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The Ourobouros of Intellectual Property: Ethics, Law, and Policy in Africa

Abstract:

Because law, policy, and ethics are multiply intertwined, developments in any one of these areas can affect what happens in each of the others. Thus those interested in African information ethics will find it valuable to examine trends in law and policy – and those concerned about legal trends should acknowledge effective leadership when it comes from the direction of ethical practices. Though African societies are almost always pictured as receivers of social, informational, and technological innovations that come from other sources, today many Africans are providing global leadership by developing innovative techniques for approaching the problem of information access. This article describes the context within which this is taking place, including a brief introduction to innovations in a number of areas, before looking in particular at innovations involving intellectual property rights that blend law, policy, and ethics.

Agenda

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Introduction

From the perspective of the formal law-making and implementation practices of governments, ethics, law, and policy are inter-related in a manner best described by the ourobouros, the ancient Greek symbol for the snake that eats its own tail. If by "policy" we mean the fundamental principles and values underlying laws and regulations, then policy is the means by which ethics is translated into law. It is a goal of the law, of course, to set up social conditions that encourage and support ethical practice. And ethics should drive policy. Thus ethics -> policy -> law -> ethics, and so on.

Today, however, ethics can play additional, even more direct, roles in the development of law and policy because relations between law and society, law and government, and the very nature of governance itself are all undergoing change. This is particularly so in areas of the law in which the subject matter itself is undergoing continuous and rapid change, and the issues themselves are therefore often emergent – as is the case with law and policy for information technology.

As a consequence, we must look beyond formal laws, institutions, and practices of governments in order to understand policy for information technology and the processes by which it is made. Recent theoretical developments support such an effort. Structural and post-structural theories of society lead rather naturally to conceptions of a broad policy field. And complex adaptive systems theory provides a way of understanding the transformations of specific policies and policy-making processes within any given policy field. Together, these theories identify three types of policy-making processes. Those of government involve the formal laws, institutions, and practices of geopolitically recognized entities such as states, regional groups such as the European Union that are beyond states, and provinces and municipalities that are within states. Those of governance involve the formal and informal decisions with structural effect of both public sector entities (governments) and private sector entities (whether corporations, communities, or civil society as a whole). And governmentality involves the cultural norms, habits, and social practices that sustain and enable governance and government.[1]

The ourobouros of ethics, law, and policy remains important for all three of these, but the rise in relative importance of governance and governmentality means that ethics activities have multiple additional paths through which they can influence the law. Indeed, one of the most interesting features of the contemporary policy environment, at both the national and international levels, is that many key battles now take place not at the level of solutions for specific policy problems but, rather, conflicts among policy-making processes themselves.

The African role in policy-making for intellectual property rights provides numerous vivid examples of this development. This article examines African participation in international intellectual property rights policy-making, with an emphasis on ways in which African ethical leadership is affecting the nature of resulting laws and regulations. Because almost all national governments around the world are signatories to international intellectual property rights treaties, this international ethical leadership in turn influences developments within other nation-states on continents outside of Africa as well. Intellectual property rights law is, of course, key to the development, diffusion, and use of IT – and in turn, innovations in IT have stimulated a great deal of revision to and extension of intellectual property rights laws as well as changes in practice. Thus developments in this area are also central to the nature of the information society and the information economy themselves.

Following a brief review of just why intellectual property rights are so important for information access and the ethics of information in Africa and the range of ways in which Africans are innovating in order to increase information access, African innovations in the area of intellectual property rights will be addressed.

The Issues

While there are those who argue that Africa is not yet fully part of the information society,[2] it can

[1]Braman, Sandra: Change of State. 9-38.

[2]Britz, Johannes, et al.: Africa as a Knowledge Society. 25-40.

alternatively be claimed that every culture is today a part of the information society in the sense that everyone everywhere is at minimum *affected* by the decisions of those who are most influential in the information society.[3]

Many of the problems that Africans face also confront those in the most deeply informatized societies – such as the cost of network breakdowns ("down time")[4] -- but it is incontrovertible that Africa lags in many indicators of "informatization." Because knowledge transfer rarely accompanies technology transfer, digital inequalities remain not only between Africa and the rest of the world but also within Africa.[5] There are barriers to information access in Africa not only when information available on the internet is sought, but with every channel.[6] Many of the challenges facing those concerned about information rights in Africa today are the same as those identified a decade ago.[7] While many of the same types of problems are faced in every African society, it is still necessary to be very specific about local conditions when country-specific policies are designed and implemented.[8] Opportunities for e-government, for example, can differ significantly from country to country.[9]

Perhaps ironically, however, while many of the factors affecting information rights are the same as factors impeding the achievement of other development goals,[10] some fear that G8 attention to using information technology to address the digital divide in Africa may draw attention away from problems such as debt and poverty by implicitly or explicitly suggesting that there are digital solutions to every concern.[11] Critics argue that developments that accompany access to information, such as "techno-dependency,"[12] are not desirable because they can bring unwelcome cultural changes, an emphasis on consumption,[13] and the possibility that use of ICTs will only enhance the power of existing elites to the detriment of others in the population.[14] Some effects of use of the internet, such as the extent to which it has increased the effectiveness of environmental activists working on African problems, may be viewed either positively or negatively depending on the stakeholders' interests![15]

There is a need to develop capacity in regulatory skills in order to achieve information technology and telecommunications goals.[16] In addition to training indigenous telecommunications policy analysts – a process Nelson Mandela wisely launched for South Africa immediately upon his election in 1994 – developing such capacity requires research and conceptualization regarding the gap between regulatory ideals and actualities of what is achieved once policies are implemented.[17]

To achieve information access goals, regulatory change regarding competition is insufficient, for a wide range of policies are necessary to ensure

[3]Braman, Sandra: The Information Society, the Information Economy, and South Africa. 74-75.

[4]Kennedy, C., et al.: Audit of Web-Based Telemedicine in Ophthalmology. 88-89.

[5]Oyelaran-Oyeyinka, Banji & Lal, Kaushalesh: Internet Diffusion in Sub-Saharan Africa. 507.

[6]Wresch, William: Information Access in Africa. 295-300.

[7]Thapisa, Amos P. N. & Birabwa, Elizabeth: Mapping Africa's Initiative at Building an Information and Communication Infrastructure. 49-58.

[8]Adomi, E. E.: Internet Development and Connectivity in Nigeria. 257.

[9]Netchaeva, Irinia: E-Government and E-Democracy. 467-477.

[10]Coeur De Roy, Olivier: The African Challenge. 883-898.

[11]Alden, Chris: Let Them Eat Cyberspace. 457-476.

[12]Donaike, S. Adefemi: The Internet and the Dilemma of Africa's Development. 41.

[13]Robins, Melinda B.: Are African Women Online Just ICT Consumers? 235-249; Ngwainmbi, Emmanuel K.: Africa in the Global Infosupermarket. 534-552.

[14]Hall, Martin: How Digital Communications Might Impact the Development of Democracy and the Identification of Elite Classes in Africa; Ott, Dana: Power to the People.

[15]Zelwietro, Joseph: The Politicization of Environmental Organizations through the Internet. 45.

[16]Mahkaya, Gertrude & Roberts, Simon: Telecommunications in Developing Countries. 41-42.

[17]Smith, Ronel: Overcoming Regulatory and Technological Challenges to Bring Internet Access to a Sparsely Populated Rural Area; Mercer, Claire. Telecentres and Transformations. 262-264.

affordability and access along all of the pertinent dimensions.[18] Since language is so important, for example, cultural policy is relevant.[19] There must be a comprehensive e-commerce framework that aligns with other telecommunications policies and practices.[20] In many places governments must also address issues affecting the printing and publishing industries, both because print materials are often a gateway to effective information access via the internet and because print still remains an important source of information in itself.[21] Even the regulation of electricity rates can affect access to the internet.[22]

Geography is a key variable for regulators concerned about African information rights. Even with the newest technologies it is necessary to ensure that there are policies in place specifically tailored to the needs of rural environments.[23] Collaboration at the regional level can make a big difference to the ability to achieve success within a country, whether a region is defined geographically[24] or linguistically.[25] The establishment of the free trade zone in Southern Africa affects information access, for example, by reducing the cost of moving both goods and services among countries in that region. Climate is another key geographic factor affecting the extent to which technologies developed for other environments can be maintained in the African context.[26]

Innovation as a Strategy

Leapfrogging and/or reversing the sequence of technological development, organizational innovations, manipulations of the diffusion process, and experimentation with the technologies themselves are all ways in which African societies are innovating in order to address information access issues.

Leapfrogging

The notion that developing countries can "leapfrog" in their use of information and communication technologies, skipping steps in what has appeared to be a necessary linear progression of movement from one technological system to another in the developed world, has long been familiar.[27] Indeed, irrespective of such beliefs among those in deeply informatized societies, leapfrogging has also been key at times even to those countries – radio received a tremendous burst of developmental attention in the World War I period as a means of working around British control over the global telegraph system.[28]

This is still a powerful technique in today's environment, filled as it is with numerous complementary communication systems, many or all of which are simultaneously in use. Thus while in Europe and North America experience showed that wireless developed after wired communication and complemented its functions, in Africa wireless often comes first, paving the way for the later development of wired networks.[29] Though factors other than the nature of the technological infrastructure affect e-readiness and the ability to effectively and meaningful use information once acquired, the level of development of the infrastructure itself is still the primary variable determining extent of use of the internet.[30]

[18]Mureithi, Muriuki: Self-Destructive Competition in Cellular. 11.

[19]Roycroft, Trevor R. & Anantho, Siriwan: Internet Subscription in Africa. 61-74.

[20]Rhodes, Jo: The Development of an Integrated E-Commerce Marketing Framework to Enhance Trading Activities for Rural African Communities. 269-293.

[21]Lor, Peter J. & van As, Adri: Work in Progress. 101-110.

[22]Zachary, G. Pascal: Black Star.

[23]Chetty, M., et al.: VoIP Deregulation in South Africa. 332-333.

[24]McCormick, P. K.: Telecommunications Reform in Southern Africa. 95.

[25]Eko, Lyombe: Steps toward Pan-African Exchange. 365-379.

[26]Boulahya, M., et al.: Climate, Communications, and Innovative Technologies. 299-310.

[27]See, *e.g.,* Jussawalla, Meheroo: Singapore: An Intelligent City-state, 31-54.

[28]Headrick, Daniel: The Invisible Weapon.

[29]Hamilton, Jacqueline: Are Main Lines and Mobile Phones Substitutes or Complements? 109-133.

[30]Oyelaran-Oyeyinka, B. & Lal, K.: Internet Diffusion in Sub-Saharan Africa, 525-527.

Organizational Innovations

Organizational as well as environmental factors are critical in determining e-readiness for African societies.[31] Collaborations with academic institutions[32] and institutions in the private sector[33] are one means of achieving this, both through development of new organizational forms and as a means of diffusion of experience, knowledge, and capability. Certainly collaborations involving ICTs have enhanced governmental capacity re information access, and both sides are critical to this for however wealthy private sector parties cannot be effective on their own or without sufficient public infrastructure.[34]

The creation of new organizations has also facilitated better access to information, African Journals OnLine, for example, launched in 1998, has significantly expanded access to scholarly information published in Africa, and published about Africa elsewhere in the world.[35] This again is a story about collaboration, for African Journals OnLine was launched in the UK and only moved its headquarters to the African continent in 2005.[36] The Alliance for Progressive Communication (APC) ICT Policy Monitor (see www.apc.org), that provides a means of sharing experience with and approaches to information rights policies, is another such organizational innovation.

Some African approaches to policy-making for the information infrastructure can themselves be considered innovations of this type. In the South African example, appreciation of the need to approach access to the internet using diverse policy tools simultaneously and development of a "converged" regulatory agency to deal with both broadcasting and telecommunications are ways in which it might be said that that government has "reinvented policy technologies."[37]

Experimentation with the Diffusion Process

It should not be surprising that it was those who combined high education levels with a very strong "need to know" motivation for working with the internet who were the first in Africa to make extensive use of information resources once made available. Thus physicians took enormous advantage of scholarly resources made available to them.[38] The Rockefeller Foundation's (www.rockfound.org) trajectory here is instructive – in the early 1980s this foundation supported distribution of indices to medical journals throughout the developing world along with delivery of the full text of any items then requested by physicians, even before the internet made such access so much easier.

The several decades of research into the nature of the diffusion process[39] has stimulated experimentation with that process itself as a means of improving access to information. Efforts to increase the internet training of librarians as a means of accelerating diffusion of knowledge about the internet[40] can be understood as a deliberate engagement with early innovators and maximizing opportunities for the trialability that is a characteristic of technologies and technological systems that diffuse quickly. Trialability and the support and encouragement to experiment with the use of new technologies that come from visibility in the community and awareness that others are using a technology are significantly enhanced through use

[31] Molla, A. & Licker, P. S.: Perceived E-Readiness Factors in E-Commerce Adoption. 83.

[32] Keats, Derek W., et al.: Using the Internet to Enable Developing Country Universities to Meet the Challenges of Globalization through Collaborative Virtual Programmes.

[33] Walker, Kenneth: Bandwidth and Copyright. 12-21.

[34] Killen, Heather: Lessons from the Internet Revolution. 141-148.

[35] Smart, P.: African Journals OnLine. 261-265.

[36] It is worth noting that at the time the literature review for this article was conducted, the single best peer reviewed scholarly journal source for research on ICTs in Africa – as measured by number of publications, diversity of research questions and approaches, and richness of material -- is First Monday, itself one of the earliest and most successful of freely available electronic journals.

[37] Braman, Sandra: Reinventing Policy Technologies. 2-10.

[38] Burton, K. R., Howard, A., & Beveridge, M.: Relevance of Electronic Health Information to Doctors in the Developing World.

[39] Rogers, Everett M.: Diffusion of Innovations.

[40] Muswazi, Paiki: Continuing education, libraries and the Internet (CELI) Project.

of community-based telecentres rather than a focus on penetration at the individual household level.[41]

Support for the education process is of course a primary motivation behind the desire to increase access to information in Africa,[42] but in this area there is a chicken and egg problem: while access to information increases the quality of education, it is necessary to have at least some education in order to be e-ready.[43] Another type of innovation in efforts to diffuse access to the internet, therefore, has been to incorporate information literacy training in higher education.[44]

Technological Innovations

Though Africa is most often portrayed as a receiver of technologies developed elsewhere, with growing theoretical and practice-based appreciation of the role of users in the innovation process it has become clear that there are many ways in which those in African societies are also developing quite useful technological innovations of their own.

Those with few resources have always, of course, been adept at using materials and objects in ways that may not have been intended by the designers and vendors of such things, whether that is use of paper advertising to adorn a home or reworking cans into tools. In highly informatized societies such as those of Europe and North America, what is now being referred to as the "make" movement, after a magazine by that name, has quite popularly now extended hacking practices from the world of software into the material world, but in Africa such efforts have long been the practice. An example of a contemporary innovation in support of information access that can be accomplished at the individual level now in use in Uganda involves soldering together two in cans and a receiver to make an expensive internet antenna.[45]

The particularities of climate and other geographic conditions are themselves stimuli to technological innovation. African companies have lead the way in such matters as developing solar powered telecommunications installations and infrastructural elements that can withstand intense heat and blowing sand.[46]

Innovation and Intellectual Property Rights

There are many senses in which information can be said to be "owned," not all of which are economic. Developing Wikipedia content in African languages,[47] for example, is an important move towards ensuring that Africans have ownership in this community-built open-source encyclopedia of global interest.

There are four types of intellectual property rights – copyright, patents, trademarks, and trade secrets.

Copyright

Copyright has been important to African development because software piracy, in particular, is so rampant that it is discouraging companies from trying to bring their own tools to African society legitimately. Indeed, in some countries it is essentially impossible to find legitimate copies of widely used very basic software. This not only has economic ramifications (including loss of tax revenue for governments), but can also contribute to a continuance of the digital divide as stolen software does not receive support and may not include features widely used by others. A second copyright issue involves efforts by many African governments are still playing catch-up in terms of adhering to international law and adapting domestic law and practice in order to conform with international standards. A third set of issues arises from African participation in efforts to develop forms

[41] Falch, Morten & Anyimadu, Amos: Tele-Centres as a Way of Achieving Universal Access, 21.

[42] Ahmed, Allam & Nwagwu, Williams E.: Challenges and Opportunities of E-Learning Networks in Africa, 86; Darkwa, Osei & Mazibuko, Fikile: Creating Virtual Learning Communities in Africa.

[43] Mutula, S. m. & van Brakel, P.: An Evaluation of E-Readiness Assessment Tools with Respect to Information Access, 212.

[44] Jager, Karin & Nassimbeni, Mary: Institutionalizing Information Literacy in Tertiary Education, 167-185.

[45] McConnell, Tristan: Internet Connections for the Price of Two Old Tin Cans. African Business, 42-43.

[46] Braman, Sandra: The Information Society, the Information Economy, and South Africa.

[47] Cohen, Noam: Building Wikipedia in African languages.

of copyright appropriate for indigenous and traditional forms of knowledge, and for ownership of property held by communities rather than individual entities.

Patents

While most discussion about patents in Africa has focused on efforts to ensure that these countries participate in the Trade Related Intellectual Property Rights (TRIPS) agreements administered by the World Trade Organization (WTO), there are at least two types of patent issues in which African involvement has affected international policy-making.

African governments have been very active in efforts to ensure that patented and otherwise quite expensive pharmaceuticals are affordably available to those who need them.[48] A variety of techniques is being used for this purpose, including adaptations to,[49] new interpretations of,[50] or new practices involving[51] patent law as well as the development of specific contractual arrangements with producers of pharmaceuticals.[52] When those pharmaceuticals have been developed using genetic information from Africa, the ethical issues are particularly noticeable.[53] Central American countries have modelled the successful use of contracts that require payment to societies from whom materials are taken by pharmaceutical companies.

A wrinkle on efforts in this area developed, however, when the Togo government announced it was banning media advertising for traditional medicines and healers.[54] Because the media in Togo were previously so highly dependent on advertising from these sources, this ban makes it likely that the amount of advertising from companies selling patented – and expensive – pharmaceuticals will grow.

It is also important for African governments to develop a culture in which adaptations of technologies for the specific climactic, social, and geographic circumstances in which they will be used are patented to maximize resources garnered for African societies.

Trademarks

Trademarks are a form of intellectual property that is based in competition, or antitrust, law. Here, too, many African governments have lagged in conforming with international law and practice in ways that are economically and socially detrimental because it discourages corporations based elsewhere from trying to operate in Africa. Still, there has been ethical innovation in this realm of particular creativity. In one example, a South African tourism entity – the Fair Trade in Tourism South Africa (http://www.fairtourismsa.org.za/) – has trademarked its name as a way of encouraging tour operators to conform with a set of ethical principles in order to be allowed to use the trademark for particular tour packages. This was the first time the concept of fair trade has been applied to the tourism industry and is likely to be widely imitated around the world.

In a second example, the South African government pursued an entity that staked out ownership in a key South African internet domain name (southafrica.com) in hopes of selling it for millions to the government in a US court. This, too, is a practice that is now being widely imitated by other governments around the world that have been abused by such cybersquatters.

Trade Secrets

Trade secrets protect intellectual property by not staking out any other form of officially-recognized property right but, rather, by defining certain practices, knowledge, or technologies as trade secrets not to be shared with anyone at all. This is a particularly difficult area in which to do research

[48]Consumer Project on Technology: Comment on the Attaran/Gillespie-White and PhRMA Surveys of Patents on Antiretroviral Drugs in Africa.

[49]Capczynski, Amy: Strict International Patent Laws Hurt Developing Countries; Wheeldon, Ron & Burt, Helen: Changes in the patent and trademark landscape.

[50]See, e.g., *Syntheta v Janssen Pharmaceutical* (1998).

[51]Pouris, Anastasios: Technological Performance Judged by American Patents Awarded to South African Inventors. 221-226; Rimmer, Matthew: The Jean Chretien Pledge to Africa Act.

[52]The Economist: Me too.

[53]World Health Organization: Protecting Traditional Knowledge. 345.

[54]Godwin, Ebo: Anger at Togo's Herbal Advert gan.

(for obvious reasons), but a secondary analysis of the literature on corporate activities and trends in Africa could yield useful insights.

Conclusions

Though African countries are often portrayed as recipients of innovations developed elsewhere, there are many ways in which African innovations that promote access to information and other information rights are worthy of diffusion to the rest of the world. In the area of IT-related intellectual property rights, however, Africa offers two faces. In a number of areas ethically-driven activities are providing international leadership for the making of law and the practices used in its implementation. In other areas, insufficient or inappropriate activity results in an ethical deficit on the part of governments vis a vis their own societies.

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