. In several indigenous African societies, land was
passed from one generation to another. Individuals who farmed the land knew that what they exercised was cultivation rights only, as the right of ownership was vested in the lineage. Writing about the Mbeere ethnic group of Kenya, Glazier (1985), asserts,

Once an individual has inherited land from his father or begun cultivation of land gained from his lineage, his agnates do not interfere in these use rights. That is, a person freely uses the land as he wished, determining what sort of crops to plant, including cash crops. Further, the lineage exercises no rights to any part of the harvest nor to money gained from the sale of tobacco, cotton, or food crops. Use rights gained from inheritance within the domestic group or from acquisition of lineage land (assigned by the trustee on behalf of the group) are indissoluble and provide the cultivator with wide latitude in the ways he will exploit the land” (Glazier 1985, 196).

Ownership and control of the land was exercised within the lineage and in the smaller ethnic groups, by the chief and members of the ruling elders. On no account must the land be sold to an outsider. Anyone who wanted a piece of land for any purpose must state his reason for it and bring a token to the custodians who would grant him access for usage. The European settlers in East and Southern Africa misunderstood the granting of access to use for the outright sale of these pieces of property to them. For a bottle of hot drink, some fowls or two he-goats, the European settlers assumed that the infinite right to the land had been “sold” to them by the elders of these communities. By the time the elders realized this misconception and wanted to re-posses their lands, colonialism had taken root and the forceful appropriation of the African’s property was entrenched. This was a misnomer and considered a “taboo” or “abomination” in most indigenous Africa where it was generally held that land could not be sold. Land was only held in trust by the living on behalf of the long gone ancestors, “to part with it was to invite the wrath of the ancestors. Land was deified, and selling it was considered sacrilegious” (Ayittey 2006, 339).

Strong emotional and spiritual emphasis was attached to land in indigenous Africa, for on them were buried the ancestors of the present inhabitants. It was believed that the sale of land would result in the disintegration of the social cohesiveness of the community who trace their ancestry to a common lineage. The benefit of this philosophy of appropriation prior to Western incursion was that nobody was landless. All individuals who were recognized as citizens of the community were assured of land as the primary means of production, thereby providing for financial and social security for all who were able and willing to work hard to till and cultivate the land for consumption and exchange. In a system of government where there was no indigenous form of taxation for the upkeep of any member of the society in the form of incomes or subsidies, land was the only asset that afforded the African income and security and also ensured that the old and infirm had a place to stay, which had not been sold to outsiders. For the reasons enumerated, the indigenous African economic system did not and still does not permit the outright sale of land as a means of production, unlike the Western economic system.

Africa’s indigenous land communal ownership system was soon to become the subject of intense attack by development “experts.” The World Bank, IMF, FAO and other institutions who trace their ancestry to the West critiqued the African indigenous
land system, proclaiming it an impediment to the development of agriculture in the subregion. The Western institutions whose consultants took a tour of several African communities that practiced the indigenous land holding system claimed that it was only through land privatization that Africa will achieve food security. Capitalist oriented “Land Reform Programs” were touted as the key to the improvement of land use practices. Ownership of title deeds, it was argued, would serve as incentives for investment in land, and reduce the high incidence of, “overgrazing, over-cultivation, exhaustion of soil fertility, and soil erosion” (Ayittey 2006, 340).

Under the pretext of Land Reform Programs, African governments engaged in wanton seizure of communal lands from communities. With the mandate of the Ethiopian Land Reform Act of 1975, Comrade Mengistu Haile Mariam decreed the nationalization of all land, and enforced villagization on over 75% of the country’s population. Under Nigeria’s Land Use Act of 1978, all lands in Nigeria became the property of the Federal Government. To utilize the land, farmers must lease from the Federal Government and therefore, they cannot be used as collateral for loans. In neither country did the seizure of communal lands result in agricultural revolution. Instead, corrupt government officials have appropriated land for themselves and their families for construction of expansive estates or other personal and antidevelopment uses. Ayittey asserts that “since the 1980s, starvation has been a constant threat in Ethiopia. Unable to feed itself, Nigeria spends $3 billion a year importing food—including rice, sugar, chickens and milk—which it could grow for itself” (The Washington Times, July 18, 2004, A6)

**Labor**

Indigenous Africa viewed labor very much the same way as land, a communal enterprise where responsibilities and profits are shared accordingly. Labor was extracted from within the extended family, and the larger the extended family then the greater the productivity. Unlike the Western concept of productivity where labor has been “thingified” or depersonalized, and therefore can be mindlessly expropriated, the African indigenous system of thought places a lot of respect on labor and considers investment in human capital a worthwhile venture (Ayittey 2006, 342).

On occasions when labor demands were beyond the ability of the extended family to supply, cooperatives were organized within the village to assist. This was usually the case when the need arose for heavy farm work or for special projects such as building a house. The work groups involved “pooling together members of the same age group, kinsmen, or all male or female members of a village. In Benin, the cooperative work group was called dopkwe and was used by the peasant farmer when his fields were too extensive to permit them to be hoed by his own labor and the labor of those whose services he has at his disposal” (Skinner 1961, 14).
Among the Yoruba

A man can invite his relatives, his friends or the members of his club, depending on the size of the task, to form a working bee (owe). He provides food and drink for the group at the end of the day’s work, but this is not considered payment; others participate because they earn the right to call upon their host for help under similar circumstances. No strict accounting is made of an individual’s participation; but if someone calls for working bees without taking part when others called them, it is noticed and others will fail to respond to his invitation (William 1987, 70).

Farmers could also agree to labor exchange by taking turns to work together on one man's farm until all the farms of all the group members are cultivated.

Pawnship was another way of labor extraction, a situation where one man borrows money and either pawns himself, or gives another as a pawn to the lender to work for a specific period of time until the loaned amount is fully repaid. This is somewhat similar to the clientage method whereby individuals, of their own accord, attached themselves to a mentor, offering their labor services in exchange for protection or training in some trade or craft (Ayittey 2006, 343). “This practice was widespread in South Africa among the Xhosa, the Thembu, the Zulu, and the Dlamini. A person would be lent cattle by a wealthy community leader or chief. He herded the cattle and drank their milk, and received some of their offspring. In exchange, he assisted the owner in building or fencing or attended him in a court case or in war” (Kendall and Louw 1987, 5). The Igbo of southeastern Nigeria also engaged in clientage although at an earlier age. Young boys are given to traders or smiths for a certain number of years to serve the master. In return, the master teaches the rudimentary principles of the trade or profession to the young boy and upon the agreed period, when the boy is assumed to be old and well versed enough to be his own boss, he is “settled” with the basic provisions needed to start the trade or craft. This system exists till today. Domestic slavery also provided labor in precolonial indigenous Africa, although this was more often than not utilized by the wealthy. It should be stated that the treatment of slaves in Africa differed dramatically from Europe and America. Some slaves such as king Jaja of the Opobo kingdom in the Niger Delta Nigeria, rose to become leaders in the societies where they were previously slaves.

Capital

Capital as defined by economists implies any commodity whose value is generated from its usage in the production of other goods. Machines, funds and other assets such as tractors or trawlers are capital needed to ensure continued output. In its popularized variant, capital is used to refer to “funds or money needed to operate or to start a business” (Ayittey 2006, 344). Indigenous Africa relied on communal effort to raise capital for large-scale projects. This was done through a revolving credit scheme known by different names in different parts of the continent: it is susu in Ghana, esusu in Yoruba, tontinnes or chilembe in Cameroon, and stokfel in South Africa (Illiffe 1987, 136).
Typically a group of, say, ten people would contribute, say, $100 into a fund. When it reached a certain amount, say $1000 it was handed over to the members in turn. Such a scheme required a liberal dosage of trust among members to be operational and somehow the natives managed to make it work. In fact, for many businesses in the indigenous and informal sector, the loan club was their primary source of capital (Ayittey 2006, 344).

Further, people borrowed money by pledging their farms, or where this was not possible, forming partnerships with a person with capital. A unique system of trading in Africa which was in existence is the institution of trust. In the area of commerce, it was possible for “middlemen or agents to secure credit solely on the basis of trust” (Ayittey 2006, 345). The institution of trust operated in the advancement of goods to a trader by a producer or importer, the repayment of which is expected from the latter within an agreed timeframe and in the medium acceptable to the supplier.

At Old Calabar in 1851, the British Council estimated that at least 70,000 lb (sterling) of imported goods were in the possession of brokers and a further 13,000 lb (sterling) had been advanced and already traded to suppliers. Another observer found that “with the utmost confidence a fellow nearly naked will ask you for three, four, or even five thousand pounds (sterling) worth of goods on credit, and individuals are often trusted to that amount. I have trusted more than one man with goods, the returns of which were worth between two and three thousand pounds.” Trust formed the essential part of the agreements between Sierra Leone traders and King Docemo of Lagos in 1854… In Gambia, the scale of trust in the 1850’s was about 200 to 2,000 lb sterling per agent, and there were eight or ten agents for each French firm (Newbury 1971, 19).

The famous trade in palm-oil which dominated most of West Africa in the nineteenth and early twentieth centuries was run on the relationship of trust which existed between the European merchants and the Africans in the coastal areas who traded directly with the hinterland Africans.

An African was compelled to sell all his oil to the European whose trust he held. The European never wanted his trust totally repaid by a reliable merchant because the African would then be free to sell to the European’s rivals. Europeans tried every method, honest and dishonest, to keep Africans in debt to them. To break the monopoly hold on Africans, new firms would offer either higher prices or trust on easier terms. If the Africans supplied the new merchant with oil the old firms would forcibly seize it. The king would then declare a boycott of all trade until the dispute was settled. The king also declared a trade boycott when the European firms combined to fix prices. Nevertheless, despite its imperfections, the trust system did supply Africans with some credit to begin commercial operations (Newbury 1971, 19).

Indigenous Political Systems

In discussing the indigenous political system in Africa, one looks at the various ways in which governance, social organization, and representation, including matters of justice and equity, are addressed in the indigenous African society. In most of indigenous African political systems, “the lineage was the most powerful and effective force for unity and stability” (Abrefa 1951, 6). Writing on the Ashanti, Abrefa
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(1951) notes that: “Each Ashanti village consisted of a number of lineages which formed a political community under the *odekuro*, who belonged to one of the first lineages to settle here. The affairs of the village were managed by the *odekuro* and the heads of the lineages of the village, but the *odekuro* was also responsible to an elder who lived at the capital in Wenchi” (Abrefa 1951, 6).

Indigenous African political systems can be loosely grouped under two broad categories; centralized authority and the acephalous or stateless societies. In the centralized societies, groups of ethnic groups, either voluntarily or by conquest are subjected to a single hegemony—the more famous of these included the “Fanti of Ghana, the Yoruba of Nigeria, the Mossi of Burkina Faso, the Swazi and the Zulu of South Africa” (Ayittey 2006, 106). The more prominent acephalous societies were the Igbo of Nigeria, the Kru of Liberia, the Tallensi of Ghana, the Konkomba of Togoland, the Fulani of Nigeria, the Somali, the Jie of Uganda, and the Mbeere of Kenya. Writing about the stateless societies, Jean-Francois Bayart (1989) in *L’Etat en Afrique*. Paris: Fayard notes that “the most distinctive contribution of Africa to human history has been precisely in the civilized art of living reasonably peacefully without a state” (Bayart 1989, 58). A peaceful and well organized stateless society as was observable in precolonial Africa presented an enigma to the Westerner who views the state as a principal agent for the prevention of tyranny, although when mishandled the same state could be the vehicle for the enthronement of tyranny in a society. For the Africans who lived in stateless societies, the state was nothing short of an institution of tyranny, which enthroned the elites above the masses in the making of everyday decisions. The acephalous societies exemplified the height of democracy in any society, as all the adult citizens were entitled to be heard during decision making. Chancellor Williams (1987) notes that

> It was therefore in the societies without chiefs or kings where African democracy was born and where the concept that the people are sovereign was as natural as breathing. And this is why in traditional Africa, the rights of the individual never came before the rights of the community… these self-governing people did not have a Utopian society in any idealistic sense. Theirs was a practical society in every way. Their laws were natural laws, and order and justice prevailed because the society could not otherwise survive. Theirs was, in fact, a government by the people; and it was, in fact, a government for the people. That this kind of government did “pass from the earth” is another fact we now call “modern progress” (Williams 1987, 170).

The colonial masters encountered great difficulty in dealing with stateless societies. Although the colonialists tried hard to establish certain individuals perceived to be “powerful” whose words could hold sway in the gatherings of the citizens, the end result was a group of leaders who were previously equals now being imposed on the groups. Ayittey asserts that this group of chiefs “lacked authority since they were not part of the kinship group and were treated as external representatives of an alien government. Within the ethnic group they had little authority and what little they had was considered tyrannous by the people” (Ayittey 2006, 116).³ The Somali

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³The Somalis made mockery of the titles given to the first central government imposed by the British and the Italian colonialists, calling the president of the Somali Republic *madaxweyne*, meaning “big head” (2006. Michael Van Notten *The Law of the Somalis*. Trenton, NJ: The Red Sea Press, Inc.).
experience is worthy of note; the Somali clans are politically independent, “no clansman will accept being ruled by a member of another, any more than someone from his own clan. All clans adhere to one political philosophy; preventing any form of dictatorship. This nation-wide attitude toward government probably has its roots in the great respect that Somalis have for every individual’s life, liberty, and property; theirs is a well thought out freedom philosophy” (Van Notten 2005, 82).

The brief decades of the imposition of European styled central government over the extremely freedom conscious Somalis have done little to change their desire for the indigenous institutions and the rule of law which they had developed themselves and practiced for centuries. Van Notten (2005) notes this when he writes that:

During the 20th century, the Somalis were subjected to the heavy-handed policies of the colonial powers. These powers left a form of government behind that was at odds with indigenous Somali political culture. It took the Somalis 30 years to get rid of it and return to their precolonial political structure. Many problems arose in the course of this, but gradually the Somalis are resolving them. Foreign observers fail to understand what they are doing; they think the Somalis have been trying to establish a democratic government and constantly failing to do so. In reality, the chief aim of many Somalis is to clean their indigenous legal and political system of its foreign elements (Van Notten 2005, 139).

Among societies with central governments, the indigenous political systems had built-in checks and balances to prevent abuse by the central leader. This is most often accomplished through the office of the chiefs and the councilors that surround him. These councilors were made up of elders selected from the different wards, districts and lineages within the community. The councilors act to prevent the chief from becoming tyrannical, by constant critique of his policies, and in seeking to control his decisions. The work of the councils of elders transcends the selection and approval of the nomination of the paramount ruler (chief), to include policy advisory roles including matters of domestic and international relations. The paramount ruler also relied on his council of elders in administrative matters and in execution of government policies. In several centralized societies, the ruler was expressly forbidden from acting on any state matter without duly consulting and securing the approval of the council, and essentially, no law is promulgated outside of the council’s approval. In this manner, the ruler’s actions are checked, and should he display autocratic tendencies, he is very quickly deposed or deserted by the council, which renders him unacceptable (Kwame 1985, 18). Other in-built checks and balances within the system form part of what is regarded as taboos, customs and traditions of the African indigenous chieftaincy system.

Religious and Supernatural Sanctions

Traditionally, Africans believe in the existence of the supernatural. At the physical demise of an individual, the soul starts to exist in the ancestral world, watching over the activities of the living. The chief and those in authority feared the consequences of displeasing the ancestors, should they treat their people harshly or steal from the state
Religious and Supernatural Sanctions

coffers. This fear made them circumspect in their dealings with state matters. The Limba of Sierra Leone who have no custom of deposition of a bad chief, believe that the ancestors will deal harshly and kill in a shameful and sudden manner, any chief who rules without due consideration of the wishes and aspirations of the populace. The Tallensi, the Dagomba and the Akan peoples (all of Ghana), are of the belief that invisible powers will bring punishment to leaders who abused powers and authority held on behalf of the masses (Amoah 1988, 79).

Institutionalized Sanctions

Apart from spiritually induced retributions, sanctions could come in the form of private and public admonitions which a ruler receives before he ascends the throne, and afterwards, when he starts displaying dictatorial tendencies. In the Ashanti system, it was the Queen-Mother who was imbued with the responsibility of scolding the king or presenting him with the option of his dethronement. Other forms of institutionalized sanctions are manifested in the establishment of certain prohibitions against the office of the chief. Among the Akan of Ghana, for instance, a chief is prohibited from meeting any foreigner except in the presence of the council of elders; this among others would ensure that the chief is not colluding with outsiders to loot the treasury. Amoah (1988) writes about the Akan tradition—obtainable across indigenous African political systems—which prohibits the chief from holding any form of private property.

In some societies, especially the Akan of Ghana, the danger of a ruler using his position to amass wealth for himself was obviated by the custom that the king could not, except in a few circumstances, own any personal property while in office. Everything that the ruler acquired while he was in office, unless the elders knew that he was acquiring it for himself and consented to it, automatically became stool property. That rule applied to the wives of the ruler as well. To make the rule effective, the administration of stool funds and property was put in the hands of the Sanahene (treasurer). The ruler was debarred from any close contact with the stool finances. He was neither permitted to hold the scale used for weighing out gold dust nor to open the leather bag in which the gold was kept (Amoah 1988, 177).

Any chief who was considered despotic could also come under immense pressure from the several existing groups in the form of secret societies, age grades, market women associations, hunter’s guild, etc.

Indigenous African political system upheld freedom of association to such an extent that it was a given part of the African’s existence. Such associations were destroyed during colonialism owing to the fear of the European colonial masters that they could turn into platforms for political agitation. The age-grade system of the Igbo was quite influential in acting as a group that ensured that all within the acephalous Igbo society complied with rules and regulations. The asafo company of the Akan of Ghana was a warrior organization of the common people or youth who, among other responsibilities and duties, posed as an “effective political force in the enstoolment and destoolment of chiefs (Amoah 1988, 176). Amoah (1988, 176)
asserts that “no chief would remain on the stool for long if the *asafo* companies were united against him.”

The inner workings of the indigenous African political system is contrary to the European characterization of the African chief as a dictator who enriches himself with the proceeds from the coffers of the state. The anthropologists, missionaries and colonialists did not understand the inner workings of the chief and his cabinet or councilors. The chief’s main occupation was the survival and well-being of his people and it is expected of him to listen to a wide variety of viewpoints in order to arrive at a consensus. As a builder of bridges across different opinions, the chief acted as an umpire who ensured fair play and justice to all. Although occasionally, certain autocratic minded chiefs arose who tried to usurp power from the cabinet and take actions unilaterally, it was the exception rather than the rule. In stark contrast to theoretical convictions that the African chief ruled for life, the practice was such that the chief could be dethroned or destooled by the elders and the masses.

**The African Indigenous Judicial System**

Africa has been upheld as the citadel of many variants of free, fair, thorough, and advanced legal systems. The indigenous courts still found in the Bantu states of the continent is testimony to the enduring nature of the home-grown and time tested legal system of Africa. Heath argues that the “Somali legal system has all the makings for becoming one of the finest systems of the world. All it needs to achieve this status is exposure to the daily hustle-bustle of the market place of ideas, goods and services in the context of the world economy” (Heath 2001). The *gacaca* court hearings were synonymous with the Tutsi of Rwanda. The hearings are held in open places where all the concerned parties to the disputes are invited. The grievances of the offended are followed by statement of the accused defending his acts. Testimonies are also heard from eye witnesses and supporters of both the accused and the complainant. The judges are tasked with sifting through the submissions by all parties to separate lies, inconsistencies in arguments and other discrepancies before declaring judgment on the erring party. There is always room for a retrial or appeal to a court of higher authority in the case of unacceptable rulings. In the absence of an adequate “modern” judicial system, *Gacaca* has been adopted as part of the official judicial system in post genocide Rwanda, in order to bring the perpetrators to book.

The nuclear family settled minor disputes among members in the case of the Igbo of Nigeria. Graver matters are within the purview of the extended family or kindred, while the lineage heads settled “cases of assault, petty theft, family disputes, adultery and even divorce” (Olaniyan 1985, 28). Olaniyan (1985) asserts further about the Igbo

The village court handled inter-lineage cases over which the lineages involved could not reach agreement. Both plaintiff and defendant paid settlement fees in kind, although the plaintiff paid the summons fees. The innocent party had a part of its settlement fees refunded
while the guilty party forfeited its fees and was subject to further fines in line with the gravity of the offence… The right of appeal was always upheld (Olaniyan 1985, 28).

Essentially, the indigenous judicial system, which was in operation prior to colonialism, sufficiently handled the prevailing issues requiring social justice and amelioration with a built-in capacity to expand in response to societal growth and development.

Indigenous Knowledge in Medicine

Indigenous knowledge of healing in Africa is as old as the very first inhabitants of the continent. For centuries, this knowledge was applied to ensure longevity and quality of life within societies, and although practiced in various interpretations, there is general consensus regarding its underlying philosophy.

Philosophy and Practice of Africa’s Indigenous Medicine

The general philosophy underlying African indigenous medicine can be gleaned from a study of its practice among the different societies on the continent. An analysis of indigenous African medical philosophy takes off at three basic premises, which although considered distinctly in this study, overlap in everyday practice. These are the natural, supernatural and social worlds; these three categories offer a holistic framework for Africa’s indigenous medical system in its analysis of diseases, as it affects not just the individual, but also the community.

Natural Explanations: The crucial role accorded to natural occurrences in determining the cause of diseases in African indigenous medicine is hardly emphasized by much of the available literature on the subject. The ill health of an individual in Africa—unlike the erroneous interpretation given by Western anthropologists—is first attributed to “naturally occurring, unclean, or contaminated substance,” and not the supernatural activities of witches and wizards (Baronov 2008, 132). The link between natural phenomena and ill health is a fundamental aspect of African indigenous medical practice, which guides the diagnosis and determined course of treatment. The Sukuma of Tanzania attributes illnesses which affect the whole community to some sort of environmental pollution or contamination. The BaKongo of Democratic Republic of Congo, give their newborn infants three herbal purges within the first few months of birth. It is believed that a child is born with vumu, a food substance in the stomach which ought to be cleansed to ensure that the baby does not grow into a sickly adult. The Zaramo of Tanzania directly link several bodily afflictions with food or air borne contaminants. The Zaramo also believe that one can fall sick by stepping on uchawi (witchcraft) ostensibly meant for someone else. Baronov argues that stepping on witchcraft suggests that witchcraft itself represents a
material substance with physical properties. Even the witchcraft, therefore, is susceptible to empirical-rational investigation, to be confirmed or refuted” (Baronov 2008, 133). The Meru of Tanzania view the human body as a complex machine which can malfunction for several external reasons which includes dirty food and environment, cold, overeating and eating the wrong kind of food, in addition to diseases caused by animals and germs. The Yoruba believe that most illnesses are caused by germs and some of these germs are contagious. They also believe that certain psychiatric disorders and other severe physical abnormalities are caused by invisible worms or as a result of impure or abnormal blood—what biomedical scientists now diagnose as sickle cell disease. The Maasai of Kenya attribute malaria to mosquito bites and the Kamba believe that measles is caused by “a reddish brown worm lodged in the stomach just under the spleen” (Mburu 1977, 178).

Environmental causes of ill health that underlie African indigenous medical beliefs include unsanitary living conditions, overexposure to sun, overcrowding, etc. The Zulu believe that there exists a unique kind of relationship between a man and his habitation or immediate environment. This environment is inclusive of topography, animal and vegetation which all interact with man in order to determine his state of physical well-being (Ngubane 1977, 323). The Igbo believe that diseases are “carried by breezes or winds resulting in coughs or yaws, while the Yoruba believe that imototo the act of dwelling in an unclean environment is a major cause of diseases (Ezeabasili 1982, 28).

In response to the identification of the personal and environmental causes of sicknesses, African indigenous medicine fashioned appropriate physical remedies or preventive techniques for these diseases. Flint (2001, 202) records that “when Europeans first arrived, Africans in the Zulu kingdom had, for the most part, minimized health risks by settling outside low-lying malarial areas and requiring multiple dwelling structures for large families.” Herbalists also prescribe an array of plant-based remedies based on a presumption of the medicinal components of the specific plants, roots, and herbs and the specific illness. In this regard, Baer asserts that

All human societies have a pharmacopoeia consisting of a wide variety of materials, including plants, animals (including fish, insects and reptiles), rocks and minerals, waters (salt and fresh, surface and subterranean), earths and sands, and fossils, as well as manufactured items. An estimated 25% to 50% of the pharmacopoeia of indigenous peoples has been demonstrated to be empirically effective by biomedical criteria; various biomedical drugs, including quinine and digitalis, were originally derived from indigenous peoples (Baer et al. 2003, 10).

In the case of indigenous African medicine, there is a limitless number of illnesses to which the treatment most often prescribed is natural, that is, based on plant or animal extracts. The Yoruba treat deafness with an herbal ear drop. Other common diseases such as colds, fevers, and childhood convulsions are treated with specific herbal remedies. In southwest Tanzania, constipation is treated with select herbal purges, and enema and eye infection treated with sap from a particular tree. The Bambari have potent herbs for the treatment of measles while the Shona of Zimbabwe
have several common herbs for alleviating of symptoms associated with scurvy. The list is endless.4

The distinctive efficiency of the African indigenous herbal remedies has attracted Western pharmaceutical companies whose exploitative inclination leads them to patent several of the age-old remedies as their own intellectual property. Baronov asserts that “this robbery is based on an ongoing relation of exploitation between Africa and the West as well as biomedicine’s proclivity to treat medical care as comprised of discrete elements that exists outside a holistic framework” (Baronov 2008, 137).

Supernatural Understanding of Ill health: The African indigenous medical philosophy does not attribute the origin of all illnesses to natural events or substances. Supernatural causes of ill health, according to African indigenous medical philosophy, are founded on the negative activities of evil spirits, often times orchestrated through their human agents. Witchcraft, sorcery, magic, and spirit are all manifestations of evil forces intent on making life unbearable for innocent humans. The functions of the witch and the sorcerer, though considered distinct, are often co-mingled in certain African societies. The witch is commonly portrayed as the recipient of witchcraft substance, although he or she is at liberty to use it for harm or let it lie latent in him. The Tswana of Botswana contend that “The witches who prowl at night are said to be normal humans during the day, and are not even aware themselves of the nocturnal personalities which they have inherited from an earlier generation” (Ulin 1984, 245). Witches posses supernatural powers that make other non-witches fear them. Although the mere possession of witchcraft spirit, which could be eaten, inherited or assimilated consciously or unconsciously, is not necessarily evidence of intent to use it for harm. It is sorcerers who possess supernatural powers and are intent on using it to do evil to innocent men, women, and children. By going through specialized intensive training and through the dubious purchase of harmful magic, the sorcerer delights in causing harm to his neighbors and perceived enemies within and outside his family setting (Baronov 2008, 140). One of the very important functions of the African indigenous medical practitioner has to do with countering the negative effects of witchcraft and the sorcerer’s spells with his own presumably higher powers. The role of African indigenous medical practitioner transcends the art of physical healing by administering herbs and other natural remedies, to include the control of the supernatural forces of darkness that might be threatening the life of his patient.

Another important aspect of supernatural interpretation of indigenous African medicine is the belief in the existence of a spirit world. The spirit world is generally assumed to compose of the spirits of long gone ancestors whose job it is to protect the living and ensure the preservation of the customs, culture, and values of the community. The spirit world is the domain of those who have departed from the community. It is generally believed that when someone dies, the soul departs from the body and goes on to join the forefathers in the form of a spirit. The breaking of

4Some of the relevant literature addressing herbal remedies in Africa include: Odebiyi and Togonu-Bickersteth (1987), Paarup-Laursen (1989), Sofowora (1982), Frankenberg and Leeson (1976).
a custom, often known as a taboo, is followed by some form of serious punishment to the person, which might range from ill health, destruction of crops, barrenness or other forms of negative occurrences in the life of the offending victim (Green 1999a, b). Spirits are a manifestation of ancestral presence and involvement in the everyday life of their children. Exorcism becomes necessary when some spirit, upset about a particular abomination, induces severe suffering to a community. In that case, a seer or priest, who also doubles as the medical practitioner in several instances, is called upon to cleanse the land and appease the offended spirit.

The supernatural realm in African indigenous medical belief involves several rituals that seek to influence the spiritual realm to favor the physical. The Kamba of Kenya would often prescribe a ritual bath (ng’ondu) in the case of female infertility (Good 1987). In essence, supernatural explanations link the causative factor of certain manifestations of human illnesses to “phenomena and forces whose nature cannot be understood, by appealing to the physical laws of nature as recognized by Western sciences” (Baronov 2008, 138).

There are two schools of thought on the role of the supernatural in African indigenous medical practice. One school of thought argues that beliefs in such forces are archaic and inconsequential in the study of the herbal knowledge of the medical practitioners. The supernatural aspect of African indigenous medicine, the school of thought contends, “contravene the laws of nature and are therefore, surely nothing more than the fanciful ranting of a preliterate, uneducated and primitive mind, however respectfully discussed” (Baronov 2008, 138). The second school of thought opine that the supernatural exists, and the fact that Western science, which upholds only the physical, does not take it into cognizance, is not proof of its nonexistence. This school of thought submits that “such forces pertain to a reality not captured by investigations of the natural world (for example, ancestral spirits) and are, therefore, simply beyond the self-imposed ontological limits of the Western natural sciences” (Baronov 2008, 138). The latter view is subscribed to by the practitioners and patrons of indigenous African medicine and by several African scholars.5

Closely related to the supernatural realm of analysis is the social network explanation as the cause of disease and infirmity in human beings (Baronov 2008, 142). Indigenous African medical philosophy contends that a breakdown in interpersonal relationships would occur when two people engage in some sort of quarrel. A consequence of such could be physical breakdown, especially when one party engages the supernatural to harm the other. For the indigenous medical practitioner, it is pointless to administer herbs to treat the symptoms of ill health if the underlying causative factors are not adequately addressed. Among the Utipa of southwest Tanzania, a traditional healer would usually begin the diagnosis of diseases by questions “specifically directed at his client’s personal relations” this line of questioning assists the indigenous practitioner to “identify the posited intrusive agencies (e.g., as territorial or ancestral spirits, or as sorcery)” (Willis 1979, 151). In the Northern Tanzanian Mgbuwe peoples, it is believed that the wealthy are often bewitched by the jealous

5 Other studies include: Airhihenbuwa (1995), Ademuwagun (1979), Asuni (1979), Horton (1967), Mbiti (1970), Mume (1977), Oguah (1984), Quah (2003) and Wiredu (1984).
poor, and the Meru of Tanzania believe that illnesses often result from broken down interpersonal relationships (Baronov 2008, 143). Supernatural manifestations may be as a result of an aggrieved spirit or an upset neighbor, relative, or acquaintance. The angry neighbor would either attack his subject personally, if he has “eaten” witchcraft, or would solicit the services of a sorcerer, to accomplish his wicked schemes.

The general overview of the indigenous African medical system as shown indicate a field that presents a holistic framework for the analysis of diseases in the individual and community. Baronov asserts that “such holistic notions contrasts sharply with the Western cultural practice that emphasize discrete ontological spheres, causing a fundamental divide between those put under the microscope and those wielding the microscope” (Baronov 2008, 145). For Worsley, “one major projection on the part of the medical anthropologist is the very assumption that the object of study is something isolable. Even more fundamental is the assumption that the divisions we draw as scientists, in scientific situations, between the natural and the supernatural is a distinction that is shared by the subjects of anthropology” (Worsley 1982, 326).

As distinct from the over-compartmentalization which characterizes Western medicine, indigenous African medicine also blends in as part of the everyday lived experiences of the individual. Issues of health, wellness, and diseases are intermingled with the everyday activities of society and do not comprise a distinct, specialized sphere or social institution. Baronov asserts that “certain aspects of pluralistic medical beliefs and practices, such as, concern for ancestral spirits involve ongoing facets of a person’s life regardless of the momentary state of his or her physical health” (Baronov 2008, 146). Katz (1982) writing about the !Kung, posits that the !Kung do not consider their healing dances as distinct from their day to day activities. The healing dances are viewed like hunting, gathering, dancing, and other economic and social activities which they engage in as often as necessary. Due to this holistic paradigm which characterizes the African indigenous medical system, one can conclude that it is not the myopic relegation of treatment to the occasional episodes of illness requiring a separate activity and effort towards restoration of health. Unlike western medicine, African indigenous medicine is located within a holistic framework that incorporates the individual’s complete life and that of his community and environment (Baranov 2008).

References

Abdi A, Cleghorn A (2005) Issues in African education: sociological perspectives. Palgrave Macmillan, New York
Abrefa BK (1951) The position of the chief in the modern political system of Ashanti. Oxford University Press, London
Abrefa BK (1967) Africa in search of democracy. Praeger, New York
Ademuwagun Z (1979) The challenge of the co-existence of orthodox and traditional medicine in Nigeria. In: Ademuwagun Z, Ayoade J, Ira H, Warren D (eds) African therapeutic systems. Crossroads Press, Waltham, MA, pp 165–170
Airhihenbuwa C (1995) Health and culture: beyond the Western paradigm. Sage Publishers, Thousand Oaks, CA
Amoah GY (1988) Groundwork of government for West Africa. Gbenle Press, Ilorin (Nigeria)
Appiah-Opoku S (2005) The need for environmental impact assessment: the case of Ghana. The Edwin Mellen Press, New York
Asuni T (1979) Modern medicine and traditional medicine. In: Ademuwagun Z, Ayoade J, Ira H, Warren D (eds) African therapeutic systems. Crossroads Press, Waltham, MA, pp 176–181
Ayittey G (2006) Indigenous African institutions. Transnational Publishers, New York
Baer H, Singer M, Ida S (2001) Biomedicine and alternative healing systems in America: issues of class, race, ethnicity and gender. University of Wisconsin Press, Madison, WI
Baer H, Singer M, Ida S (2003) Medical anthropology and the world system, 2nd edn. Praeger, Westport, CT
Baronov D (2008) The African transformation of western medicine and the dynamics of global cultural exchange. Temple University Press, Philadelphia
Bayart J-F (1989) L'Etat en Afrique: la politique du ventre. Fayard, Paris
Berkes F (1988a) The intrinsic difficulty of predicting impacts: lessons from the James Bay hydro project. Environ Impact Assess Rev 8:201–250
Berkes F (1988b) Environmental philosophy of the Chisasibi Cree People of James Bay. In: Freeman MMR, Carbyn LN (eds) Traditional knowledge and renewable management, Boreal Institute for Northern Studies, Edmonton, Aha., Canada. Occasional Publication No. 23, 7–21
Ezeabasili N (1982) Traditional Igbo ideas about disease and its treatments: Nigeria perspectives on medical sociology. Stud Third World Soc 17–28
Flint K (2001) Competition, race, and professionalization: African healers and white medical practitioners in Natal, South Africa in the early twentieth century. Soc Hist Med 14(2):199–221
Frankenberg R, Leeson J (1976) Social anthropology and medicine. In: Loudoun JB (ed) Academic Press, London
Glazier J (1985) Land and uses of tradition among the Mbeere of Kenya. University Press of America, Lanham
Good C (1987) Ethnomedical systems in Africa: patterns of traditional medicine in rural and urban Kenya. Guilford Press, New York
Good C (1991) Pioneer medical missions in colonial Africa. Soc Sci Med 32:1–10
Good C (1996) Indigenous healers and the African state: policy issues concerning African indigenous healers in Mozambique and Southern Africa. Pact Publications, New York
Green SA (1999a) Orthopaedic surgeons: inheritors of tradition. Clin Orthop 6(363):258–263
Green E (1999b) Indigenous theories of contagious disease. Alta Mira Press, Walnut Creek, CA
Heath FD (2001) Tribal society and democracy. In: The Laissez Faire City Times 5(22). http://www.afrifund.com/wiki/index.pcg?i=page=CtrySomaliland
Horton R (1967) African traditional thought and western science. Afr J Int Afr Inst 32(3):197–219
Illiffe J (1987) The African poor. Cambridge University Press, New York
Katz R (1982) Boiling energy: community healing among the Kalahari Kung. Harvard University Press, Cambridge, MA
Kendall F, Louw L (1987) After Apartheid: the solution for South Africa. ICS Press, San Francisco
Knudston P, Suzuki D (1992) The wisdom of the elders. Stoddart LePena, Toronto, Ontario
Kwame A (1985) Traditional rule in Ghana. Sedco, Past and Present Ghana
Lalonde A (1993) The federal environmental assessment review process and traditional ecological knowledge. Environmental Assessment Branch, Ecosystem Sciences and Evaluation Directorate, Ottawa, Canada
Mbti JS (1970) African religions and philosophies. Doubleday & Co, New York
Mburu FM (1977) The duality of traditional and western medicine in Africa: mysteries, myths and reality. In: Singer P (ed) Traditional healing: new science or new colonialism? Essays in critique of medical anthropology. Conch Magazine Limited, New York
Moxon J (1998) Volta: man’s greatest lake---The story of Ghana’s Akosombo Dam. Andre Deutsch Press, London
References

Mume JO (1977) How I acquired the knowledge of traditional medicine. In: Singer P (ed) Traditional
healing: new science or new colonialism? Essays in critique of medical anthropology. Conch
Magazine Limited, New York, pp 136–157
Mundy K (2002) Externally driven reforms and their adoption during democratic transition. In:
Moulton J, Mundy K, Walmond M, Williams J (eds) Education reforms in sub-Saharan Africa.
Greenwood, Cincinnati
Munn RE (1979) Environmental impact assessment: principles and procedures. Wiley, New York
Newbury C (1971) Prices and profitability in early nineteenth-century West African trade. In:
Meillassoux C (ed) The development of indigenous trade and markets in West Africa. Oxford
University Press, Oxford
Ngubane H (1977) Body and mind in Zulu medicine: an ethnography of health and disease in
Nyuswa-Zulu thought and practice. Academic Press, London
Odebiyi AI, Togonu-Bickersteth F (1987) Concepts and management of deafness in the Yoruba
medical system: a case study of traditional healers in Ile-Ife. Nigeria. Social Science and Medicine
24(8):645–649
Odhiambo T (1990) You cannot fix indigenous knowledge. ILEIA News 6(1):3–5
Oguah BE (1984) African and western philosophy: a comparative study. In: Wright R (ed) African
philosophy: an introduction, 3rd edn. University Press of America, Lanham MD, pp 213–226
Olaniyani R (1985) Nigerian history and culture. Longman Group Limited, London
Omololu AB, Ogunlade SO, Gopaldasani VK (2008) The practice of traditional bonesetting. Clin
Orthop Relat Res 466:2392–2398
Organization of African Unity (OAU) (1980) Lagos plan of action and the final act of Lagos
Paarup-Laersen B (1989) The meaning of illness among the Koma of Northern Nigeria. In: Jacobson-
Widding A, Westerlund D (eds) Culture, experience and pluralism. Almqvist & Wiksell, Upsala,
Sweden
Quah S (2003) Traditional healing systems and the ethos of science. Soc Sci Med 57(10):1997–2012
Schneider H (1986) Traditional African economies. In: Martin P, O’Meara P (eds) Africa. Indiana
University Press, Bloomington, IN
Schneider W, Pressley M (1986) Memory development between two and twenty. Lawrence Erlbaum,
New Jersey
Skinner E (1961) Intergenerational conflict among the Mossi: father and son. J Confl Resolut
5(1):55–60
Sofowora A (1982) Medicinal plants and traditional medicine in Africa. Wiley, Chichester
Sofowora A (1993) Recent trends in research into African medicinal plants. J Ethnopharmacol
38(2):197–208
Ulin RC (1984) Understanding cultures: perspectives in anthropology and social theory. Blackwell,
Massachusetts
Van Notten M (2005) The law of the Somalis. Red Sea Press, New York
Warren D (1991) Using indigenous knowledge in agricultural development. The World Bank, Washing-
ton D.C
Warren DM, Slikkerveer LJ, Brokensha D (1995) The cultural dimensions of development: indige-
nous knowledge systems. Intermediate Technology Publication, London
Williams C (1987) The destruction of black civilization. Third World Press, Chicago
Willis R (1979) Magic and ‘Medicine’ in Ulipa. In: Morley P, Willis R (eds) Culture and caring:
anthropological perspectives on traditional medical beliefs and practices. University of Pittsburgh,
Pittsburgh
Wiredu K (1984) How not to compare African thought with western thought. In Wright, R. Lanham,
MD (eds) African philosophy: an introduction, 3rd edn. University Press of America, pp 149–162
Worsley F (1982) Non-western medical systems. Annu Rev Anthropol 11:315–348
World Bank (1988) Education policies for sub-Saharan Africa: adjustment, revitalization, and
expansion. Report no. 6934. Author, Washington, DC
World Bank (1989) Chad irrigation subsector review. Report no. 7968-CD. The World Bank, Agri-
cultural Division, Sahel Department, Africa Region, Washington, D.C.
