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An Examination of Education and Research Institutional Policies on Copyright and Access to e-Resources in Uganda

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Abstract

Education and research is the cornerstone of Africa's socioeconomic and political development. Yet there are barriers that prevent Africa's education and research institutions from realizing their full potential. The paper examines copyright as one such barrier in accessing and using electronic resources in Africa's education and research contexts. It is an outgrowth of a study conducted at three Ugandan institutions, a public university, a private university and a public research institution. The study found that there was a serious lack of institutional policies on copyright and intellectual property in Ugandan research and academic institutions. The paper critically examines the draft policy on research and intellectual property rights management of Makerere University (participated in the study). The extent to which this draft policy addressed issues of copyright and extent to which it advanced open sharing of knowledge is examined. On account of the findings of the Ugandan study which pointed to the need of greater openness in access and use of e-resources, this paper argues that openness should supersede other interests in the copyright system. The position taken in the paper is that institutional policies should advance open sharing of information and knowledge (internal or external to the institution). Short-term legal remedies are proposed based on various creative commons license that are designed to advance openness within existing national copyright statutes. Long-term remedies suggested involve reforming national and international laws and instruments to advance openness including protecting existing provisions for education and research. Protection of education and research activities can be attained by not simply availing the existing exceptions and limitations but also by precluding statutory exceptions and limitations from being overridden by contractual licenses. The proposed short and long-term remedies are expected to be addressed by institutional policies to facilitate in the access and use of e-resources (and other research and educational resources).

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The views contained inside remain solely those of the author who may be contacted at kawooya@policy.hu. For a fuller account of this policy research project, please visit www.policy.hu/kawooya/.

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1 Background

The paper examines Uganda's copyright policy framework vis-à-vis access to electronic resources (e-resources) for teaching and research in university and research institutions. The analysis of the policy environment is based on a study conducted by the author in Uganda in 2006. The study carried out at two Ugandan universities and a government research center examined the impact of copyright on access to e-resources (Kawooya 2006a). A number of copyright-related socioeconomic and cultural factors that intervene in the access and use of e-resources were identified. It was noted that institutions are beginning to respond to copyright and related access issues by establishing institutional policies on copyright and research. One such policy is Makerere's draft policy on *Research and Intellectual Property Rights Management*. The draft policy was examined as part of the Ugandan study. Makerere University is a leading public institution and one of the oldest and most influential in the Eastern, Central and Southern Africa. The overarching goal of the draft policy was to streamline and commercialize knowledge put out by the institution for purposes of generating resources for narrowing conspicuous gaps in Makerere's research funding. While Makerere's goal of generating funds for research is timely, emphasis on commercial exploitation of institutional research output will likely limit rather than promote access to its scholarly output and resources for education and research. Secondly, the draft policy focused on internally generated knowledge without addressing outside resources used by the university communities. Increasingly these resources are electronic in nature (hence the focus of the study) and copyrighted (although the Ugandan study revealed that students increasingly use openly available e-resources presumed to be free of copyright).

Based on the identified access barriers, the study recommended institutional policies to address: *research and knowledge creation; awareness and relevance of copyright taking into account of the African contexts or situations; e-resources (especially openly available resources), and availability and representation of African content (in the digital environment)*. The study further recommended that policies

should foster innovation and creativity by promoting openness in the creation and use of knowledge in Africa's education and research institutions. While recommending institutional policies on copyright (as opposed to no policy at all) seems to play into the dominant protectionist ideology that characterize traditional intellectual property policies and laws, emphasis on openness in institutional policies departs from the traditional approaches to copyright. Likewise policies are not an end in themselves but a means to an end. Therefore, the proposed institutional policies must be implemented with particular emphasis on open sharing of information and knowledge. Openness is not new to Africa's sociocultural contexts. Since time immemorial, traditional African ethos and oral culture required open sharing of knowledge. Indeed the open and 'blatant infringement' of copyright reported in the Ugandan study was partly attributed to a culture where private ownership of knowledge or information is generally foreign to that sociocultural context.

Against that backdrop, this paper advocates for an institutional copyright policy environment that engenders and espouses openness in the access and use of e-resources in Uganda's research and academic environment. In the realm of education and research, the openness advocated for is best informed and guided by the *Access Principle* set forth by John Willinsky.¹ By *Access Principle*, Willinsky argues that knowledge is most useful if society partakes of it with minimal, or no, access barriers. Openness is critical to advancing creativity and innovation in scholarly environments. Moreover openness is the prerequisite to access and visibility of African scholarship currently missing in the global knowledge flows. But why and how does copyright intervene in the access and use of e-resources in Uganda's education and research contexts? Why advocate for institutional policies that foster openness in access and use of e-resources?

Increasingly copyright is a key policy question in the access to digital content in Africa's education and research institutions. Copyright is the legal framework that enables individual claim to creative works expressed in 'physical' or 'tangible' forms. Creators of literary and artistic works are granted exclusive rights including, but not limited to: reproduction, distribution, transformation, public display and performances

¹ Willinsky (2006)

and translation of such works. Besides private rights, copyright grants access rights² for public use of protected works to facilitate the creation of additional knowledge through scholarship and research. For purposes of this paper, I refer to these as the ‘public access rights.’ Copyright makes these available primarily through the *fair use* or *fair dealing* doctrines (discussed later). Essentially, the two doctrines permit the use of protected e-resources without recourse to individual rights-holders. Depending on the nature and scope of public access rights in a country’s law, copyright can promote or hinder education and research by promoting, or restricting, wide access and use of protected materials. Copyright promotes knowledge creation and use by rewarding creativity through exclusive rights to the creators of intellectual works. Legally, the exclusive rights are meant to guarantee the creator’s return on (intellectual) investment by requiring that economic benefits from the works accrue to rights-holders. Yet the negative consequences of copyright stem from use of the same exclusive rights by rights holders (increasingly corporate entities such as publishers and database vendors) to limit access and use of protected materials. Rights-holders achieve this in a variety of ways including lobbying for the extension of duration of protection (normally set at fifty years upon the death of the ‘author’). Right-holders are also lobbying for new rights, extension of copyright to previously public domain or copyright-free resources and limiting the number of exceptions. Considering the impact of private and public rights on access to information, in this paper I argue that copyright has a direct but subtle impact on the production, distribution, access and use of knowledge goods, specifically e-resources for education and research. This forms the inextricable link between copyright, on one hand, education and research, on the other. The inherent potential of copyright to restrict access and use of e-resources means that public access rights are an important aspect of the copyright policy debate amongst policymakers, development partners, civil society and scholars in Africa where majority of the populations remain outside the echelons of the information economy and the attendant development.

² Copyright laws don’t acknowledge these as rights but more of privileges. In this paper we want to differ by framing these as rights given the potential of copyright to promote or hinder access to information, which is already recognized as a universal human right.

I work from the above assumption that copyright can limit access and use of educational and research content to examine the extent of the copyright problem in Uganda's education and research environments, specifically analyzing its impact on of institutional policies on access and use of e-resources. In education and research realms, copyright is framed around access to information and the freedom to pursue knowledge for self-determination (or intellectual freedom). As part of my copyright work in Africa, I have noted the lack of empirical research and policy engagements on the nature and extent of the copyright problem in Africa's education and research environments. Copyright is not perceived as a top policy priority by African governments, institutions and the general public. Consequently, universities and research institutions generally lack clear policies on how to deal with intellectual property rights on external resources used by institutions as well as internal resources generated from scholarly and research activities. While the lack of clear policies on copyright was possible in the past, the changing nature of copyright scenes in Africa renders inaction (as a policy option), unattainable. Research and education institutions primarily depend on information (much of it protected) for teaching and research functions. Increasingly there are demands by rights-holders like local musicians, publishers and other creative individuals, for stringent laws which threaten to undermine the proper and efficient functioning of education and research institutions. Clearly, education and research institutions need policies on copyright to guide users and creators of protected materials as well as preserve the proper and efficient functioning of these institutions in fast changing intellectual property environments.

Copyright-related access problems for research and education in Africa go beyond access to e-resources in general. Access Africa is also a question of access and use of African scholarship available in the digital environments. This content ought to be visible in electronic environment to account for Africa's unique sociocultural experiences and development needs. Consequently, this paper narrows the focus on the impact of copyright on availability of and access to African content in the digital environment. Lack of African content in the digital environment is blamed on copyright and technological barriers by some scholars.^{3 4} A feature article in the 2005 Summer

³ Kawooya 2006b

⁴ Okediji 2004

issue of *The Carnegie Reporter*⁵ asserted that African scholars, scientists and researchers were uncertain of the digital environment as an outlet for publishing African scholarship. They cited intellectual misappropriation of that content in the digital environment. According to this school, inadequate protection of African content is the stumbling block to its availability and visibility in the digital environments (Internet in particular). Similar sentiments were expressed at a workshop organized by the Association of African Universities (AAU) where Kiondo (2004) pointed out that “fluidity and uncertainty of copyright and intellectual property rights for African intellectual contributions as a hindrance to wide accessibility of African scholarship” (2). Another school, call it the alternative school, blames the lack of African content on marginalization of that content by western databases publishers (Jaygbay 2006). According to this school, bias rather than copyright is the main reason African content is not widely accessible in western electronic databases. In this paper, we examine access and use of African content in the digital environment by examining the basic assumptions of both schools. Policy recommendations are made on how African content can be freed from the copyright bondage for wide availability and accessibility.

Access is approached in the narrower lens of e-resources owing to the recent rise in the use of e-resources in African universities and research institutions. E-resources supplement the small and, often, dated library collections available in many African education and research institutions. E-resources also present opportunities for widening access to educational content in Africa's learning and research environments. Besides, e-resources are crucial to the open and distance learning (ODL) models touted as remedies to Africa's long-term human capacity building challenges (Pityana 2004).⁶ Secondly, I consider e-resources because unlike in the print environment, openness in the digital environment is a “two-sided phenomenon,” as Armstrong and Ford (2006) rightly point out. Armstrong and Ford (2006) note that “on one hand, the Internet allows traditionally passive users to become active participants in the construction of meaning and the publishing of creative and innovative works... On the

⁵Carnegie Reporter is a publication of the Carnegie Corporation of New York: <http://www.carnegie.org/reporter/>

⁶ Pityana considers ODL a unique opportunity for Africans to catch up after years of conflicts especially for those who missed opportunities of traditional education systems. Because ODL learners are mature-self directed individuals, the need for easy access to a variety resources to support their learning experiences.

other hand, there is a significant move by traditional publishers to set up barriers that threaten the potential of the digital realm” (4-5). As such, new business models have sprung up for digital or electronic content that were not part of the traditionally print environment. For instance, e-resources are more of services where access is limited to the subscription period as opposed to actual ownership of the resources at the point of sale in case of print resources. In the print environment, subscription meant actual ownership of the physical copy. Unless copyright and contractual agreements permit saving a personal copy of the e-resource locally, access to the resources ceases at the end of subscription period. Unfortunately, in an increasingly charged copyright environment, publishers of e-resources are less tolerant of actions like saving copies citing loss of revenue since such copies can be distributed easily, freely and globally (Armstrong & Ford 2006). Besides legal remedies, publishers of e-resources use technological protection measures (TPMs) to restrict or control access and use of the resources. Such restrictions have serious implications in Africa where most institutions cannot afford new subscriptions leave alone sustain existing subscriptions. As noted later, most e-resource initiatives depend on donor-funded programs and their lifetimes end with donor funding leaving institutions without (or limited) access to subscription-based resources. Thereafter, access for the university and research communities is uncertain. Institutions that persist with subscriptions are likely to significantly cut back on e-resources. However, the popularity of e-resources aside, non-electronic resources including ‘hard-copy’ remain important to faculty and students in African university and research institutions. Likewise technological infrastructure, bandwidth, electricity and hardware remain enduring challenges for many institutions. Such challenges have a direct bearing on access and use of e-resources.

The paper is organized in five sections. *Section I* introduces copyright in context of e-resources and scholarly activities. *Section II* problematizes copyright with the specific focus on education and research. *Section III* narrows the problem of copyright to Africa’s education and research contexts. *Section IV* continues the analysis in the narrower lens of the Ugandan study and context. Discussing findings of the Ugandan study, I note the lack of, and need for, institutional policies that advance scholarship and research through open sharing and use of knowledge. As evidenced by Makerere’s draft policy on research and intellectual property management, I note a negative trend towards commercializing knowledge a trend likely to curtail opportunities

afforded by the open sharing of knowledge. Under this section, I analyze Makerere draft policy using Uganda's copyright framework (and law) as a backdrop (Makerere's draft policy makes frequent references to national intellectual property laws, copyright in particular). Based on that analysis, policy recommendations are made in *Section V* on how institutional policies can be crafted to advance open access and use of e-resources for education and research.

2 The copyright problem or the problem of copyright

As noted in the Ugandan study, access to knowledge goods and services in Africa is increasingly controlled by private entities through a variety of avenues (including but not limited to copyright). From privatization of education and research (given the exponential growth of private universities and research centers) to increasing influence of private ownership of educational and research content in African institutions (evidenced by multinational database vendors as content providers), Africa's education and research is shifting from the old 'socially-oriented' to market driven models. Uganda has a total of 25 universities 17 (75%) of which are private institutions. Although Government retains oversight through the National Council of Higher Education, institutional curricula offerings and related activities reflect business interests of private entities. Courses are not always developed and offered based on development interests of the country but on the potential to attract students (or clients) in a highly competitive education market. Likewise students don't look to the long-term development goals of the continent when select courses but the immediate needs of the job-market (which at times don't reflect the long-term development goals).

On the content side, many African countries depend on foreign database vendors to provide access to e-resources. The Program for Enhancement of Research Information (PERI) is the first robust multi-country initiative in Africa (outside South Africa) for delivering e-content to different universities and research institutions. Initiated in 2000, PERI provides access to full text journal and bibliographic databases from leading database publishers and aggregators including Blackwell, CABI, EBSCO, Emerald, Gale, Springer, OVID and IEEE among others. Whereas PERI seems free to end users under the current license agreement, it is highly subsidized with funds from the Swedish International Development Agency (SIDA). That means that over 14,500 full text online journals, citation, bibliographic and reference databases delivered under PERI come from a few multinational content providers whose interests are primarily profit making. The old university bookstore through which government provided educational materials (textbooks) is increasingly irrelevant or totally phased out. Likewise African university libraries have very little (or no) resources for book budgets.

E-resource content providers are becoming the mainstay for access to educational and research content in Africa (but will likely not overtake print resources in the near future). As a result, knowledge controls by private entities leads to unintended consequences for education and research, including the negative consequences of copyright (DeLong & Fromkin 2000).

Proponents of stringent controls take a utilitarian approach and perceive copyright as essential to innovation and creativity. Without copyright, creators of knowledge goods have no incentive to produce new knowledge. Under that school, rights-owners rely on the copyright system by controlling the production, distribution, access and use of knowledge goods and services. According to this school, if author A sees the economic potential of putting out his/her work on the market, s/he will only do so if clear and restrictive copyright laws exist to ensure s/he gets paid for that work. Otherwise without clear and strong laws, “people simply help themselves” to that work (De Long and Fromkin 1997). If our author is lucky, some users will ‘pledge’ or donate to that cause, creating a “gift-exchange [rather] than a purchase-and-sale relationship” (De Long and Fromkin 1997). According to proponents of strong copyright, the above scenario is a disincentive to author A. This scenario is possible because information-based goods are *nonrivalrous* and *nonexcludable* in nature (Maskus 2000). *Nonrivalrous* meaning that use by one person doesn’t diminish use by another (quantitatively or qualitatively). Information in a book is not exhausted when read by two or more people let alone making several copies of the same book (if copies are legible and decipherable). *Nonexcludable* refers to the fact that once information is ‘out there,’ one cannot prevent others from utilizing it (Maskus 2000). Unfortunately, considering the modest income per capita of African countries and the associated high levels of poverty, the vast majority in Africa will likely find it easy to ‘help themselves’ to copyrighted work than pay for protected resources priced out of range. Some argue that copying in Africa does not have significant impact on the market potential of the works or the ‘right-holders’ interests since majority (of the users) cannot afford the markets rates in the first place (Schonwetter 2006). That potentially means the market for copyrighted materials, if not heavily regulated, cannot function normally. The market cannot function in the same way as in economically advanced societies where the vast majority can afford through market mechanisms.

Besides the *nonrivalrous* and *nonexcludable* nature of copyrightable resources, information-based markets (where information goods are exchanged) suffer more (than non-information market) from what economists call *information imperfection* or *asymmetry*. Information imperfection refers to a situation where some actors (in the market for information goods or information economies) have more information about goods and services than others. That necessarily disadvantages certain actors in the information markets. Information imperfection warrants a mix of legal, economic and, of recent, technological, remedies for efficient functioning of those markets (Bates, 1988; Bettig, 1996), hence the justification of copyright as a policy and regulatory option for information-based markets.

On the flip side, opponents of the strong copyright environment find the above assertions conceptually and historically flawed on grounds that public and private rights in the copyright system were meant to be on equal footing (UK Commission 2002; Nwauche 2005; Lessig, 2004). The balance between private and public interests (or rights) is critical to access and use of privately owned e-resources. Ideally, neither rights-holders nor the publics (more appropriately users) should have absolute control over knowledge under this school. Besides, the notion that creative individuals engage in knowledge creation solely for economic gains is not always true since many do so for honor. Privileging private over public rights by the copyright system undermines education and research institutions (Bettig 1996). Public institutions suffer when exclusive rights granted to rights-holders through the copyright system become control mechanisms for defining who gains access to knowledge goods and services. Over the years, the trend towards privileging private interests led to erosion of public access rights in the contemporary copyright discourse and scholarly endeavors. Consequently, the public domain is shrinking as a result of corporate assault on public rights in the copyright system (Bettig, 1996; Vaidyanathan, 2001). Rights-holders in literary goods determine who accesses what and under what terms. Cast from that angle, copyright seriously impacts access to knowledge in public interest sectors including education, research and training institutions whose economic contributions are neither short-term nor self-evident (Maskus 2000).

Due to lack of empirical research and public policy dialog on copyright, much of the above analysis (especially the public access dimension) is missing in Africa's education

and research contexts. Existing work is limited to scholarly commentary from legal scholars and activist working in Africa like articles on intellectual property and digital commons in Africa carried in the recent issue of *The Southern African Journal of Information and Communication*. The issue assembled thoughts by legal scholars on the current global issues and trends in IPR and their impact on Africa.⁷ Whereas some articles in that issue offered useful insights on Africa's situation (actually South Africa's), they left room for broader examination of intellectual property questions away from a legalistic-economic angle. As demonstrated in that issue, much of the copyright policy analysis and dialog is currently limited to South Africa leaving the rest Africa outside the debate. That said, such scholarly exercises are important for Africa (even if located in South Africa) but fall short of articulating the African situation based on empirical evidence. There is a need to expand that work to the rest of Continent. Otherwise education and research institutions risk serious consequences for lack of proactive evidence-based policies in a fast changing copyright environment. This paper intends to stimulate debate on copyright in Uganda and Africa's education and research contexts by prescribing specific policy recommendations.⁸

⁷ The Journal is available at: <http://link.wits.ac.za/journal/journal.html>

⁸ As part of a small but growing body of literature attempting to understand the impact of copyright and access to knowledge,

3 Copyright and education in the African context

Copyright is relatively new to Africa only introduced to the continent by European colonialist that ruled most African countries (Boateng 2002; Nchwue 2005). That recent history partly explains the limited scholarship of copyright in education and research contexts. Majority of the population is unaware and unconcerned with copyright. Copyright is also not high on the agenda of most African countries given the more pressing developmental challenges (Armstrong and Heather 2005). At the national level, African policy makers are only beginning to understand the link between education and research, on one hand, and copyright on the other. Unfortunately that understanding doesn't always translate into laws and policies friendly to public institution (Rens, Prabhala and Kawooya 2006). Likewise the growing interest in copyright in education and research settings has not translated into serious policy engagements at national levels not mentioning institutional levels. Majority of Africa's education and research institutions remain marginalized and indifferent to copyright debates and policy processes. Private interest groups are the ones driving policy and legal reforms mostly advocating for stringent laws that are detrimental to proper functioning of public interest institutions. Local content creators, notably musicians, are actively demanding legal reforms or new legislations to address the perceived rampant piracy of their music. However, Armstrong and Ford (2006) observe that "not much is said in [African] mainstream media about the struggles of people who wish to copy and share not for entertainment or commercial gain but rather to educate or to further their ideas. There are librarians, educators, and researchers the world over who have little interest in downloading or buying illegal copies of entertainment content, instead they want to make copies of readings they find online for students, or to distribute their research freely online, or to give students free access to academic databases" (5). Besides local influence, copyright reforms in Africa are driven by international organizations like the World Intellectual Property Organization (WIPO) and the World Trade Organizations (WTOs) whose obligations prescribe minimum intellectual property rights standards (Nicholson 2006). Legal reforms affect access privileges by redefining access terms to the detriment of education and research institutions. In the

end, the laws adopted have significantly impacted (or will soon impact) education and research institutions.

Africa's indifference to copyright in education and research is a major concern given the limited scholarship on the subject. The analysis below draws from the small body of literature and empirical research on Africa's copyright situation. It also draws from literature and studies conducted elsewhere but relevant to Africa. A few scholars have addressed copyright by tackling the 'problem' of photocopying in education environments. Photocopying businesses are often blamed for undermining the economic interests and prospects of rights-holders (Okiy 2005). Unfortunately studies like Okiy's fail to address the broader social concerns, specifically extent to which photocopying facilitates and expand access and use of educational resources. Such studies concentrate on the extent to which photocopying activities conform to national copyright laws (often restrictive for public access purposes). African scholarship directed towards understanding impact of copyright on public access hardly exists. A recent study by Rens, Prabhala and Kawooya (2006) investigated the impact of intellectual property (IP) on access to knowledge in Southern Africa. The study pointed out that in Africa, copyright and education interfaced in unpredictable ways owing to escalating poverty levels on the continent. Africa's situation means that Africa's copyright-related markets are a far cry from those envisaged in rich western countries which are premised on the majority of the populations actively participating in the market for education resources. On the contrary, in most African countries, the majority work outside those markets or in underground economies due to the high levels of poverty. Additionally, many African cultures are not oriented towards private ownership of information and knowledge.

Informal exchange of information resources and enterprises dealing in the same goods are evident in Africa's education and research environments where 'informal economies in knowledge goods' are the norm rather than exceptions. The Rens study reported on an informal survey of photocopying at a public institution in one of the study countries (*see Table 1 below for the daily output of the photocopying enterprises at that institution*). Although photocopying was castigated by Okiy, the Rens study noted that photocopying enterprises are indeed instrumental for they "enhance effective utilization of the copyright system for educational purposes" by making

possible the utilization of the *fair use* and *fair dealing* exceptions for education and research (Rens, Prabhala and Kawooya 2006, 22). As discussed below, *fair use* and *fair dealing*, legally permit certain uses for education and research.

Table 1: Photocopying at Makerere University (pages per day)

Lecturers	Students	Others	Total
5700	34750	2950	43400

Source: Rens, Prabhala and Kawooya 2006

The figures point to considerable reliance on photocopying, by both students and faculty, at that institution. The Ugandan study also reported photocopying as an access mechanism to be extensive. However, strict interpretation of copyright laws in Africa would likely find some photocopying outside legitimate uses. Yet the reality of most students and faculty is that purchasing own materials is beyond what they can afford. Notwithstanding the high poverty levels, the demand for education and access to information remains high as this is perceived as the long term remedy to poverty and development challenges at individual and national levels. Indeed commenting on South Africa, which is seen as a transition economy, Schonwetter (2006) noted that, despite the high demand for education, the vast majority could “afford only unauthorised copies...as these are available for considerably cheaper prices” (49). In the African context, the choice of cheap ‘illegal’ copies reflects socioeconomic status and realities of most people.

The Rens study pointed out specific factors affecting access as noted below:

Books are still largely inaccessible in the south whether on account of high cost, unsuitability of language and format, or, even more simply, plain unavailability. The open access textbook, on the other hand, costs as much as it does to print and can be available wherever necessary. Even a visible scarcity of knowledge goods in the main languages spoken in southern Africa could be alleviated by the permission-free translation choices presented by open access, since access to cultural goods in turn produces producers of cultural goods. The point to bear in mind is that access as a strategy is not predicated on the assumption

that students of the south are consumers (and that professors of the north are producers), but rather, that a complex, interdependent relationship exists between consumption and production and furthermore, that access to cultural goods is a necessary and significant factor to stimulate production

(Rens, Prabhala and Kawooya 2 2006).

While the Rens study was not focused on copyright in the digital environment, it provided useful insights into Africa's education in relation to copyright and access to learning materials. First, notwithstanding the scarcity and high cost of books and paper, print remains the most important access medium (as noted earlier in this paper). Secondary, it showed that access is a multifaceted and complex issue influenced by several factors including costs, format, etc. Such factors may, or may not, be linked to copyright. Similarly, besides copyright, the Ugandan study identified other access barriers including: *unavailability* and *suitability* of learning materials; *resource constraints* amongst African governments, outright *stringent copyright, contract and trade laws*, and *excessive pricing* of knowledge products (Rens, Prabhala and Kawooya 2 2006). In this paper, I submit that access to e-resource in Africa is affected by similar obstacles, particularly *restrictive licenses, contracts* and *excessive pricing* of e-resources.

Another dimension to the Rens study was a comparative legal analysis of copyright laws of five Southern African countries. As noted in Table 2 below, national copyright laws in the study countries carry special provisions for protecting public access and use of protected resources for education and research. The exceptions and limitations (to exclusive rights) originate from international instruments notably the Berne Convention (1886)⁹ specifically the 1971 Appendix to Berne; the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (1995)¹⁰, the World Intellectual Property Organization's Copyright Treaty – WCT and the Performance and Phonograms Treaty – WPPT (1996). African countries in the Rens study implemented these provisions as *fair use/dealing* provisions or general

⁹ Text (as revised) available from (not official site): <http://www.law.cornell.edu/treaties/berne/overview.html>

¹⁰ See full text at: http://www.wto.org/english/docs_e/legal_e/27-trips.pdf

exceptions and limitations for education and research. *Fair use* and *fair dealings* are the main building blocks of public access rights in the copyright system. The two are particularly important in Africa where the vast majority cannot afford through private means due to low income per capita of most countries (US \$ 300 in case of Uganda). The exceptions and limitations (*fair use/dealing* inclusive) are still subjected to other conditions under the so-called three step test that is part of some international intellectual property instruments (TRIPS, WCT and WPPT Berne). The test requires that exceptions and limitations are:

- confined to certain special cases;
- not conflict with the normal exploitation of the work, and
- not unreasonably prejudice the legitimate interests of the author (Senftleben 2004, 113).

Hence any limitation and exception defined under *fair use* and *fair dealing* must meet the above requirements.

Fair use and *dealing* defenses are integrated in the copyright system to safeguard public access rights. Without limitations and exceptions, any access and use of copyrighted works by the publics would have to be sanctioned by the rights-holders (given the present copyright dispensation where the authors' rights take precedence over public access rights). *Fair use* and *dealing* apply in *civil* and *common* law jurisdictions respectively. *Fair use* is a judicially crafted doctrine first developed in US through case law as the *fair abridgement* doctrine.¹¹ The doctrine provides a relatively flexible range of exceptions and limitations including scholarship, news reporting, parody, criticism, etc. *Fair dealing* on the other hand is more explicit and less flexible *vis-à-vis* permissible exceptions and limitations. *Fair dealing* explicitly defines a set of defences against alleged infringements at times creating room for wide interpretation of permissible actions. Consequently, *fair dealing* sometimes reverts to the *fair use* doctrine to assess infringement. Sometimes countries take the middle ground (Schonwetter 2006). African countries like Namibia and S. Africa that were colonized by the British use *fair dealing*. However, these countries (and many others) are

¹¹ See note 2. Allowed abridgment, translations and/or digestion (digest) of one's work (164) without his/her permission.

increasingly resorting to *fair use* under the weight of international instruments that promote the American *fair use* approach.

Table 2: Comparison of legislations impacting public access

COUNTRY	Exceptions	Limitations	Import	Other Relevant Provisions
Botswana ⁶⁶	s12 Exceptions s13 Private Reproduction s14 Quotation s16 Teaching s16 Libraries	s28 Non application of s24, 25, 26, 27 to certain uses	s32 Powers of Customs Officials	
Lesotho ⁶⁷	s9 Free Use	s10 Limitation of right of Translation (Schedule 1) 11. Limitation of the Right of Reproduction (Schedule 2) s30 Limitation of Protection of Neighbouring Rights	s 30 Ministers General Regulation Power	s18 Use of works in public domain requiring authorisation s19-22 Utilization of folklore requiring authorisation
Namibia ⁶⁸	s15 Fair Dealing s16 Prescribed Exemptions		s29 (2) unauthorised import s34 prohibition of import	s81 General Regulation powers
South Africa ⁶⁹	s12 General Exceptions music and literary works s13 Prescribed Exceptions s15-19B application of general exceptions to other types of works 23 (2) (a) import for personal use allowed			
Swaziland ⁷⁰	s 4(1) (a) (d) (f) of the 1912 Act? s6 Compulsory licence			s26 bis Deposit of 1912 Act

⁶⁶ Unless otherwise stated, sections referred to in this row are in the Botswana Copyright and Neighbouring Rights Act No. 8 of 2000.

⁶⁷ Unless otherwise stated, sections referred to in this row are in Lesotho Copyright Order No. 13 of 1989.

⁶⁸ Unless otherwise stated, sections referred to in this row are the Namibia Copyright and Neighbouring Rights Protection Act 6 Of 1994.

⁶⁹ Unless otherwise stated, sections referred to in this row are in the South African Copyright Act 98 of 1978.

Source: Rens, Prabhala and Kawooya 2006

Notwithstanding the general availability of *fair use* or *fair dealing* provisions in African copyright laws, the Rens study noted the limited (or total lack of) implementation of flexibilities permitted by international instruments notably *The Berne Convention* and the *TRIPs Agreement*. This is due to a number of factors. Whereas the *Berne Convention* and specifically its Appendix that created special flexibilities for developing countries is fairly comprehensive. The Convention (Appendix in particular) was found to be cumbersome to implement by most countries.

Findings of the Rens study are consistent with findings of a study conducted by Consumer International (Asia-Pacific) in eleven countries in South East Asia. The

Asian study examined flexibilities in national copyright laws by taking a critical-legal analysis. It clarified on the range of flexibilities available in international instruments including: *scope of copyright protection, duration of copyright protection and limitations and exceptions* (Consumer International 2006). The Asian study concluded that there is under utilization of internationally acceptable copyright flexibilities (Consumer International 2006). The African and Asian studies reveal the problems faced by education and research institutions that stand to benefit if national laws took advantage of these and more flexibilities. The vagueness of the *Three Step Test*, the broadness of the *fair use* language and the restrictive parameters of the *fair dealing* doctrine, means that limitations and exceptions in national laws based on the *Three Step Test* tend to be problematic to education and research institutions. What constitutes *fair use* or *dealing* for educational and research purpose is often not clear.

Beyond copyright, both the Rens and Asian studies took note of the complex nature of contractual and licensing structures in the area of trade law which directly affects access to learning and research materials in Africa (Rens, Prabhala and Kawooya 2006; Consumer International 2006). The two studies note that subjecting education and research content to trade and contract laws potentially affects access to that content in jurisdictions where trade and contract laws don't extend special status, provisions and treatment of education and research institutions. Trade and contract laws are not necessarily amenable to the notion of 'information as a public good' particularly in poor African countries where the vast majority access through public institutions. Economic contributions of public institutions are long-term and often don't fit traditional economic models (Bates 1988). Due to lack of clear, precise and measurable economic incentives, economists and proponents of strong copyright laws tend to dismiss the need for increased public access provisions in the African context. However, economists like Keith Maskus tend to cross disciplinary and ideological boundaries to demonstrate that copyright systems based on traditional economic models fail to account for socioeconomic contributions of public interest institutions to national development. On the flipside, the failure by the information-based markets to function in highly impoverished contexts like Africa, lead some users in such contexts (mostly students and faculty as observed in the Ugandan study) to dismiss copyright systems in Africa. Hence the rampant copying evident in most African institutions. Given the under funding of university and research libraries, the problems of copyright

highlighted above point to possible crises noted by scholars and commentators across the continent.¹²

Another study relevant to the African situation was conducted by the Berkman Center at the Harvard Law School. The Center issued a white paper highlighting challenges to educational uses of copyrighted materials in the digital age.¹³ The report attributes obstacles to education in the digital environment to:

- a) Unclear or inadequate copyright law relating to crucial provisions such as *fair use* and educational use;
- b) Extensive adoption of digital rights management technology to lock up content;
- c) Practical difficulties obtaining rights to use content when licenses are necessary;
- d) Undue caution by gatekeepers such as publishers or educational administrators. (Fisher & McGeeveran 2006, 2).

Whereas the Berkman study was US based and, therefore, representing a context significantly different from Africa, some obstacles (like the problem of fairness in educational contexts) resonated with copyright in Africa and developing countries (observed by the Rens, Asian and Ugandan studies).

Thus far I have considered general access but in the Africa's educational and research settings, access raises accessibility of African scholarship in the digital environment (Elich 2006). When approaching access to electronic resources and the impact of copyright on education and research, there is need to acknowledge and account for the disproportional representation of African knowledge in the global knowledge flows and the contributions of the contemporary copyright discourse to that inequality. Revisiting the copyright debate (in context of African content) is meant to

¹² Scholars such as Denise Nicholson and Nwauche Enyinna have written and lectured extensively on the copyright (and Intellectual Property Rights) crisis in Africa vis-à-vis access for education is concerned.

¹³ Report available at: http://cyber.law.harvard.edu/home/uploads/823/BerkmanWhitePaper_08-10-2006.pdf

carve out an 'African' niche in a seemingly settled debate. The notion of Africa as a net consumer rather than producer of knowledge is questionable although shared by some Africans and non-Africans (Nuachwe 2005). Likewise there is need to examine western knowledge systems like electronic databases as venues for distorting rather than advancing Africa's knowledge potential. As a result, the continent remains a marginal player in the global knowledge appropriation. Eve Gray (2006) succinctly captures Africa's dismal performance in the global knowledge flows attributing it to a number of factors including failed research dissemination policies and mechanisms. She draws from different sources to illustrate Africa's marginal position in the global knowledge flows:

Across Africa, research dissemination is conceived of almost exclusively as a matter of publishing journal articles, preferably in accredited international journals. This is to fail to recognise the damage wrought by the knowledge divide...[and] the ways in which African knowledge is marginalised in and through the systems, policies and hierarchies that govern this global research publication system. Research and dissemination output through scholarly journals globally is very skewed, with the rich countries of the North, which spend the most on research, producing over 80% of the most cited publications, while 163 countries, mostly developing countries, account for only 2.5

(Gray 2006).

The question of African's contribution to the global knowledge flows was the theme of the 2006 conference of the Council for the Development of Social Science Research in Africa (CODESRIA). CODESRIA addressed dissemination avenues for African knowledge which partly contribute to the disproportional representation of African content. Delivering a keynote address to CODESRIA 2006, Lor (2006) distinguished domestic African channels from international outlets noting that, African authors who wish to publish internationally face various barriers, including bias. On the domestic front, Lor noted positive strides in the work of organizations like the International Network for Availability of Scientific Publications (INASP) which has built (and continues to build) Africa's journal publishing capacity. Lor warned that problems remain with dissemination and reception of African journals outside Africa. According to

Lor, the Internet and Web offer greater visibility than conventional print. Visibility is critical if African publications are to garner local and international stature as outlets for quality scholarly work.

In support of online avenues for elevating Africa's scholarly and knowledge standings and visibility in the global knowledge flows, Jaygbay (2006) observed that:

The argument that the “prestige” of African scholarly journals (read publications) makes them less favorable for listing in recognized social science indexes is vacuously true because African scholarship remain largely underrepresented in most indexing services. It is the mere absence sometimes not the quality of the African publications that feeds the cynicism. There is growing evidence that improving the online presence of African scholarship through open access journals or a viable African consortia repository can increase the citation of African researchers and enhance the credibility of their scholarship.

(Jaygbay 2006, 9)

On a related subject, Elich (2006) was concerned by lack of the 'African voice' in African studies often dominated by non-Africans (Elich 2006). Whereas African content doesn't have to originate from African scholars, lack of a critical mass of African scholars to articulate the African experience through scholarly publishing reinforces the notion of Africa as a net consumer of knowledge than creator. Needless to say that publication of African scholarship should not simply be about visibility but also avenues for critical analysis of long-term socioeconomic development strategies of the continent (Gray 2006).

Jaygbay (2006) advocates for content management systems (CMS) at consortia level to aggregate African scholarship and make it easier to access locally and internationally. He argues that active participation of African scholars in content creation and archiving process is necessary to legitimate institutional repositories and open access publications. Jaygbay (2006) rightly observed that:

in spite of the efficiency that African scholarship can gain from ICT, content management is arguably more of a process issue than it is a software and hardware issue (5).

Although not framed as a barrier, Jaygbay cautions that copyright at the individual, institutional and consortia levels should be given special attention.

Another dimension to copyright in education alluded to by *The Carnegie Reporter* article cited earlier, and one addressed by the author elsewhere (Kawooya 2006b), is the fact that African scholarly output interfaces with 'unique Africa knowledge' or indigenous and traditional knowledge (ITK) that was previous owned collectively by traditional communities (and remains so in some communities). I argue that:

Contemporary African society is enmeshed in the global information society with attendant documentation, intellectual protection, control and commercialization of knowledge. Africa's institutions of higher learning are central to the cultural and social transformation insofar as ITK intersects with research and teaching in educational settings. Individual scholars working in ITK-related research rely on communal ITK resources to create new knowledge appropriated as private property rather than the collective community resources.

(Kawooya 2006b)

This raises questions on the best approach to dealing with intellectual property (copyright in particular) of African scholarship that draws from ITK. The contemporary copyright system that is embedded in the western individualist ownership values is antithetical to African's historically collective tradition thereby exposing ITK to misappropriation. In academic settings, the copyright that protects expressive forms of ideas, also covers scholarly output in form of articles, books, audiovisual recordings, etc. But in Africa much of that scholarship intersects with ITK that is not covered by the copyright system because it doesn't fit certain criteria prescribed by copyright laws including individual ownership. Against that background, traditional copyright, imperfect as it is for education and research (as noted above), is worse for protecting African knowledge in the digital environment (Kawooya 2006b). Although traditional African

communities and scholars whose scholarly outputs interface with ITK deserve economic benefits, protection here goes beyond economics to integrity of sacred artifacts of spiritual or cultural significance to communities in question (Britz and Lipinski 2001). Consequently questions arise as to how African scholarship and knowledge output in the digital form can be openly shared at the same time guaranteed protection from misappropriation (since it is an extension of Africa's ITK). The Ugandan study, tackled this and general access questions discussed above.

4 The Ugandan context

Uganda gained independence in 1962 from the British colonialists. Post-independence conflicts and political upheavals lasting up to the mid 1980s damaged education and research infrastructure beyond repair. Since the mid 1980s, a minimum recovery and development program (emphasizing infrastructure building and social service delivery including education) was the priority of the reformist government of the National Resistance Movement (NRM) of *Yoweri Museveni Kaguta*. NRM has made significant contributions to the country's education infrastructure since the desperate times of the mid 1980s. Today the country boasts of significant macroeconomic growth based on foreign inflows both private investments and foreign aid. However, Uganda's highly touted economic growth is yet to translate into improvement in household incomes and socioeconomic indicators. Social and economic indicators remain amongst the lowest in the world. As of 2006, the country's population was estimated at 27.4 million people with income per capita at \$300 and poverty levels at 38% of the population. Close to 80% of the population live off subsistence farming in rural areas. Against that background, the government intervened to improve socioeconomic services to the people. In the education sector, programs like the universal primary education (UPE) and universal secondary education (USE) were designed to increase primary and secondary school enrollment respectively. Such programs have had significant impact. For instance UPE increased primary school enrollment from 2.7 million students prior to 1997 to 7.3 millions by 2003 (MOE&S 2005). As a result institutions sprung up at secondary and post-secondary (university) levels to accommodate the growing numbers of primary school graduates.

Despite the low 'transition' rate (that is, continuation from one level to another due to dropouts), UPE's enrollment still poses significant constraints to both public and private universities as UPE graduates make it through secondary education to post-secondary levels. Unfortunately, government priorities remain mass primary education and that is where most of the education resources are allotted. Recent introduction of Universal Secondary Education-USE (on a limited basis) has led to some resources being channeled to secondary education as well. USE will improve transition rates from

primary to secondary level. Rising university enrollments across public and private institutions are not matched by resources allocation from government unlike primary and secondary levels which take a significant portion of the recurrent budget allotted to the education sector (MOE&S 2005). Consequently universities struggle to provide access to learning materials such as library and research facilities (Makerere University 2006). Recently, the Government adopted the *Strategic Investment Plan for Higher Education* aimed at expanding and managing private investment in higher education. The Plan is a way of getting around the higher education conundrum. Unfortunately the policy only shifts the resource problem to private institutions themselves faced with similar if not worse infrastructure problem as their public counterparts.

UPE and USE aside, a series of policies and programs have contributed to increased university enrollment including affirmative action where female students automatically receive additional points (1.5) to join public universities. Continued government sponsorship of close to 4000 students for each annual intake in public institutions is another program that has significantly changed access to higher education in Uganda. The pressure on the limited resources and facilities at universities has led to alternative access mechanisms. For instance, the petty photocopying enterprises at universities reported by the Rens study are partly a result of inadequate library resources and low income levels of both faculty and students. E-resources that became available to most institutions recently, therefore, fill major access and research gap at these institutions but remain inadequate.

Besides PERI programme, discussed earlier, open access initiatives such as the *Electronic Supply of Academic Publications - eSAP*, *eGranary* and *ePrints* are widening access to e-resources for research and instruction. These resources are available to both academic and nonacademic institutions. These and other open access models widen and deepen visibility and accessibility of e-resources, African scholarly output in particular. Internet use is widespread in education and research settings although still hampered by bandwidth and infrastructure problems.

Uganda's copyright framework under which the above e-resources are accessed and used is not much different from the Africa's copyright scene highlighted earlier. Copyright was introduced in Uganda by the British colonialists through the Copyright

Ordinance of 1915 and subsequently the Copyright Act of 1956. Following Uganda's independence from the British, the 1956 Act was repealed by the Copyright Act 1964 Cap 215 revised primarily to reflect Uganda's sovereignty. The Copyright Act of 1964 didn't introduce substantive changes. Article 7 (2) in the 1964 Act on exceptions and limitations for education purposes introduced and defined *fair dealing* as use of protected materials for: criticism or review, or the reporting, parody, pastiche or caricature (5). The most recent amendment of the copyright law through *The Copyright and Neighbouring Rights Act 2006* introduced significant changes including the *fair use* doctrine and provisions for collective rights management. Uganda followed the trend where countries are adopting a middle ground between *fair dealing* and *fair use* (Schonwetter 2006). Most precarious changes introduced by the 2006 Act are criminal sanctions for infringement justified on grounds of rampant music piracy. Criminalizing copyright infringement has serious implication for education and research in context of petty photocopying enterprises at educational institutions. It will likely have chilling effect on perfectly legal activities or fair use/dealing activities whose legal definitions remain unclear as noted earlier.

Changes in the Uganda's copyright law notwithstanding, hardly any cases went before courts to warrant the statutory changes. As such, awareness of copyright is a fairly recent development championed by local music artists to address the so-called music piracy. The above background points to the fact that copyright was irrelevant to Ugandan contexts when it was first introduced by the British. Elsewhere I note that:

For a long time, the creators of intellectual property [in the western sense] in the country [Uganda] were few; hence logical to assume that...[copyright] legislations were to protect 'foreign' authors. Legislations [were] of little relevance to the greater population which relied on oral tradition and culture for information access

(Kawooya 2003, 222).

Until the early 1960s, hardly any publishing took place in Uganda. Kigongo-Bukenya (2004) notes that books and learning materials were mostly published in Britain and distributed through bookshops and a small public library infrastructure. This affirms the assertion that copyright was to protect foreign materials (mostly British) than local

works (although they were never discriminated against). Not surprisingly, the mismatch between local circumstances and the copyright legal infrastructure meant that copyright was outside the mainstream. For long only a handful of the elite section of the Ugandan society was concerned about copyright. Majority of the population in rural areas are unaware of copyright and will remain so for long.

Analysis of court cases relating to copyright point to the same conclusion. Since 1964, only a handful of cases were brought before courts. Majority of the cases involved music piracy not educational materials. According to the official at the Commercial Court in whose jurisdiction copyright falls, most cases are settled through arbitration under the Commercial Court or settled out of court. He attributes this to lack of copyright culture but also acknowledged the changing nature of economic activities that require enforcement of copyright and other intellectual property laws. At the time of preparing this report, no case had been settled by courts under the more stringent 2006 copyright law. However, several music-related cases were at various stages of settlement and/or hearing. That points to the immense influence of the local music industry. It's against that backdrop, that the Ugandan study examining the impact of copyright on access and use of e-resources (African in particular) was conducted in 2006. Findings of the study relevant to this paper are reported below to provide a framework for analyzing institutional copyright policy framework.

4.1 The Uganda study

The qualitative study was conducted at three institutions: one public and one private university, and a government research institute. All three institutions were subscribed to the PERI programme hence provided access to e-resources to their communities. Likewise the three are research-intensive institutions. Data was collected through a mix of document analysis, focus group interview and individual interviews. The study focused on three central questions:

- i). How does copyright mediate to hinder or promote access to electronic knowledge in Uganda's education and research settings?

- ii). How does copyright distort representation of Africa's scholarship in the global knowledge flows through electronic database (revised to Internet in general)?
- iii). How should Africa's educational and research institutions leverage internal copyright practices and knowledge to formulate institutional policies but also participate and influence national and international copyright policy spaces?

This paper specifically tackles question iii) on institutional policies. Questions i) and ii) raised policy issues that should be part of the institutional and national policies advocated for in question iii). That said, question i) on whether copyright hinders, or promotes access, garnered interesting responses worth noting here.

Although copyright is not widely known and discussed, majority of the students, faculty and researchers associated cost-related barriers to access as copyright induced. E-resources that required subscriptions were considered copyrighted (although that is not always the case). Participants considered copyright in education and research as inappropriate, in some cases detrimental to education and research (despite participants being potential beneficiaries of copyright as researchers and authors). A graduate student noted that:

in any case here in Uganda, that copyright thing cannot work....its not active...I don't know what to call it...yeah its not emphasized.

Similar sentiments were shared by a faculty member.

...to me that is a very tactical question and there is a lot of challenges...particularly on the copyright. I want to look at it from a different angle and I think the challenge comes from the environment itself. For me I would think the issue of copyright works only in specific environments may be to a certain society. Because when I look at our environment ... our setting here, I think the issue of copyright doesn't work and that is the biggest challenge I see. Even the article you produce... may be I have published something may be even before I have launched it already someone has a copy and can change just a little and republish it. I started by saying this might not work in our

setting because when I look at our local settings, when I go to town, you find a local artist has just produced one CD and has not sold it and there are already people reproducing it. To me the issue of copyright is a big challenge. I don't know... may be at the end of this [discussion] we shall come with a [way] forward but I don't see [a remedy]...

Given the above sentiments, it was not surprising that socioeconomic [and cultural] factors were often cited for dismissing copyright as repugnant to knowledge access. It was not exactly clear how copyright intervenes in the distribution of knowledge goods and services in education and research contexts. But frequent mention of copyright and cost-based access mechanisms like journal and database subscription suggests that copyright is an important factor in determining access to education and research content in the digital environment. Indeed in the Ugandan study, based on conversations with students, I arrived at a plausible conclusion that the popularity of search engines (like Google) is not merely for easy access to resources (most not scholarly), but access to those resources that are not locked behind subscription-based databases or technological measures.

On question ii), the study didn't find copyright to be causing lack of representation of African knowledge in the digital environments. Representation is possibly a copyright question but other factors were identified as significantly impacting the representation and visibility of African content. These include: availability of information and communication technologies- ICTs (for digitizing and uploading African scholarly output by faculty and researchers), weak internal peer review mechanisms, and lack of resources to enable faculty and researchers carryout research and publish that work locally and/or internationally. One factor was particularly revealing (and relevant to the study), that is, competition amongst researchers often resulting in reluctance to openly share amongst peers (especially details of on-going research project). The 'culture of secrecy' (as one participant put it) occasioned by competition, undermines openness amongst researchers further limiting access to African scholarly output (in this case Ugandan). A participant explained it thus: *sometimes they have their own motives...I don't know how to put it. They just have that thing...[the] culture of secrecy.* There is a general absence of local research output not because content isn't generated but deliberately kept secret. To access this content, one has to physically visit individuals

or organizations where they [researchers] are employed to gain access to print formats like pamphlets or reports. Sometimes one has to visit government departments or ministry resource centers to get that information. The culture of secrecy is so prevalent in some government departments that access to resource centres often entails formal introductory letters from one's parent organization. A participant narrated her ordeal while attempting to get information from a local organization...

We were doing something on human rights in Uganda so we went to organization X. They [of organization X] said no go back to Human Rights Commission and get letters explaining why they want this information and what they want to use it for....that kind of stuff...may be some don't release information for confidentiality [you] would think.

However it was noted that this culture was not widespread among full-time government researchers. Based on interactions with researchers at the *Fisheries Resource Research Institute (FIRRI)*, a government research facility, I established that full-time researchers found sharing and openness valuable to their work since this was the main avenue for establishing oneself professionally. However, researchers were reluctant to share primary data fearing misappropriation and/or breach of contractual agreements with funding agencies (that support individual projects). FIRRI's information resource centre started a small collection of full-text publications by their researchers. FIRRI also runs a research dissemination programs that rests on sharing and partnership with stakeholders in the fisheries sector. As one researcher observed below, FIRRI's approach deconstructs the culture of secrecy noted elsewhere:

publication is out pride. When things were [research activities] at the initial stages there is [was] no booming but now our things have changed so much that we must be closer to the stakeholders [users who live close to water resources]. Even when we go out to the field, priority goes to stakeholders. As I am working, the stakeholder must be working besides me. Even when I find out about this [research findings] I can even ask him...what is this? Because they are closer to the resource than we researchers. We do research concurrently [with stakeholders]

and [the research] comes up very nicely. Another thing is that during those olden days, things used to be in boxes [hidden]...[one could] can even write something and put it there...we have moved to the stage of going to the lake with the stakeholders, writing something and even organizing a symposium, they come and participate. We can write something technical ... reports which are distributed [them].

Being a government agency and, therefore, publicly supported organization, FIRRI's approach is expected. FIRRI researchers indicated that they work closely with stakeholders including fishing communities in the research information dissemination activities. The close working relations with stakeholders reported by the researchers and the move towards open access digital repositories available online demonstrates FIRRI's commitment to openness. As noted above, the culture of openness was not shared by all government agencies. Like the case was in FIRRI, secrecy as a barrier to African content wasn't widely reported in universities. A few cases were reported where some faculty are reluctant to share their scholarly output (with colleagues in the department) in order to protect their tuft. Overall there was wide support for openness and knowledge sharing which brings us to question iii) on institutional and national policies.

Question iii) was concerned with existence of institutional policies and extent to which those policies advanced openness. Question iii) is of significant importance to this paper and the position that institutions need policies on research and intellectual property (or innovation and access to knowledge). In context of this paper, the policies should promote openness for long-term socioeconomic development and cultural preservation. On account of the data collected and analyzed in the Ugandan study and the problem areas identified (notably mismatch between copyright and the 'African Situation'), a policy of no policy, for access to e-resources and representation of the African content in digital environment, is not tenable. The study also revealed the fast changing copyright environment in Africa that favors local content creators (musicians) and content providers (publishers). That trend points to tough times in future for education and research institutions. If anything, the policy issues emerging out of the study (as evidenced above) were clear indications of the need for institutional policies to address identified problem areas. Indeed one participating institution, Makerere

University, had drafted a research and intellectual property rights management policy. To the extent that Makerere's draft policy addresses question i), ii) and most important iii), the rest of this section is dedicated to analyzing that policy as a 'model' (or a typical) of policy framework of an African university. While Makerere's draft policy is silent on content other than that generated at the Makerere (meaning it excludes e-resources focused on by this study), it points to directions likely to be taken by similar institutions in the country and region. Given the 'commercial' orientation of Makerere's policy, there is a need for early and quick intervention to curb adoption of similar policies if African scholarship is to be widely disseminated and shared.

4.2 Makerere's draft policy on research and IPR management

Although Uganda Martyrs University (one of the study institution) has a policy on open source software, no 'content-oriented' policy existed at the time of the fieldwork (the institution has since started drafting an IPR policy). Likewise FIRRI was in the process of developing an IPR and research policy under the National Agricultural Research Organization (NARO). FIRRI's case is complicated by the fact that the Institute is one of several agencies under NARO, itself a Government research agency. By implication, the policy choice made by NARO partly reflects the direction Government is likely to take on intellectual property (at least in the agricultural sector). Makerere was the only institution in the process of developing a research and IPR management policy warranting closer examination of their draft policy. As a respectable academic and research institution, one can only make a plausible assumption that Makerere's direction will likely influence other institutions in Uganda and the region.¹⁴ The analysis that follows doesn't cover all aspects of draft policy but elements of consequence to access and knowledge sharing. Whereas Makerere's policy doesn't cover ICT infrastructure, ICTs are recognized as critical to effective implementation of Makerere's policy on research and IPR management not mentioning access and use of e-resources. Lastly, this policy being a draft is a work in progress likely to change as the process moves forward.

¹⁴ Also Makerere is the oldest institution of higher learning in Uganda and one of the oldest in Eastern Africa.

4.2.1 Background

Makerere's research and IPR management policy dates back to 2004 when Makerere's *Board of Research and Publications* caused the formation of a committee to develop the policy. The graduate school being at the helm of Makerere's research activities initiated the discussions on IPR in relation to Makerere's research activities. Makerere's research profile in areas like HIV/AIDS, agriculture, engineering and natural sciences is unrivaled in Uganda and the region. Makerere's medical school is home to prestigious research facilities like the Infectious Diseases Institute. Likewise the Makerere Institute of Social Research (MISR) is known internationally for its leadership in social science research. The University's Library houses the biggest collection of Ugandan scholarship and one of the biggest on Africa in the Africana section. Against that backdrop, Makerere had to address the intellectual property question to address its research infrastructure and resources needs. However, it's not clear how consultative the draft policy development process was and whether the draft policy reflects institutional realities that can only become apparent through a broad consultative process. The Ugandan study was unable to capture the history of this draft beyond details provided above. Apart from a handful of senior administration officials, awareness of the draft policy was very limited. Again this is a draft whose future development is unclear. May be the consultative process advocated for will be done in the final stages of policy development. The question is whether faculty and students' inputs at later stages will benefit the entire process.

The draft policy is divided into two broad mutually exclusive areas. Area one (Chapter Two) addresses the research component while area two (Chapter Three) focuses on intellectual property and its management. This paper concerns itself with area two on intellectual property management without losing sight of the research component whose output directly impacts the IPR component. For instance, the research component recognizes the importance of research to Makerere's mission of providing "quality teaching, carry out research and offer professional services to meet the changing needs of society by utilizing world wide and internally generated human resources, information, and technology to enhance the University's leading position in Uganda and beyond" (Makerere University 2006,1). For research to contribute to that

mission, the draft policy acknowledges Makerere's current problems and challenges including:

- i). lack of appropriate mechanisms for disseminating results,*
- ii). inadequate funding for research with just 1% of the university budget allocated to research well below the recommended minimum of 3% by a 20 year old document, the Lagos Plan for Action,*
- iii). over reliance on foreign textbooks by faculty for instruction rather than internal research findings,*
- iv). faculty lacking skills to effectively conduct research, and*
- v). lack of motivation to conduct research by faculty (Makerere University 2006).*

The document further notes the irregular flow of research funds and lack of clear mechanisms for allocation of those resources. The policy is reacting to these problems but also proposing forward looking strategies for developing a vibrant scholarly environment. The strategies, challenges and problems provide the justification for the intellectual property rights component of the draft policy.

Overall the policy frames Makerere's research agenda as important to institutional and national development goals. For the latter, it aims at creating awareness and contributing to the 'national research agenda.' The policy also asserts that a vibrant research environment will enhance Makerere's international stature by encouraging "authors to publish their research products in internationally recognized publishing houses and outlets" (Makerere University 2006, 4). Research is to benefit individual researchers "through promotion, public and University recognition and the patenting of their output for commercial use" (Makerere University 2006, 3). Research in this case serves a dual purpose, boosting Makerere's international stature and rewarding researchers' creativity and innovation through job promotion and commercial exploitation of intellectual property generated from research. The dualistic approach of Makerere's policy effectively links research (innovation and creativity) to intellectual property (and its commercial exploitation). This paper focuses on the intellectual property part of the draft policy to understand Makerere's approach to IP and extent to which the policy pursues openness as far as knowledge put out by Makerere is concerned.

4.2.2 Key IPR (copyright) provisions

Chapter three of the draft policy addresses intellectual property management in context of Makerere's research agenda. Management of intellectual assets and property is central to Makerere's research strategies. Through management of IPR, Makerere hopes to:

- i). *Achieve the University's vision of providing research and service relevant to sustainable development needs of society,*
- ii). *Commercialize public research for the public good,*
- iii). *Beef up Makerere's human resource needs by drawing from IPR proceedings,*
- iv). *Build and strengthen link with the private and industrial sectors to the benefit of the general public, and*
- v). *Promote economic growth through research innovations (Makerere University 2006, 13).*

Picking on objectives *ii)* and *iii)*, it is clear that Makerere intends to treat IP as commodity to leverage its commercial potential. Objectives *ii)* and *iii)* are key to achieving the other three objectives (and the overall mission of the university of exploiting IPR to bolster research funding). As such, the draft policy takes steps to define what constitutes intellectual assets (the precursors to intellectual property-IP). Section 3.3.1 identifies intellectual assets as items where university personnel have:

- i). *Put their ideas;*
- ii). *Taken particular decisions in respect of different choices;*
- iii). *Thought of ways to solve particular problems, etc (Makerere University 2006, 13).*

Intellectual assets if “protected under the relevant laws would be transformed into intellectual property” (Makerere University 2006, 14).¹⁵ Researchers are required to properly document research procedures and laboratory processes using the *Intellectual Asset Identification Form*. Information (or intellectual property) generated as a result is passed on to the *Intellectual Property Manager* for safe custody and future (commercial) exploitation. 'Copyright issues' is one of the intellectual assets to be transformed into intellectual property. Research reports “approved for the award of a University Degree or Diploma” are some of the intellectual assets to be submitted to the *Intellectual*

¹⁵ Relevant laws are identified as: Copyrights Act Cap 215, Patent Act Cap 216, Trade Marks Act 217

Property Manager as potential intellectual property (subject to requirements of relevant national laws). These reports ordinarily cover dissertations and theses prepared by students at different levels as requirements for completion of their programs. They are covered by Uganda's *Copyright and Neighboring Rights Act 2006* (and in some cases involving Patent law). Besides custodial function, the *Intellectual Property Manager* is to assist researchers in “applying for registration of patents/designs under the relevant laws or trying to commercialize their innovation(s).” The draft policy is probably deliberately leaving out copyright-related IPs since Uganda’s law (like many national copyright laws) automatically rewards copyright protection on relevant works without any preconditions such as registration. Registration of copyrighted works is only ‘encouraged’ in cases of infringements likely to seek legal redress.

The Manager will also “create a central database where the information on Intellectual Assets can be recorded and accessed by interested persons.” The intellectual asset database is to hold: *employment contracts; collaborative agreements; confidentiality agreements; laboratory notebooks/notes; field data/notes; licenses – reagents, software; databases; software/simulations; information/data from third parties; other “tangible” items e.g. cell lines and monoclonal antibodies; copyright issues; institutional policy; national legislation, and international agreements.* As noted earlier, all these are potential intellectual property to be commercially exploited by Makerere and/or individual ‘researchers.’

Section 3.13. defines ownership of ‘innovation and inventions.’ Subsection 3.13.4 and 3.13.5 explicitly vests intellectual property generated at Makerere in the institution of the university (seemingly contradicting the notion of individual researchers being permitted to exploit IP they create). Subsections 3.13.4 and 3.13.5 state that:

3.13.4 Any discovery or invention that satisfied the following circumstances shall belong to the University (hereinafter referred to as: University Inventions):

(a) results from research carried on by, or under the direction of any employee of the University which is supported by University funds or funds controlled or administered by the University, or

*(b) results from an employee's duties with the University, or
(c) has been developed in whole or in part through the utilization of
University resources or facilities not available to the general public.*

*3.13.5 Any discovery or invention arising from joint collaboration
between the University or its employees and other institutions shall
proportionately belong to the parties.*

Notwithstanding reference to relevant national laws as the source for legal interpretation and the language of section 3.13 which leans towards patents (inventions), the above subsections, read in whole, potentially brings all research (whether leading to copyright or patents) conducted at Makerere under the ambits of the institution. For instance subsection a) refers to “*results from research carried on by, or under the direction of any employee of the University which is supported by University funds or funds controlled or administered by the University*” is broad enough to cover any ‘invention and/or discovery’ as a result of research conducted at Makerere by both students and faculty (noting that students work under the direction of university employee). Likewise subsection 3.13.4 (c) is broadly crafted to bring students' research output under Makerere's owned property. Indeed subsection 3.5.4 (of Section 3.5.1 on Research Findings) identifies student’s research reports as intellectual property:

*A Research Report approved for the award of a University Degree or
Diploma shall constitute an intellectual asset, which upon protection
under the relevant law will be transformed into intellectual property.*

While the above subsections 3.13.4 and 3.13.5 are not explicitly directed to copyrightable but patentable works, the dividing line between the copyright and patent aspects of the work is thin. Based on the above sections (and subsection 3.5.4), one can conclude that Makerere’s draft policy seeks to assign ownership (of patents as well as copyright in research reports) to the institution in whole or part (this being another institution in case of a joint collaboration but not individual students or faculty). With Makerere's utilitarian (and commercial) approach to its knowledge output, the policy has serious implications for access to knowledge generated at Makerere and directions other institutions are likely to take on copyright and research.

The last section of the draft policy of interest in this paper is on disclosure which directly relates to the central theme of this paper, *openness*. Makerere's clause on disclosure is one expected of a policy seeking to exploit IP. Section 3.14 on disclosure states that:

3.14.1 To assist the University in protecting University Inventions, University employees and students (including postdoctoral appointees, graduate and undergraduate students) shall disclose any University Inventions to the University prior to disclosing such discoveries or Inventions through publications, presentations or communications with third parties (including research sponsors) in a manner, which may inhibit or preclude the University from obtaining patent protection.

3.14.2 The disclosure mentioned under 9.5.1 (above) may also be required to comply with legal and/or contractual obligations owed to governmental or non-governmental research sponsors.

3.14.3 University staff shall not disclose University Inventions in the course of performing Outside Work for Reward unless and until the University has had the opportunity to take the steps necessary to protect University Inventions through patent or otherwise.

Again this is a clause specific to patentable works but presumably indicates Makerere's spirit and approach to other categories of intellectual property generated at and/or by the institution. The above conclusion is made very well knowing the fundamental differences in categories of intellectual property by the relevant intellectual property laws in Uganda. For instance, patents, unlike copyrightable works, are protected for relatively short period of time during which the inventor or creator is expected to fully exploit that work through industrial application and/or license to others. Copyright on the other hand have a slow and low return on investment and, therefore, protected for longer period (currently life of an 'author' plus fifty years upon his/her death). Disclosure of patentable works resulting in an outside beating Makerere to the registration of the patent presents more serious commercial losses to the institution

than disclosure of copyrightable works. Consequently, given Makerere's commercial orientation, the overly protectionist disclosure clause is not surprising. However it should in no way be read as limited to patentable works. Take the case of a researcher, faculty or student conducting research, publishing it and not associating it with Makerere but another institution. Whereas that action is probably a false claim, Makerere is likely to invoke the disclosure clause in the policy (among other remedies) to deal with the offending individual. But for purposes of this paper, we are concerned with the likely impact of restricting Makerere's communities and partners as far as intellectual property is concerned. The disclosure clause and others highlighted above (and those totally missing in the policy but ought to be covered) call for critical analysis to determine their impact on sharing and use of Makerere's intellectual output. That critique is the subject of the next section after which specific recommendations are offered to steer Makerere's policy (and other institutions) towards openness.

4.3 Identifiable 'grey' areas and implications of Makerere's draft policy

I refer to the criticism offered below as 'grey' areas to acknowledge that whatever omissions, contradictions or conceptual disagreement identified by this paper can still be rectified (since the policy is a work in progress). Second, as state above, some are simply conceptual differences with the notion of openness I have advanced in this paper and not factual errors. The critique is offered as a whole and not broken down into specific areas to acknowledge the interrelatedness of different sections of the draft policy.

4.3.1 Contradictions in scope and ownership

First, there are a number of contradictions in the draft policy. One of direct interest and relevance to this paper pertains to ownership. The scope of the policy is provided as: "*The IPR Management Policy [that] covers the handling of Intellectual Assets and Intellectual Property of the University or which are generated by the Faculty and staff of Makerere University.*" Yet section 3.5.4, which seeks to define aspects of research findings that constitute intellectual property (presumably covered by the policy) states that "*A Research Report approved for the award of a University Degree or Diploma*

shall constitute an intellectual asset, which upon protection under the relevant law will be transformed into intellectual property.” Although not explicitly stated, language in this section covers students’ research (as intellectual asset covered by the policy) yet they are not faculty or staff members. The contradiction takes on significant importance when read in conjunction with section 3.13 (on ownership innovations and inventions), specifically 3.13.4. Subsection 3.13.4 states that:

Any discovery or invention that satisfied the following circumstances shall belong to the University (hereinafter referred to as: University Inventions):

(a) results from research carried on by, or under the direction of any employee of the University which is supported by University funds or funds controlled or administered by the University, or

As earlier states, subsection (a) of 3.13.4 was found to be inclusive of students reports. Therefore, besides the problem of whether (or not) students’ work is covered by the policy, the above subsection raises question on reports prepared and submitted by privately sponsored students (whose funding doesn’t originate from the university or public coffers although on payment to Makerere, the funds are ‘controlled and administered’ by the institution). Lack of clarity on students’ reports (for both private and public) also affects the University Library System, which is charged with the function of collecting and circulating these reports. The question necessarily is do students retain ownership on account of their private sponsorship status or does the ‘control and administration’ aspect of the funds (whatever that means) take precedent over source of funding? This is not a rhetorical question because the Ugandan study (in which Makerere participated) addressed this question and the vast majority of students that identified themselves as ‘privately sponsored’ opposed the idea of institutions automatically assuming ownership (sole or joint) of works they submit to the institution to fulfill programme requirements.

4.3.2 Makerere's policy and national laws

The draft policy makes reference to 'relevant national laws' which is significant in defining Makerere's position on copyright and intellectual property in general. Although narrowly refers to 'patents' and patenting, the clause on 'Ownership of Innovations/Inventions' in the draft policy has far reaching implications for not only patentable products and services but also copyright and access to Makerere's internally generated knowledge. It is clear that Makerere's policy draws from national intellectual property (IP) laws but also sets forth specific positions the institutions has taken on intellectual property. First, Makerere perceives IP as an economic resource with a public good, if exploited, furthers the institution's education and research services to the public. The utilitarian approach to IP comes as no surprise in an environment where economic interests trump the public good and academic institutions are increasingly taking on corporate cultures and practices. The significance of referring to national laws lies in these laws not being amenable to open access and sharing of knowledge at the moment. Some, especially the copyright Act, remain untested in courts on questions specific to education and research. The consequence of the blanket reference to the laws threatens to further curtail access and sharing of Makerere's intellectual output. Today, even before legal reforms at the national level take place to allow for open access and sharing of knowledge, there are mechanisms for working within existing IPR framework to advance openness at the institutional level. Makerere is not even opening itself to these possibilities.

4.3.3 Makerere's policy, knowledge resources and the Library system

Makerere's draft policy is generally silent on outside knowledge resources yet these are critical to the research agenda Makerere aspires to build. As such, the policy doesn't address e-resources, the focus of this paper. Makerere's researchers, faculty and students make extensive use of 'outside' knowledge resources made available throughout the University Library System. Resources in question are both print and digital (the later being the focus of this paper). As noted earlier majority are copyrighted with exclusive rights residing with individuals or entities other than Makerere or its researchers, faculty or students. A visionary policy document would address these

resources and specify what resources researchers and scholars can use, under what terms. In a world where commercial databases have been introduced into a context where copyright is relatively new, as noted in Uganda's copyright history, the likelihood of litigation arising out of 'improper' use of such materials is not mere speculations. Evidence from the extensive photocopying enterprises should serve to support that conclusion. While this paper takes the position of wholly supporting these enterprises in context of advancing and supporting legal limitations and exceptions (in relevant laws) as well as advancing openness, the extent reported at Makerere may not be legally permissible. Yet the socioeconomic reality warrants their existence and operation. The library's current offerings (in terms of print and electronic resources) should be taken into account by the policy to avoid litigation (otherwise under the current legal dispensation and practices, courts are less likely to be lenient with library cause).

Remaining with the university library theme, we note that some resources are internal to the institution but interface with jurisdictions outside Makerere (and/or Uganda). Examples of these include publications by faculty through outside or international outlets. The library is currently collecting these as part of its institutional repository initiative (The Uganda Science Digital Library – USDL). Legal status of these resources is anything but clear. If the work is a pre-print by a faculty or researcher at Makerere, that work will likely be covered by the current policy (proposed). However if it was published with an international journal where the faculty member in question “signed away” or passed on copyright to the journal publisher, that work is covered by the proposed policy nor belongs to Makerere (or the faculty member). That leaves the library's institutional repository in a murky legal position (in the event of legal action by the publisher in question. The policy ought to clarify the position of this important initiative (from the contributors and library perspectives) otherwise the likelihood of legal confusion in future is real.

4.3.4 Retrospective coverage?

Makerere is a fairly old institution where many students have studied and conducted research. Africana section of the University Library is largely made up of this collection. Unfortunately, the draft policy is silent on research output completed prior to the coming into force of that policy. Will the work be covered retrospectively? What are the legal implications of this considering that alumni joined the institution before this policy (or worse at a time when Makerere had no policy at all)? Should Makerere assume ownership of works by graduates whose terms of admission and award were different from the terms set forth by the draft policy? Does such action present moral and possible litigation?

4.4 Conclusion

The foregoing analysis is in no way a compressive and exhaustive critique of Makerere's draft policy on research and IPR management. It for instance omits the research component of the draft policy as well as elements of the IPR components of little relevance to Makerere's draft policy is a fairly ambitious document but one likely to tilt the balance away from the knowledge commons in Uganda and Africa in general. Whereas the policy document mentions transfer of intellectual assets to the public and private sector, it's clear from the specific sections highlighted above that economic interests override openness values whereby Makerere's research output is directed towards income generation at the expense of wide dissemination and furthering knowledge generation. In a context of resource-poor institutions, the likelihood of other institutions borrowing a leaf from Makerere's draft policy is a realistic prediction at the moment. Yet the gaps and problems pointed out from the foregoing analysis presents real challenges to openness as far as access and use of e-resources is concerned. Hence the policy options offered below to promote openness in Makerere's policies and those of other institutions. The question shouldn't be whether institutions need

policies or guidelines on vital questions like copyright and access to content for education and research.

Rather, the issue is what directions institutions need to take and articulate through these policies. Makerere's draft policy calls for greater consultation, internally and externally, to seek opinions of the university community and other stakeholders (for example alumni through the University Convocation). Such exercise might reveal preference for more openness-oriented policies and guidelines in Makerere's policy (which were articulated by some faculty interviewed in the Ugandan study). For instance some of the 'grey' areas like omission of internal and external resources as well as lack of coverage of research reports prior to the draft policy will be addressed if Makerere pursues a broad consultative process. The recommendations below tend not to address some of these areas, pertinent as they are. Recommendations are narrowly crafted to address the access and use dimensions of the policy regardless of whether resources are external or internal to the institution. In line with the aim of this paper of promoting openness, recommendations tend to offer legal remedies to the current protectionist policy at Makerere. Needless to say recommendations are crafted within the framework of copyrightable resources (but can be extended to other intellectual property areas).

5 Conclusion and Policy Recommendation

The concluding section opens with a recap and brief examination of John Willinsky's *open access principle* mentioned in the introductory section. John makes a simple but compelling argument that scholarship and knowledge is beneficial only if society in general has unfettered access to that knowledge and inquiry.¹⁶ John considers access restrictions to knowledge and scholarship resulting from "arbitrary or otherwise unnecessary barriers to the particular body of knowledge" as a denial of the *right to know* (Willinsky 2007, 6). He further asserts that the scholarly and research community has been slow to exploit "the current opportunity at hand to greatly increase access. The educational opportunity of redressing considerable inequities in access to knowledge has yet to hit home for the majority of scholars and researchers" (Willinsky 2007, 8). I argue that Makerere's seemingly protectionist policy reflects the tendency to close rather than open up access to knowledge and scholarship. However, notwithstanding Makerere's protectionist and closed policy, the Ugandan study revealed that the desire to limit access is not necessarily shared amongst university and research institutions. Even at Makerere, some faculty are open to the idea of supporting an environment of openness and sharing through different means, including legal and policy mechanisms. John Willinsky notes that while the academic and research community lurks on the edge, there is an "obligation that falls to researchers and scholars with an interest in the educational value of access to knowledge...to continue to experiment and inquire, providing evidence, responding to concerns, making arguments, proposing models, designing technologies, even as an awareness of this human right unnecessarily denied slowly spreads among the academic community and beyond" (Willinsky 2007, 8). In the mean time patience must reign as institutions "improve the quality of, as well as the access to, research and scholarship" (Willinsky 2007, 2). Likewise, our quest for openness in Makerere and Uganda's policy framework on copyright (and intellectual property in general), there is a need to devise

¹⁶ But not necessarily unlimited say in cases of unethical research practices he wants some controls and measures to protect human subjects.

short-term arrangements that facilitate growth of research in order to build the much needed infrastructure for innovation.

The legal and policy recommendations offered below take into account of the need for short as well as long-term policy strategies for access and use of e-resources (and research output in general). Short-term remedies seek to work within the existing legal framework to advance openness whereas long-term seek to change the legal framework to accommodate other possible mechanisms for advancing innovation and creativity. The reformed legal framework should also guarantee access and use of digital content in the fast changing technological world. Taking the Ugandan study and Makerere's draft policy into consideration, one finds as true John's assertion that a lot remains to be done in encouraging an environment of openness in academic and research communities. Considering Africa's urgent development challenges, open access, use and application of scientific and technological knowledge generated locally is the more urgent.

John's *open access principle* and *right to know* was crafted primarily to advocate for greater access to 'physical copies' of content (*open access to content*) as opposed to access to intellectual element of a work. Since this paper has focused on the intellectual side, we stayed clear of the *open access* dimension but recognize that the two are not mutually exclusive. To attain full access one has to address the 'physical' access as well as the intellectual and legal access. A number of huddles tend to hinder the free flow of information. In this paper I considered the intellectual or legalistic barriers in the realm of intellectual property, copyright in particular. Cases where copyright hinders access to information (e-resources) for education and research in the African and Ugandan contexts were identified and discussed. Policy recommendations offered below take into account of the African situation as well as evidence gathered from Makerere's draft policy (which is indicative of future directions likely to be taken by academic and research institutions).

5.1 Legal and practical remedies to openness

Several options could be recommended, including maintaining the *status quo*. However, noted in foregoing discussions, a policy of no policy (or inaction) is not tenable in Uganda and Africa's situation. Increasingly rights-holders are clamoring for stringent IP laws as well as seeking legal redress to the detriment of academic and research communities that depend on the 'public access rights' in the copyright (IP) system. These institutions lack the resources to fight litigation or even fear being 'seen' as epicenters for infringing activities.

In light of Makerere's draft policy and stated challenges for funding research, as well as the "African situation" articulated in the Ugandan study, the proposed policy and legal options (and the practical approaches to access and use of e-resources) advocate for openness as the default but don't preclude economic exploitation of research (where benefits are clearly discernable). I recognize that at times that exploitation calls for some restrictions. I propose that these restrictions be as limited in scope and duration as possible, in some cases opting for openness to achieve the same goals. Note that under the framework recommended below, the institution (such as Makerere) or entity at the institution (such as researchers, faculty, students or academic unit) claims or registers the IP under existing statutory framework. However, registration should not be primarily for seeking economic gains.

5.1.1 Short-term legal and policy remedy

Let's use an example from the patent system to explain the limited restrictions mentioned above. Option one is for academic and research institutions to establish public-private partnerships where patents are exchanged for donations and the recipient industry actor doesn't claim exclusive rights or does so for a short period (say five) at the end of which that patent is open to attract more donations. Option two is one I think is more practical to the same patent scenario. The institution opens up the patent and recognizes whoever contributes to the scholarly endeavour that led to discovery of that patent. Donors (including public and private) are ranked or

categorized (Platinum, Gold, Silver, etc) according to the size of the donation. The public donor can be a Government agency interested in 'working' the patent or simply supporting research in that area. The patent will be open to everybody. However those that don't donate are not officially recognized by the institution but at the same time not excluded from exploiting that patent. Note that the above approach is short-term as it works within existing legal (patent) dispensation. The patent applicant or right-holder seek shorter terms of protection or no protection at all but still claims legal 'ownership' of the patent. Openness is the default by making allowance for (rather than restricting to) commercial exploitation where applicable and viable.

To bring the patent example in context of copyright, take a research report on HIV/AIDS vaccine trials from Makerere's Institute of Public Health (IPH) carried out by the fine epidemiologists at IPH. The report is probably a major break through in the fight against HIV/AIDS through vaccines. That report will likely attract the attention of two constituencies of interest to us (but not limited to them). One group will be other researchers worldwide (involved or not in vaccine trials) and vaccine companies interested in developing vaccines on commercial scale. Setting openness as a default benefits both groups through easy and quick access to the study report. Researchers will likely benefit more since the work will be circulated easily and quickly across research networks without fear of retribution arising from the exclusionary copyright. The vaccine company will also benefit because it will easily and quickly access and apply the findings of that study. Since openness is only a default but not the end, once this company makes commercial break-through, benefits must accrue to IPH, Makerere and the individual researchers.

The legal framework proposed to address this policy question (in the short-term) is the creative commons (cc) licensing scheme. Creative commons licensing is discussed comprehensively elsewhere. In the nutshell, it seeks to do away with "all rights reserved" as the default in the copyright system to a system where authors have some rights reserved (or no rights reserved at all). As noted earlier, "all rights reserved" means that the author or creator of IP assumes exclusive rights (save for the exceptions and limitations). Cc licensing scheme has different licenses which stipulate the kind and extent of rights reserved to the author. The *cc Attribution-ShareAlike* (BY-SA) requires that work distributed under that license can be shared and adapted but

the originator must be acknowledged. Any subsequent work drawing from that work must be distributed under the same license. The cc other license of interest is the cc Non-commercial (NC), which requires that work can be shared but only for non-commercial purposes. Any commercial activities (such as adaptations) require permission from the originator or rights-holder. Wikipedia¹⁷ has an excellent matrix of possible license options (common one) under cc scheme:

1. *Attribution alone (by)*
2. *Attribution + Noncommercial (by-nc)*
3. *Attribution + NoDerivs (by-nd)*
4. *Attribution + ShareAlike (by-sa)*
5. *Attribution + Noncommercial + NoDerivs (by-nc-nd)*
6. *Attribution + Noncommercial + ShareAlike (by-nc-sa)*

A combination of different 'rights' or permissions should address the openness question, at least under the current legal dispensation. Any license for e-resources should have the '*Attribution*' and *ShareAlike* attribute (option 4) as default. Depending on the potential to raise funds for research, cc licensing schemes can be crafted to provide limited incentives in line with the donor-recognition scenarios highlighted above. This public-private mix of licensing is an appropriate response to some of the current copyright challenges noted with institutional policies on IP. If adapted well and incorporated in the institutional policy, the different cc license scenarios should go along way in opening up research output from the institutions. Initially, the policy can stipulate that the outside resources used by the communities should be those issues under cc's flexible licensing scheme. Otherwise institutional application of cc fails but also the goal of advancing openness is not achieved.

The question necessarily is how does creative common license fit into Africa's oral and free knowledge culture and does it provide legal redress for protecting Africa's scholarship in the digital environment? As noted earlier, knowledge or information in African cultural contexts was never owned, at least not in the western sense. Under the current legal dispensation, pursuing the historically free sharing of knowledge (which some consider public domain knowledge) is naïve at best. But at the same time concealing African knowledge due to lack of suitable legal framework for protecting it is

¹⁷ Matrix available at: http://en.wikipedia.org/wiki/Creative_Commons_licenses

detrimental to Africa's development. It denies not only 'foreigners' but also fellow Africans who urgently need that knowledge to devise remedies to Africa's problems. Some form of legal protection of that knowledge is a logical step to avoid its misappropriation in the electronic environment. While creative commons generally doesn't come close to creating the historical environment of free sharing, a mix of creative commons licenses noted above will likely allow the sharing of that knowledge within African communities but at the same time offer legal protection from misappropriation by 'outsiders' to the culture. That approach doesn't preclude further analysis of other possible legal frameworks that might be found best suited to the Africa's knowledge situation. Indeed the long-term reforms discussed next are aimed at advancing the short-term remedies discussed above.

5.1.2 Long-term legal and policy remedy

Attempting to overhaul the intellectual property rights system from one we know today seems insurmountable but certainly not impossible. It's been noted that the system has evolved over the years to accommodate certain interests, usually rights holder. What seems difficult is introducing legal reforms that address the 'public interest rights' or encouraging the spirit of openness advocated for by this paper. As noted earlier, these kind of rights seem to erode the economic interests of the not so innovative rights-holders or those at the profiteering end of the creative process (such as intermediaries in creative processes).

Several long-term reforms are necessary in the intellectual property domain, copyright in particular. Both are occasioned by the rapid technological changes that prompt policy-makers to change national laws to accommodate the new technologies and economic interests that come with them. The legal reforms and long-term remedies to advancing openness recognize that whereas copyright avails private individuals certain rights which are enforced or administered privately, the public interests in the system must be safeguarded through a mix of private and public means. Today the tendency is for private rights-holders working from public statutory provisions of copyright (and IPR in general) to the private contract law, specifically contract law. In most cases, contracts negotiated between parties, which carry legal

force, can render the statutory provisions of copyright useless, including the exceptions and limitations envisaged in copyright. Even the short-term provisions in form of creative commons licenses proposed above can be overridden by private contracts. The long-term remedy to this problem is to shift private contract laws to public statutory provisions of copyright and require that:

- i). Contract law and private contracts cannot undermine the exceptions and limitations built into the copyright system,
- ii). Contract laws and private contracts should provide for the same level of safeguard to open sharing of knowledge as that contained in copyright law or even set higher standards as far as openness is concerned. This provision should also accommodate the creative commons options noted above.

The question necessarily is how does the long-term remedies proposed above benefit education and research institutions in Africa. Institutions benefit in two ways. First as consumers of 'outside' content, they will not be subjected to exhortation as they negotiate contracts with private content providers such as database vendors that provide e-resources. As creators of knowledge, institutions will be sure to provide access to that knowledge widely but again be sure that whoever receives that content or the rights to that content cannot lockout other potential users. Overall the aim remains openness and wide sharing, access and use of educational and research resources. The short and long-term remedies proposed above will go a long way in achieving the widest access of e-resources (and other educational recourses) in Africa's education and research institutions. However, it would be naïve to assume that they are the only remedies to achieving greater and wide open access and use of educational content. More will have to be proposed and followed through in terms of institutional and national policies.

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