

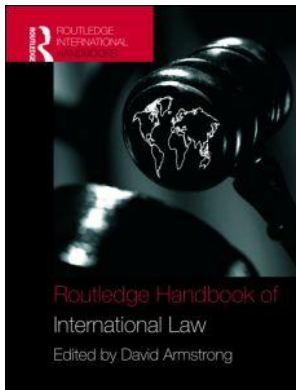
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On: 27 Mar 2023

Access details: *subscription number*

Publisher: *Routledge*

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## **Routledge Handbook of International Law**

David Armstrong, Jutta Brunée, Michael Byers, John H. Jackson, David Kennedy

### **Colonial Origins of Intellectual Property Regimes in African States**

Publication details

<https://test.routledgehandbooks.com/doi/10.4324/9780203884621.ch22>

Ikechi Mgbeoji

**Published online on: 22 Dec 2008**

**How to cite :-** Ikechi Mgbeoji. 22 Dec 2008, *Colonial Origins of Intellectual Property Regimes in African States from*: Routledge Handbook of International Law Routledge

Accessed on: 27 Mar 2023

<https://test.routledgehandbooks.com/doi/10.4324/9780203884621.ch22>

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## Colonial origins of intellectual property regimes in African states

*Ikechi Mgbeoji*

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*This chapter analyzes the colonial roots of intellectual property rights (IPR) regimes in African states and argues that the inability of contemporary African states to internalize some of the key doctrines of IPR regimes can be linked to the underlying differences between African worldviews and the Eurocentric philosophies underpinning IPR regimes. Using the general concepts of patent law as the analytical framework, it argues that unreconstructed Eurocentric IPR in Africa may be blamed for the perverse phenomenon wherein legal provisions in the statute books have failed to translate to compliance with IPR in many African states. It contends, in summation, that colonial rivalries between decolonized African states are responsible for the institutional fissures and balkanization of continental regulation of IPR in Africa.*

This chapter is divided into four sections: The first queries the general assumption that IPR are universal verities divorced from local truths, in particular, the Eurocentric worldview and value systems of modern IPR. The second section traces the origins of IPR and relates the European origins of the patent system to its unsuitability for African realities. In the third section, we examine the features that make modern patent systems uniquely Eurocentric and argue for a reconsideration of those doctrines that impede

domestication of IPR in the African continent. The final sections summarize the arguments put forward in the chapter by examining how the cultural disconnection between patent systems has influenced the inability of modern IPR laws to influence social and economic behavior in African states.

### The local as universal

Although IPR regimes are often promoted as universal verities (Draho 1998: 13), scholars are increasingly aware that standardized global IPR regimes affect various societies in different ways (Endeshaw 2002: 55). Indeed, in the past decade, the local impulses and characteristics of IPR in various states and across different historical timeframes have all become subjects of legitimate inquiry (Grundmann 1976; Penrose 1951). IPR regimes are, indeed, susceptible to the perceived changing demands of industrialized states and the power relations between states (Chiappetta 2000).

Yet, for a long time, especially in the heydays of colonial domination of Africa, Eurocentric scholars and institutions pretended that IPR are universal verities lacking

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in local differences and historical contingencies. As Endeshaw (2002: 55) has observed:

[T]his trend is evident in standard IP textbooks and even WIPO publications. Pick up any of these writings and you will see a discussion beyond the concrete; an outpouring of rules and policies that do not tie in with specific conditions of countries. Perhaps this had to do with the misfortune of IP being in the suffocating care of lawyers and not economists.

Despite the grudging admission by IPR scholars of the varieties and different temperaments if not doctrinal differences, among IPR in several states, an often ignored dimension of the local nature of IPR is the influence of the colonial origins of IPR in Africa. Yet, it cannot be seriously doubted that the nature and content of IPR laws and institutions, especially patents, trademarks, and copyrights clearly show that the dominant IPR have their origins in the cultural, legal, and economic traditions of continental Europe and of western jurisprudence and economic systems (Mgbeoji 2003). Consequently, it would be problematic for scholars to persist in the myth that local economic, technological, and cultural conditions do not influence the structure and content of IPR laws and institutions (see, e.g. Beier 1980). Thus, I argue in this chapter that the prevailing notion that Eurocentric varieties of IPR regimes should be universally accepted as symbols of civilization is a notion that needs to be scrutinized (Endeshaw 2002).

The European origins of copyrights, trademarks, and patents regimes is widely acknowledged but scholars have hardly inquired into the subject of whether the philosophical and cultural underpinnings of dominant IPR may have implications for the efficacy of such IPR in the African landscape (Lowenstein 2002). It needs to be borne in mind that the diffusion and spread of IPR regimes from Europe to other parts of the world followed distinct patterns derived from the single template of European economic, political, and

cultural conquest of the globe. A combination of certain historical factors facilitated and encouraged the diffusion of IPR regimes from Europe to many parts of the world including Africa.

As a colonial transplant and imposition on African societies, Eurocentric IPR were part of the cultural, economic, and legal instruments for the control and subordination of colonized peoples and economies (Sagoe 1992; Sklan 1978). As I have argued elsewhere (2006: 13), the transplanting of IPR from Europe to Africa was an essential part of the racist and exploitative repertoire of the colonial project. The colonization of native Africans by European states was premised on two main grounds, namely, a sense of European innate superiority over colonized peoples, and, of course, economic exploitation of the colonized. On the former, colonial Europe sought to justify its suppression of native African laws and institutions on the hypothesis of racial superiority of Europeans and the inferiority of “the savages and primitives” of Africa (and Asian, natives of the Americas, aboriginal Australian and the Maoris of New Zealand). It was largely on the notion of a racial ordering of that the colonialist enterprise justified the acquisition and colonization of large swathes of lands and cultures occupied by peoples considered by the colonizing European Christians as “backward territories” and primitive peoples (Lindley 1969).

On the latter, European colonization of Africa was designed as machinery for the looting and dispossession of the colonized peoples of Africa of valuable natural resources (Wa Mutua 2000), and to create a ready market for European goods. To achieve both ends, the colonial enterprise had to create legal and social structures that ensured not only a racist ordering of cultures and societies, but a violent imposition of foreign legal norms and institutions on conquered peoples and cultures for the purposes of European economic supremacy. The obvious implication is that Eurocentric IPR regimes such as patents, copyrights, trademarks, etc., like other manifestations

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of European values, norms, and institutions, had to be internalized by colonized societies if such colonized societies were to be regarded as “developed” and “civilized.”

It must be emphasized that the imposition of Eurocentric IPR on African societies operated on the prevalent notion that colonized African peoples and cultures had no civilization, no jurisprudence, institutions, or methods of governance worthy of respect, let alone deserving of legal protection (Bedjaoui 1978: 153). To all intents and purposes, the colonized territories and peoples were treated as cultural *tabula rasa* (Coombe 1995), on which the colonialists proceeded to inscribe European institutions, norms, and systems, including IPR regimes. This project was facilitated and justified by diverse legal theories and methods which need not detain us here but it will suffice to note that the entire process was executed without the consent or input of colonized peoples.

Accordingly, it has to be understood that the colonial project was not merely the unprecedented robbery of Africa, but also the near annihilation of autochthonous legal systems and protocols. Conversely, Eurocentric laws and instruments were promoted as the highest attainments of rationality, empiricism, and justice: universal truths and ideals attainable by all societies regardless of differences in culture (Shiva 1988). As Wa Mutua (2001) has observed, within this prevailing logic of the colonial project, “history is a linear, unidirectional progression with the ‘superior’ and ‘scientific’ Western civilization leading and paving the way for others to follow.”

Today, there is hardly one African state that does not have IPR regimes copied from the template of the former colonial overlord. Beyond the colonial origins of IPR, a corollary issue is the marginal roles played by colonial and newly decolonized African states in the creation of international and global IPR legal doctrines and institutions. Historically, the structure and process of international intellectual property regulation has margin-

alized the Third World,<sup>1</sup> especially, Africa (Gervais 2002). This phenomenon is currently epitomized by the limited participation and near irrelevance of African countries in global IPR law-making processes (Endeshaw 2002).

As some scholars have observed, in the development of global IPR and trade frameworks,<sup>2</sup> a constant phenomenon is the marginal roles played by African states (Blakeney 1996; see also Gervais 2003). Despite its enormous size – the African continent is four times the size of the United States (Mallet 1999) – Africa has contributed little to the emerging global regimes on IPR (Correa 2002). The questions raised by the continued marginalization of African states in the global production and regulation of IPR norms and institutions echo the unfortunate global notion that Africa is a dumping ground for foreign goods, foreign laws, and foreign norms (Mgbeoji 2004).

Despite the successful globalization of IPR (F. Abbott 1999), the transplantation of Eurocentric IPR to African countries has not been matched with success, at least in terms of internalization of IPR norms by a reasonable proportion of African businesses (Mgbeoji 2007). Rather, IPRS in Africa have been beset with several challenges including domestic economic difficulties, cultural dissonance, and institutional incapacities. There is emerging scholarly speculation that the inability of modern IPR to take root in many African states may be related to the failure of policymakers to adapt Eurocentric IPR to local needs and worldview. Using the patent system as a model, the next part explores the viability of this school of thought (Adewopo 2002).

### Colonial origins and migration of the patent system

The patent system is not new to controversy. Conceived in circumstances that Lippert (1999: 129) described as “blackmail,” the

concept of patents<sup>3</sup> are traceable to Filippo Brunelleschi's successful blackmail of the medieval Italian city state of Florence. According to Bruce William Bugbee, in 1421, Filippo Brunelleschi, the Italian architect and painter, announced his invention of an iron-clad vessel, the *Badalone*, which he claimed could carry marble across Lake Arno for the construction of the now famous cathedral of Florence. Contrary to scientific tradition (Bugbee 1961: 76),<sup>4</sup> Brunelleschi refused to disclose the *Badalone* to the public. In addition, he rejected the idea of putting the vessel at the service of the city unless he was granted a limited right to an exclusive commercial exploitation of the vessel. Florence yielded to his unprecedented demands and on June 19, 1421, the city issued him the first recorded patent in history. To Brunelleschi's embarrassment, the *Badalone* sank on its inaugural trip and the Florentine patent idea sank with it (Kaufert 1989) – at least, for a long time.

Recovering from the rather inauspicious debut in Florence, the patent concept migrated to Venice where it acquired legislative imprimatur and substantive features. For instance, the Venetian patent law of 1474 provided for patent duration of 10 years, examination of patent applications for novelty, and punishment for infringement of patent rights (White, Jr. 1967). However, with increasing papal intolerance and the frequent political conflicts in the Italian peninsula, Italian artisans, and craftsmen began a process of migration to central and western Europe (Macleod 1988). Naturally, they did not leave the concept of patents behind them in Italy. They took the patent concept with them. Netherlands in 1817, Spain in 1820, the Vatican in 1833, Sweden in 1834, Portugal in 1837 (F. Abbott 1999: 228). Thus, it is fair to say that the modern patent concept owes its original inspiration to the Italian city states of medieval times. From central Europe, the patent concept spread with European immigrants to North and South

America; and by colonialism and diffusion, to the rest of the world.

### **Defining patents**

At this stage, a definition of the patent concept is apposite. Although there is no universal patent law *per se*, Article 27 (2) of the TRIPS agreement defines patents in terms of a legal protection for products or processes which are *new*, *involve an inventive step*, are *useful*, and *capable of industrial application* (Gervais 2003, emphasis in original). The United States Patents Act provides that “whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor.”<sup>5</sup> Machlup (1958: 2) has defined a patent as “that which confers the right to secure the enforcement power of the State in excluding unauthorized persons, for a specified number of years, from making commercial use of a clearly defined invention.”

Certain inferences may be made from the various definitions of patents. First, in spite of several theories on patents, especially, attempts to couch the arguments for and against patents in the discourse of human rights, there is no such thing as a human right to patents. A patent is a discretionary grant of a state on an invention which excludes unauthorized persons, for a specified number of years, from making commercial use of a clearly defined and specified invention.<sup>6</sup> Second, the patent system is anchored on a capitalist worldview. In recognition of these, particularly, the latter, the patent system, especially in western societies, is ostensibly designed to recompense investors by its offer of a temporary monopolization of the commercial benefits of a clearly defined invention. Third, the system of patents purports to celebrate creativity or authorship as an individual effort. This approach discounts immense societal contributions and the incremental basis of most inventions.

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For African societies, the crux of the matter here is whether the patent system is inherently universal in its philosophy, and if so, whether it offers the best economic incentive for protecting and rewarding inventions in the realms of activities that are peculiarly communal and where innovations occur in an incremental nature, for example, in plant genetic resources. Law, as most jurists have restated, is a mirror of societal values. In other words, does the Eurocentric patent concept reflect non-European values? In resolving these difficult questions, certain factors must be taken into consideration. Primarily, the passage of time and contemporary realities have modified the jurisprudence on property ownership, the social nature of the inventive process, notions of legal personality, etc., which underpin the patent system. The crucial task thus is to locate the areas of abiding difference. This issue may best be examined within the context of the provisions of the CBD, Article 27 (3) of the TRIPs Agreement,<sup>7</sup> and perhaps, other international instruments purporting to deal with the subject, especially, the Food and Agriculture (FAO) Undertaking of 1983 (as clarified or amended by a number of other resolutions).

The patent system may be malleable in some respects but the question remains whether African states have the political and economic clout to create doctrinal deviations that best serve their own peculiar needs and aspirations (Coulter 1991; see also David 1993). It seems to me that unlike the powerful industrialized countries,<sup>8</sup> developing countries lack the economic and political machinery needed to create an effective but parallel global regime on Plant-related Resources Knowledge. As Lara Ewens (2000: 307) notes: “[B]ecause of the immense investment western corporations have made in plant genetic resources and plant genetic research, and of the important potential biotechnology offers for increases in global food supply, modification of the system is likely to come from within, if [it comes] at all.”

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### The eurocentricity of the patent system

Before examining in relative detail the main doctrinal obstacles to the internalization of the patent system by traditional African societies, it is imperative that the social and institutional biases against traditional knowledge in general be addressed. The first socio-cultural obstacle is the notion that bio-cultural knowledge is common knowledge possessed by every African villager. This is a simplistic and indefensible dismissal of the intelligent and labor-intensive interventions of millions of people working across the millennia.

With particular reference to plants and food crops, it is known that domestication of plants leads to increased varieties. This is principally due to the phenomenon of polyploidy: a process by which chromosomes of any particular specie are increased or multiplied to yield new varieties or species (Isaac 1970). Over the centuries, small-scale farmers and local peoples have contributed to plant diversity by breeding assorted crop varieties to suit particular local conditions (Friends of the Earth 1995: 2).<sup>9</sup> For instance, Indian farmers have grown over 30,000 different varieties of rice during the past century. The native Andeans have developed hundreds of species of tomatoes, potato, maize, and beans. Indeed, scientists reckon that the “the total genetic changes achieved by farmers over the millennia was far greater than that achieved by the last hundred or two years of more systematic science-based efforts” (Shiva 1988: 259).

Apart from developing new varieties, the knowledge of biological resources for medicinal and other uses by local farmers and healers are often phenomenal and pragmatic. For example, in Sierra Leone, local farmers can differentiate between 70 different varieties of rice based on several criteria including: length to maturity, ease of husking, proportion of husk to grain size and weight, susceptibility to insect attack, behavior in

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different soils and moisture levels, cooking time, and qualities (Nijar 1994: 17).

This knowledge is not merely of academic or theoretical importance; it serves practical ends. For instance, in Rwanda, farmers have cultivated mixtures of beans that perform better in their poor soil conditions (Friends of the Earth 1995). The Aguarana Jivaro community in the Peruvian Amazon has developed 61 distinct cultivars of cassava and in the Philippines 123 rice varieties have been found at just five sites. In both cases, the varieties are designed to suit certain specific requirements and needs. Thus, the abundance of multitudinous varieties and species of plant resources and the knowledge of the uses thereof among the so-called traditional societies are not merely dependent on geographical quirks but partly a result of deliberate and cumulative efforts spanning thousands of years.

Intellectual feats such as the aforementioned cannot be adequately protected by modern patent law. Modern international law has equally come to terms with the reality of traditional input into the improvement, conservation and diversification of biological resources.<sup>10</sup> The preamble of the CBD recognizes the “close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources.”<sup>11</sup> Article 10 (c) of the CBD obliges Contracting Parties to “protect and encourage customary use of biological resources in accordance with cultural practices that are compatible with conservation or sustainable use requirements.”<sup>12</sup>

Recognition of the mutually reinforcing nature of human culture with biological diversity is expressed in Article 8 (j) of the CBD which obliges contracting parties to:

[R]espect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and their wider application with

the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.<sup>13</sup>

The salient points from our analysis thus far are that the links between rational human impact on and mutual interaction with plant resources is enormous and profound. Second, the notion that plant resources in the gene-rich countries are resources of a “wild” character is often generalized and exaggerated. A considerable portion of the so-called wild plant resources and ecosystems are, in fact, products of centuries of human impact on the ecosystem and particularly, plants (Hochberg 1996; Kaufman and Mallory 1993; Young 1990). Thus, to determine the boundary, if any, between the so-called wild plant species or “unknown” varieties thereof and the “domesticated” versions and the uses thereof requires a substantial degree of circumspection and open mindedness. Of course, the mischaracterization of traditional biological resources as “raw materials” for western biotechnology denies and delegitimizes the enormous intellectual contributions made over the centuries by the so-called informal breeders, farmers and other local people. Given the preceding arguments on the human impact on the improvement and sustenance of biological resources by local people in Africa and elsewhere, the next task issue is to examine doctrinal and institutional obstacles that continually make it difficult for modern IPR such as patents to be internalized by contemporary African societies.

For the purposes of securing patent protection on biological resources, for example, it is not enough that an innovation has been wrought. The threshold for legal protection under the patent regime is whether the invention has surpassed obvious or prior art in the field of that invention (de Valoir 1995; Seay 1988–9). In attempting to apply patent-like protections to biological resources, the

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modified test is to ask: When do such innovations, private or collective, surpass obvious knowledge or prior art (Caillaux 1994: 10)? And whose prior art is relevant?

In addressing this question, two misconceptions on the “traditionality” of bio-cultural knowledge and “naturalness” of traditional knowledge deserve our attention. First, references to the innovations and knowledge of traditional societies, especially on the issue of biological resources as “traditional” are often misconstrued to imply or mean that such inventions and innovations are static, antiquated, and wrapped in mythology. That is to say, there is a pervasive notion that African traditional knowledge or bio-cultural knowledge are intellectual relics of a bygone era handed down to modern successors by unreliable oral history. Of course, there exists “traditional knowledge” elements both in the western and non-western paradigms that are long-known. However, the notion of antiquity associated with traditional knowledge, especially, on bio-cultural knowledge is supported neither by common sense nor by international law. As the Four Directions Council points out,

[W]hat is “traditional” about traditional knowledge is not its antiquity but *the way it is acquired and used*. In other words, the *social process of learning and acquiring which is unique to each indigenous group, lies at the heart of its “traditionality.”* Much of this knowledge is actually quite new, but it has a social meaning and legal character, entirely unlike the knowledge indigenous people acquire from settlers and industrialized societies.

(Dutfield 1999, emphasis added)

The second common misconception about traditional knowledge is the notion that traditional knowledge of biological resources is mere discovery of “natural phenomena” waiting for the lucky discoverer. As Gurdial Nijar has observed:

[T]raditional uses, although based on natural products, are not “found in nature”; as

such. They are products of human knowledge. To transform a plant into a medicine, for example, one has to know the correct species, its location, the proper time of collection (some plants are poisonous in certain seasons), the part to be used, how to prepare it (fresh, dried, cut in small pieces, alcohol, the addition of salt, etc.), the way to prepare it (time and conditions to be left in the solvent). And finally the posology (route of administration and dosage).

(Nijar 1996: 16)

Put simply, it would be erroneous and too sweeping to characterize all traditional bio-cultural knowledge as mere “raw materials” or as fortuitous revelations of nature. The naturalness of bio-cultural knowledge does not necessarily mean that there is an absence of human intellectual input in the improvement and modification of its relevance or utility. As the Sierra Leonean example indicates, innovations within the traditional African farming contexts, particularly, in plant breeding, can be quite complex and thus is not a process of mere conservation or knowledge of gene pools. It is, in fact, a mechanism for enhancement of natural genetic resources, albeit slow and laborious.

In order to achieve these sophisticated results in the improvement of plant varieties or cultivars, it has been observed that those farmers:

[E]mploy taxonomic systems, encourage introgression, use selection, make efforts to see that varieties are adopted, multiply seeds, field test, record data and name varieties [and in fact] . . . do what many Northern plant breeders do.

(Friends of the Earth 1995: 4)

It is from such intricate innovation systems and processes that often yield the stupendous varieties and holistic knowledge of bio-cultural knowledge which traditional farmers and healers have been reputed for. According to a World Resources Institute report:



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[I]ndians dwelling in the Amazon River make use of some 1300 medicinal plants, including antibiotics, abortifacients, contraceptives, anti-diarrheal agents, fungicides, anesthetics, muscle-relaxants, and many other most of which has not been investigated by researchers.

(Panjabi 1993)<sup>14</sup>

Seventy-four percent of the pharmacologically active trees reported by an indigenous group correlated with laboratory tests whereas in contrast only 8 percent of random samplings showed any activity. In short, absent “the aid of indigenous groups, it is estimated that for every commercially-successful drug, at least five thousand species must be tested” (Jenks 1995: 646). Michael Balick of the New York Botanical Gardens found that using traditional knowledge increased the efficiency of screening plants for medicinal properties by more than 400 percent (Nijar 1994: 3). It is therefore no coincidence that a decisive number of drugs derived from plant resources have been with the help of local peoples operating outside the dominant western framework of what constitutes “scientific knowledge” (Roht-Arrioz 1996).

It seems clear that the opposition by the “scientific and industrial” community to the scientific worth or merit of traditional bio-cultural knowledge has nothing to do with the innate inferiority of the latter but a reflection of a socially constructed relegated status of innovations arising from the so-called traditional or informal sectors. As the environmental activist Pat Mooney has stridently posited, “the argument that intellectual property is only recognizable when performed in laboratories with white lab coats is fundamentally a racist view of scientific development” (Shiva 2000: 259). Every bio-cultural innovation, regardless of the cultural framework from which it springs, deserves to be judged on its own merits and not to be peremptorily categorized as “raw material” or automatically elevated to the status of an invention merely because of the respective cultural setting from which it is made or derived.

With particular reference to enduring Eurocentric patent law doctrines that impede the internalization of patent systems by African societies, perhaps, the most remarkable doctrine of patent law is the fiction that inventions are necessarily the result of individual, spontaneous creativity and genius. Thus, a concept of reward and recompense on the idea of *individual* inventiveness discounts the daily African reality that most inventions are the result of incremental insights into what already exists in society. In the extremely perverse manifestation of the Eurocentric myth on inventive genius, the “inventive genius,” and thus property in the inventions, belongs not to the actual “inventor,” but to the capital investment made by a multitudinous number of corporate or public stakeholders. This pandering to modern capitalism affords juridical basis for ownership by corporate entities of thousands of inventions. For farmers and native healers in the traditional African setting who produce new plant varieties or discover medicinal remedies from biological sources, this is a juridical and institutional impediment.

The myth of the inventor as a lone ranger leads to the common notion that the patent concept is, *inter alia*, incompatible with the inventive process in traditional communities. The communal/collective nature of the development and improvement of bio-cultural knowledge in traditional social structures and units has been posited as one of the grounds why such units of legal *persona* may not secure patent protection for their intellectual contributions to biological resources (Gana 1995). This school of thought points to the individualistic structure of western societies. The contention is that the patent system is partly predicated on the concept of the inventor as an individual and the inventive process itself, as an exercise in solitude (Hannig 1996; Petersen 1992). In addition to the obvious generalization inherent in this categorization of the inventive process in non-western societies, there are problems of misapprehension of the modern social

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structure of the inventive process in western societies.

First, the impression created by the notion of an individualized inventive process in the western world is that of an inventor working alone and the invention, a product of *his* own genius. Without this individual inventor, the invention would probably never materialize. The invention is thus the “sweat of *his* own genius.” The theory is that the patent grant is designed to compensate *him* – the individual inventor. This idealized, in fact, perverse narrative of the character of the inventive process, albeit heroic, is a fiction; indeed, a myth.

The individualism in western societies is probably a social fact but to suppose that the social structure of the inventive process has remained static since the days of Benjamin Franklin and James Watt is erroneous. The notion of the solitary western scientist and inventor in his isolated basement or garage has become a legal anachronism. What baffles the mind is the longevity and obduracy of this myth. Indeed, the contemporary reality is that since the legal fiction of an employer’s ownership in the employee’s invention,<sup>15</sup> and the economics of scale of group research, a community of scientists working away in huge laboratory complexes has driven the concept of the solitary inventor to virtual extinction. Yet, modern patent law persists to sustain the myth of the individual inventor.

Were Leonardo da Vinci, Thomas Edison, James Watt, and Benjamin Franklin alive today, they would in all probability be working in commercial/multinational or public-funded laboratories, bouncing ideas off one another and seeking solutions to complex problems. As Alfred Kuhn (1996) noted in a groundbreaking treatise:

[T]he transformation of technology and of economic society during the last century negates completely the patent law assumption as to the nature of the inventive process . . . in the modern research laboratories, tens, hundreds of men focus, upon

single, often minute problems; inventions become increasingly inevitable.

According to David Safran (1983: 117):

[I]n this age, most inventions result from corporate research efforts . . . a growing number of these research efforts are the result of the work of several research and development teams that are located in different countries.

As this army of inventors are put to work, it is no coincidence that an overwhelming proportion of global patents on inventions are owned by corporate institutions and public-funded research institutions including universities, where researchers and inventors routinely work in groups. Assuming that the hypothesis of a collective inventive process in traditional societies holds, the transformation of the inventive process in western societies is in several material respects similar to the inventive process in the so-called informal sector. As Stephen Brush (1996: 145) notes, “collective invention is a common and determinant force in both local economies and the world economy.”

Interestingly, it has not been suggested such collectively invented products in western societies cannot be patented because of a perceived inability to pin down the critical “flash of genius” involved in the invention to a member of the collegial team in a western laboratory. Rather, the patent law has been adjusted in western countries to create a convenient legal fiction of an employer’s ownership in the employees’ invention and the attendant consequence of reducing the individual inventor to a hired worker.

The inescapable conclusion is that like the “scientists” in the laboratories of the industrialized states who exchange information, collective groups of traditional knowledge holders and practitioners also exchange ideas to resolve and find solutions to deep and complex problems relating to biological resources. As the Crucible Group recently

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observed: “Farmer’s fields and forests are laboratories. Farmers and healers are researchers. Every season is an experiment.” If corporate inventors are honored with patents, *a fortiori*, their informal counterparts deserve the same privileges.

Further, just like the modern patent law created the fiction of corporate “creative or inventive” genius to serve social and economic imperatives, non-western jurisprudence has legal personalities serving same or similar ends. These artificial legal personas or juridical entities are usually designed for the regulation of diverse functions including land ownership, succession, inheritance, etc. Indeed, the category of legal persons is not closed. Yet, domestic laws in Africa have largely maintained colonially inspired categories of legal personalities, thus further enabling the irrelevance of the patent system to local needs and realities.

The alleged boundary between individual and collective creativity is a conflation of communalism with the notion of collective inventions. Often, an individual in the community of persons may derive inspiration from pre-existing knowledge, just like his western counterpart, and from thence, invent something “of intricate detail and complexity, reflecting great skill and originality.”<sup>16</sup> In short, “gross generalizations about the irreconcilability of collective and individual” rights or contributions towards inventiveness can no longer be maintained in the context of present realities (McDonald 1998).

Another Eurocentric aspect of the patent regime is the conception of what constitutes public domain for the purposes of evaluating novelty. The prevalent notion is that bio-cultural knowledge is a matter of common knowledge and resides in the public domain. Despite its strong basis in contemporary patent law, it is argued that this tenet of patent law when uncritically applied to African settings is flawed on three grounds. First, not all traditional or informal bio-cultural knowledge is in the public domain. For instance, native healers, in particular, hardly reveal the secrets

of their medicinal knowledge and herbal remedies. Secrecy of their knowledge guarantees their power and influence in the local communities. Indeed, the rituals, magic, and spirituality that often surround the practice of traditional healing is, in addition to myriad other societal functions, a critical aspect of the “secrecy regimes”<sup>17</sup> imposed on such bio-cultural knowledge by herbalists and healers.

Second, assuming, but not conceding that all traditional bio-cultural knowledge is in the public domain, placement of such knowledge in the public domain by overzealous researchers without the consent of native healers, does not, *ipso facto*, extinguish a right of ownership to intellectual property. This principle is the rationale for the regime of prior informed consent (PIC) in contemporary international law on access to traditional and bio-cultural knowledge. Ironically, it is often the same information or knowledge construed to be in the “public domain” in the so-called traditional societies, which affords the basis for some patents on bio-cultural resources in some other countries, particularly, Japan and the United States. Third, the concept of public domain is an occidental legal principle that should not be foisted on traditional societies without informed consent.

Beyond the problem of what constitutes public domain, another aspect of the problem of novelty is the mistaken assumption by many policymakers that there is a universal consensus on the concept of novelty as a criterion in granting patents. A careful analysis of international patent law and practice does not support the notion of absolute global novelty in the determination of what constitutes a patentable invention. The criterion of novelty is regrettably, geographically relative and arbitrary. While this situation is to be decried and needs to be changed, it remains the law in many jurisdictions. Neither the TRIPs Agreement nor any other relevant international legal instrument contains any definition of the concept of novelty. As the United Nations Conference on Trade and Development (UNCTAD) recently observed: “[T]here is no

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agreed international standard of absolute novelty and, *within limits*, member countries may apply the different approaches recognized in domestic patent laws” (UNCTAD 1996: 32).

The problem is that no binding international custom or legislative instrument has yet demarcated the boundaries of the acceptable “limits” of domestic jurisdictional prerogative in defining novelty and prior art. As Richard Gardiner (1994: 256) has lamented:

[I]n the light of uncertainty as to what it is that is protected by patent law (both in the case of what required element of inventiveness is central to patentability and the extent of what the patent actually protects), readers of the Reports of Patent cases might well reach the conclusion that the state of the law in this field depends on how key concepts strike the judge hearing a case or fit the line of reasoning . . . invention . . . idea . . . ingenuity . . . and discovery are used by the courts in conjunction with novelty and the notion of what is inventive or not obvious in unpredictable ways.

In addition to the definitional anarchy on novelty, an international juridical bifurcation arising from the United States and European patent law jurisprudence on novelty and prior art has not yet been bridged. As the United States Supreme Court held in *Gayler vs. Wilder* (1850, emphasis added):

[I]f the foreign invention had been printed or patented, it was already given to the world and open to the people of this country as well as of others, upon reasonable inquiry . . . *but if the foreign discovery is not patented, nor described in any printed publication, it might be known and used in remote places for ages, and the people of this country be unable to profit by it. The means of obtaining knowledge would not be within their reach; and as far as their interest is concerned, it would be the same thing as if the improvement had never been discovered.*

This technical and geographically relative approach to construing the concept of novelty and prior art is hardly dissimilar to the medieval and eighteenth-century patent

policies of the fledgling European industrial states; yet it has legislative force by virtue of section 102 of the United States Patent Act (1982; see also Gratwick 1972).<sup>18</sup> The trouble with Section 102 of Title 35 of the United States Code and similar provisions elsewhere is that it confers juridical sanctity on the phenomenon of bio-piracy by legalizing the process by which traditional or bio-cultural knowledge may be appropriated from one country without acknowledgment or compensation. The existence of a dual regime on novelty is therefore a blemish on the international patent system. Commenting on this, Jain (1999: 781) notes that:

[P]articularly worrisome are the ramifications of Section 102 of the United States Patent Act. Under this provision, whereas prior knowledge, use or invention in the United States can be used as an evidence to invalidate a U.S. patent for lack of novelty, similar foreign activity can not be used against a U.S. patent. The only foreign evidence which qualifies to invalidate U.S. patents is an actual patent, a known or used invention or an invention that was described in a printed publication. This technically narrow interpretation of “novelty” remains wedded to the concept of tangibility and blind to the oral traditions and knowledge of genetic resources, resources which largely flourish in biodiversity-rich areas.

In effect, for the purposes of determining novelty of invention, there are parallel regimes on publication, that is, *de facto* publication and *de jure* publication.<sup>19</sup> Given that innovations in the informal paradigm are largely conducted in traditions where the keeping of formalized data in books is the exception rather than the rule, the seeming triteness of such bio-cultural knowledge in such societies would not debar such bio-cultural knowledge from being construed as “novel” in another country like the United States (Oddi 1989). The paradox is that such bio-cultural knowledge would be ineligible for patent protection in the home country.

Hence, what is an obvious invention or prior art in India, as the controversy over *Neem* derivatives and *Turmeric* patents demonstrate (Jain 1999), may be construed as a novel art in the United States of America for the purposes of obtaining a patent grant. Yet, in both cases, the bio-cultural products were unjustly patented in the United States. Consequently, the blurring of the law on novelty permits, or even encourages some biotechnology and pharmaceutical firms to privatize traditional bio-cultural knowledge through a cosmetic repackaging of those resources and knowledge. This phenomenon often brings disrepute to the patent system in Third World countries. Thus, it is evident that at the doctrinal level, the ideological values and worldview encoded in the IPR of the colonizing European powers were often alien to indigenous African ethos and economic traditions (Farley 1997).

### Echoes of the past

Leaving doctrinal obstacles aside, at the institutional level, the complications resulting from the colonial scramble for Africa are reflected in the discordant and often competing IPR laws and institutions prevalent in decolonized African countries. For example, English common law countries in Africa are structurally different from Francophone African countries. While the latter operate the French civil law system, the former apply common law plus a mix of contemporary legislation. Another layer of colonial fissure is evident in the Roman-Germanic legal system operating in lusophone countries in Africa. The result is a gaggle of IPR laws and institutions in Africa that are, in several instances, verbatim reproductions of IPR laws in the colonial states plus a mix of recent domestic legislation.

As already noted in the foregoing paragraphs, European IPR laws were often re-enacted in African colonies without regard to local sensibilities and practical realities.

For example, until 1962, patent law in French Africa was governed by French laws. Administratively, the French National Patent Rights Institute (INPI) was the national authority for members of the African French Union.<sup>20</sup> Similarly, barely two decades ago, a person wishing to obtain patent protection in most British colonies in Africa could do so by reregistering a British patent in the local office in the particular African country. In effect, both the substance and process regulating IPR governance in Africa were appendages to colonial dictates and preferences.

Clearly, the internationalization of IPR which started in Europe in the nineteenth century and culminated with the conclusion of the Paris Convention and the Berne Conventions was an extension of colonial diktat in African IPR governance (Adewopo and Oguamanam 1999). African countries did not participate meaningfully in the law-making process at the international level. African states have largely played the role of passive recipients of laws and norms rather than co-participants in the creation of both the content and structure of international IPR regimes. It seems obvious that the alienation of African states from IPR law-making processes is implicated in the non-protection of indigenous categories of IPR such as folklore (Kuruk 1999).

Regrettably, the process of political independence for African colonial states marked by the retreat of most European settlers to Europe in the 1960s did not bring about radical changes. Indeed, shortly after formal decolonization, with the singular exception of South Africa, none of the newly-decolonized African states operated functional patent offices. Save for trademarks, which were used to protect merchandise from the imperial states, there was little domestic efforts on the protection of IPR.

At the continental and macro levels, the colonial rupture of Africa left in its wake fissured and competing continental institutions and frameworks for the regulation and governance of IPR. The two continental

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organizations that deal in IPR are (1) African Intellectual Property Organization (OAPI)<sup>21</sup> and (2) the African Regional Industrial Property Organization (ARIPO). The former comprises 14 French colonies in Africa (North Africa excluded). The French colonies decided in 1962 to create the African and Malagasy Patent Rights Authority by the agreement known as the Libreville Agreement. The Libreville Agreement was signed to form the African Malagasy Patent Rights Authority (OAMPI). The Libreville Agreement was based on three fundamental principles: (1) the adoption of a uniform legislation by the putting in place and application of common administrative procedures resulting from a uniform system of patent rights protection; (2) the creation of a common authority for each of the member states; (3) centralization of procedures.

Following the withdrawal of Malagasy and the need to expand coverage to other categories of intellectual property, the Libreville Agreement was revised and a new convention signed in Bangui on March 2, 1977 gave birth to the African Intellectual Property Rights Organization (OAPI).<sup>22</sup> The Bangui Agreement deals with the following categories of intellectual property: patents; utility models, trademarks and service marks; industrial designs, trade names; appellations of origin; and copyright. With respect to trademarks, the OAPI Agreement provides that only visible marks are registrable (Kongolo 1999). The OAPI office also serves as the registration office for OAPI members of the Trademark Registration Treaty.<sup>23</sup> In addition, members of OAPI submit notifications of their domestic legislation to the WIPO.<sup>24</sup> The Bangui Agreement was amended in 1999 to make it TRIPs compliant. The revised version of the Bangui Agreement entered into force for all OAPI members in early 2002 following ratification by 16 OAPI member states.

For most of Anglophone Africa, there was the Lusaka Agreement of 1976 which came into effect in 1978. In December 1985,

the Lusaka Agreement was amended in order to admit all African states interested. This change gave birth to the African Regional Industrial Property Organization (ARIPO).<sup>25</sup> The Harare Protocol adopted by ARIPO members in 1982 empowers the ARIPO office to receive and process patent and industrial design applications on behalf of states party to the Protocol. A patent granted under the Harare Protocol has the same effect in the designated contracting state as a national patent. The Banjul Protocol on marks was adopted by the administrative council of ARIPO in 1993. It establishes a trademark filing system similar to the Harare Protocol. The Protocol came into effect on March 6, 1997.

Northern African countries are a reflection of historical patterns of conquests, colonialism, Arabization, and Islamization of the Maghreb, Nile Valleys, and the Saharan parts of the African continent. The Arab conquests of the seventh century AD, European (mainly French) colonialism of the eighteenth century have largely defined the legal framework of northern African countries. With specific reference to Algeria, there are various legislations dealing respectively with patents,<sup>26</sup> trademarks,<sup>27</sup> industrial designs,<sup>28</sup> copyrights,<sup>29</sup> appellations of origin,<sup>30</sup> and layout designs of integrated circuits.<sup>31</sup> Morocco was until 1953, a French colony. Consequently, Morocco has been largely influenced by French civil law traditions.

The colonial imprint on West African countries is palpable in contemporary times. Throughout the colonial era, Britain controlled a wide swath of West Africa including The Gambia, Ghana, Nigeria, and Sierra Leone. By way of contrast, France controlled Burkina Faso, Cote d'Ivoire, Guinea, Mali, Niger, and Senegal. The remaining territories were controlled by Portugal (in Guinea Bissau) and Germany (Togo until the end of the First World War). Liberia is the only country in West Africa to escape direct imperial control although it saw itself as an American outpost in Africa.

## COLONIAL ORIGINS OF INTELLECTUAL PROPERTY REGIMES IN AFRICAN STATES

Eastern Africa is comprised of Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Rwanda, Seychelles, Somalia, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe. In many instances, national laws on IPR were hitherto anchored on colonial British laws that have now been reformed to meet the minimum standards set out in the TRIPs agreement.

Central Africa comprises Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, and the twin islands of Sao Tome and Principe. The contextual circumstances and experiential exigencies in Central Africa are imperative factors in any useful analysis of the colonial impact of domestic IPR regimes in Central African states. The situation in Cameroon is somewhat different, largely because Cameroon has been one of the most politically stable countries in Africa. The situation in Gabon is akin to what obtains in Cameroon, CAR, Chad, and the Congo. Gabon's laws on patents, trademarks, and industrial designs are premised on the Bangui Agreement as last amended in February 1999. Southern Africa is composed of Botswana, Lesotho, Namibia, South Africa, and Swaziland. Save for South Africa with a very diverse industrial base, much of southern Africa is dependent on mining, agriculture, and tourism.

### Conclusion

From the foregoing, it seems clear that the origins of IPR in African states are directly traceable to the colonial conquest and domination of Africa. While the arguments made in the 1800s for the imposition of Eurocentric IPR laws and institutions in Africa have faded and lost their appeal, it remains a paradox that African states have not re-examined the utility and relevance of those colonial legal regimes. The hope that Eurocentric laws must ipso facto give rise to

“development” and “civilization” in Africa is increasingly becoming untenable. The chasm between the promises of IPR laws and industrial development in Africa may also be a result of institutional problems and challenges rather than a demerit in the laws themselves. However, the analysis here does suggest that IPR laws are not enough in and of themselves to transform a politically unstable and economically dysfunctional continent into an innovative and technologically advanced society.

In sum, it seems that the colonial origins of IPR in Africa have cast a shadow on the contemporary development of IPR regimes in the continent. Perhaps it is time for African countries to focus on those industrial and economic activities in Africa that would best respond to certain types of IPR. For example, many African state economies are largely agrarian (Reichman 1995). In this regard, it would be sensible to adopt and implement IPR regimes that are proven to be responsive to agriculture. The existence of colonial IPR laws in Africa has not positively impacted on the lives of ordinary Africans. What is perhaps needed is a frank appraisal of the costs and benefits of those colonial IPR laws in Africa. Where necessary, such regimes should be re-structured to respond to local needs and imperatives (Oddi 1996).

### Notes

- 1 For a definition of the Third World, see Rajagopal 1998–1999. (Contending that the concept of global south or Third World should not be inflexibly moored to a fixed geographical location.) For a consideration of the complexity of the Third World, see Mickelson 1998: 360.
- 2 *Agreement Establishing the World Trade Organization*, April 15, 1994, 33 I.L.M. 81, Available at [http://www.wto.org/english/docs\\_e/legal\\_e/04-wto.pdf](http://www.wto.org/english/docs_e/legal_e/04-wto.pdf).
- 3 The term “patent” as an adjective derives from the Latin word *patere* which means, “to be open.” When used as a noun, it means an open letter addressed to the public.

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- 4 Prior to the modern era of serious inroads by the patent system into scientific discourse, open exchange of scientific discoveries and ideas was the norm. As Stephen Brush (1996: 149) has noted: “[S]cience is the long conversation among members of . . . community . . . the glitter of science to many practitioners is its alternative to pecuniary reward.”
- 5 United States Patent Act (1982) 35 U.S.C. 101. (See also Gollin 1991.)
- 6 *Attorney-General vs. Adelaide Steamship Co.* [1913] Appeal Cases 781.
- 7 The literature on this burgeoning school of thought is quite remarkable. See, generally, Greaves 1994.
- 8 For example, when it became obvious to the industrialized states that the existing patent regime could not protect computer chip makers, the Washington Semiconductor Treaty was quickly concluded and ratified. Meanwhile, as Peter Drahos (1997) has noted: “[I]n contrast, the issue of protection for indigenous knowledge has largely remained just that, an issue.”
- 9 Traditional ecological knowledge may be defined as “a body of knowledge built by a group of people through generations living in close contact with nature. It includes a system of classification, as set of empirical observations about the local environment, and as a system of self-management that governs resource use” (Johnson 1992: 2).
- 10 Preamble, CBD, supra.
- 11 CBD, supra.
- 12 CBD, supra.
- 13 Article 8(j) of the CBD, supra.
- 14 But see Merges 1988; Scalise and Nugent 1995.
- 15 In virtually every patent jurisdiction in the world, an employer owns the patent right to an employee’s invention if the employer is hired to invent or the invention is made in the course of the employment using his employers’ tools. However, under some narrow circumstances, the employee may own the invention. Similarly, governments and their research institutions can acquire the inventions of their employees (See Vaver 1997: 147–9.)
- 16 See Justice von Doussa, in *Milpurruru vs. Indofurn* 1995: 216. In the preparation of this chapter, Tomme Rosanne-Young opined that corporate inventions are put into use when such inventions are completely invented whereas (as she argues), traditional knowledge inventions seem to come into existence after being in use. Second, that corporate membership, unlike traditional societies is fixed and determinate. With due deference, the suggested distinctions, if at all they exist, are not insurmountable problems capable of defeating the concept of community patents. Rules of membership of a corporate organization, like traditional societies are not necessarily uniform but a prerogative of national laws and the internal constitution of that corporate body or traditional society.
- 17 World Intellectual Property Organization (2007) WIPO Report.
- 18 Further to the WTO, the United States has amended this section but the amendment limits it to WTO member states only!
- 19 There is a commonly held view that traditional knowledge is uncoded. This is far from the truth, in addition to the Ayurvedic System which is codified in 54 authoritative texts, the Siddha System is codified in 29 authoritative texts, and the Unani Tibb tradition in 13. In India, the First Schedule of the Drugs and Cosmetics Act, No. 23 of 1940, as amended by the Drugs and Cosmetics (Amendment) Act No. 71 of 1986, specifies the authoritative books of the three systems.
- 20 Otherwise known as Union Française, the group is composed of 16 French-speaking African colonies except French North Africa. These are Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Cote d’Ivoire, Equatorial Guinea, Gabon, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal, and Togo.
- 21 The acronym OAPI is derived from the French name of the organization, which is *Organisation Africaine de la Propriété Intellectuelle*. OAPI is constituted by French-speaking countries.
- 22 Article 19 Paris Convention permits members to belong to regional IP groupings provided there is no contradiction between the Paris norms and the obligations created by such regional groupings.
- 23 Art. 2(3)(4) of the Trademark Registration Treaty.
- 24 Benin, Congo, Cote d’Ivoire, Gabon, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal, and Togo have all notified WIPO on their domestic legislations. Chad simply affirmed that it will abide by the terms of the TRIPs Agreement.
- 25 There are currently 15 members of ARIPO. See [www.aripo.wipo.net](http://www.aripo.wipo.net).
- 26 Law No. 03-19, November 2003.
- 27 Law No. 03-18, November 2003.
- 28 Decree No. 66-87, April 1966.
- 29 Executive Decree No. 98-366, November 1998.
- 30 Decree No. 76-121, July 1976.
- 31 Law No. 03-20, November 2003.