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Natalia T. Bowdoin
University of South Carolina - Aiken, nataliab@usca.edu

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Cultures of Access: Differences in Rhetoric Around Open Access Repositories in Africa and The United States andTheir Implications for the Open Access Movement

Natalia Taylor Bowdoin

Library Collections / Associate Professor / Interdisciplinary Studies Degree Coordinator
University of South Carolina Aiken

ABSTRACT

Open Access (OA) refers to free, online access to peer–reviewed scholarship. Many OA proponents view OA as a potential mechanism for reversing inequities in information flows between industrialized and non-industrialized nations. The "green road" of OA (self-archiving in an OA institutional repository) has seen substantial growth in African nations where there have historically been chronic problems both with access to scholarly and scientific materials and participation in the larger scholarly and scientific community. For this study I examined the rhetoric used by OA institutional repositories and what this rhetoric may say about different "cultures of OA". I conducted textual analysis of 46 websites of OA repositories in the United States and 14 Sub-Saharan African nations. Analysis of the specific rhetoric used to present the OA repositories reveals differing views on the importance of OA in terms of cultural ideas about information control, access to information, and social capital.

Keywords: Open Access; Institutional Repositories; Scholarly Communication; Sub-Saharan Africa; Textual Analysis; Culture

Introduction

Open Access (OA) literature is, "digital, online, free of charge, and free of most copyright and licensing restrictions" (Suber, 2012, p. 4). The OA movement came into full force with the 2001 *Open Letter to Scientific Publishers* signed by tens of thousands of scholars worldwide which called for "...the establishment of an online public library that would provide the full contents of the published record of research and scholarly discourse in medicine and the life sciences in a freely

accessible, fully searchable, interlinked form" (Public Library of Science, 2001). While the focus of OA was originally on these disciplines, interest in OA quickly expanded beyond these into nearly all scholarly areas. The impact of OA has been felt both nationally and internationally. *Nature*, *Science*, *The Scientist*, and the *Wall Street Journal* all ranked OA among the top science stories in 2003 (Willinsky, 2006, p.1). Additionally, many proponents of OA have seen OA as a potential mechanism for reversing inequities in information flows between industrialized and non-industrialized nations.

Two roads for OA have developed: the "golden" road of OA journals and the "green" road of archiving articles in an OA institutional repository. The OA movement adopted this terminology to distinguish between methods of OA delivery after the terms were coined by Stevan Harnad (Suber, 2012, p. 53). OA institutional repositories are online collections of freely accessible articles organized and managed by an institution such as a research center or university and containing the intellectual products of scholars (and sometimes students) associated with that institution. Most OA institutional repositories were originally limited to peer-reviewed research articles and their preprints; however, some repositories have expanded to include other content such as dissertations, datasets, or other content (Suber, 2012, p. 52). Additionally, there are distinctions between "*gratis* OA", which removes price barriers alone, and "*libre* OA" which removes at least some permission barriers (Suber, 2012, p. 6). Although there has been a rise in OA consciousness around the globe, there has also been a rise in the tendency to equate OA exclusively with OA journal publishing – highlighting the golden road over that of the more heavily traveled green road – despite that self-archiving in an author's own university Open Archives Initiative (OAI) compliant depository is the fastest and most sure way of providing OA access and content (Harnard et al., 2008). The OAI Protocol for Metadata Harvesting (PMH)

makes separate repositories interoperable thus allowing users to search all repositories at once (Suber, 2012, p. 56). Despite the growing attention and examination of OA in general, there is still relatively little literature on OA and its potential for libraries and scholars in Africa where there continue to be chronic problems with lack of access to scholarly and scientific materials primarily due to economic and technological limitations. While Sub-Saharan African countries have been slower to produce actual OA journals than other parts of the world (Bowdoin, 2011), there appears to have been substantial growth and success in the starting of OA institutional repositories in Sub-Saharan African universities.

While OA is relatively easy to define and examine, the concept of culture is, in many ways, the opposite. Centuries of academic, commercial and political discourse have defined, re-defined, analyzed, politicized and often sought to control that often nebulous aspect of human beings' lives. There is the narrow, intellectual concept of culture as being that related to the humanities (arts, literature, music, etc.) while there is also the much broader, anthropological sense of culture as a way of life (McGoldrick, 2007). Additionally, the cultural rights that are enshrined in Article 27 of the *Universal Declaration of Human Rights* state, "Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits," (United Nations General Assembly, 1948). Yet, that concept of just what is the "cultural life of the community" and what it means in terms of rights for both individuals and communities, has witnessed a constant battle of negotiation by scholars and officials in the international rights regime (Poppeliers, 2010). Gannon (2008) has pointed out that there are so many numerous, expert definitions of culture, with so many variations therein, that the concept of culture is itself a paradox and one that calls into question the very meaningfulness of the term itself (Gannon, 2008, p. 19) while Mohammed (2011) has

argued that "the very idea of the existence of culture is in serious need of revision" (p. x). Despite this, for the purposes of this chapter, I will be using an approach to culture similar to that of the cultural anthropologist, Clifford Geertz (1973):

> The concept of culture I espouse...is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning. It is explication I am after, construing social expressions on their surface enigmatical. (p.5)

In short, I have chosen to use the term culture in terms of our individual and collective histories and upbringings that impact and affect the way we make sense of, and interact with, the world.

Due to my ongoing interest in OA and the OA movement and my long-standing interest in all aspects of culture, nebulous as that area can sometimes be, I have been interested in the particular ways that OA is talked about within different communities and cultural groups (which could be defined as subcultures or micro-cultures) and the ways OA is adopted or rejected within those groups. Thus, my research question for this study was "What can the rhetoric used by institutions in Africa and the United States to describe institutional repositories indicate to us about the internationalization of the OA movement and its impact on local or national scholarly micro-cultures?" In order to answer this question I also choose to look at ways in which the rhetoric represented in the texts used to describe institutional repositories reflects differing views on the importance of OA in terms of cultural ideas about information control, access to information, and social capital.

To pursue these questions, I choose textual analysis as a methodology. McKee (2003) defines textual analysis thus:

> Textual analysis is a way for researchers to gather information about how other human beings make sense of the world. It is a methodology – a data-gathering process – for those researchers who want to understand the ways in which members of various cultures and subcultures make sense of who they are, and of how they fit into the world in which they live....We interpret text...in order to try and obtain a sense of the ways in which, in particular cultures at particular times, people make sense of the world around them. And, importantly, by seeing the variety of ways in which it is possible to interpret reality, we also understand our own cultures better because we can start to see the limitations and advantages of our own sense-making practices. (p. 2)

In addition to this, it is important to remember that text, rhetoric and discourse are by no means neutral. While the term "rhetoric" generally indicates an intention by the author or speaker to convince or persuade the audience toward a particular point of view, the terms "discourse" and "text" can appear, at first glance, more neutral and less prescriptive, This assumption of neutrality, however, can be misleading. Drawing on Foucault's (1972) descriptions of discourse, Herb (2010) succinctly explains:

> A discourse formulates specific rules which determine a view of reality via language. These rules define a specific context, a field of knowledge, a scientific field or even an abstract notion or idea (e.g., globalization). Discourse is tightly linked to power. It pretends to describe reality, but in fact, it prescribes reality. (Digital divide and information poverty section, para. 4)

While it is possible to conduct surveys, interviews and focus-groups to try to get at what people believe or how they feel about various issues (such as OA), a researcher can often get a clearer picture of the dynamics at work by examining the actual actions or artifacts being executed or created around those same issues. Depending on the circumstances, human beings often have a tendency to be naturally conciliatory or combative when asked their opinions on certain matters but their actions and the marks they leave behind often tell a different story.

Method

To conduct this textual analysis, I choose to examine a sample of 46 websites of OA institutional repositories in Africa and the United States. The repository websites were examined in November and December 2012. I selected the institutional repositories from those listed in the *Directory of Open Access Repositories (OpenDOAR)* (University of Nottingham, 2006-11). I attempted to include all institutional repositories from Africa except when there was more than three in one country. I choose to limit my sample to no more than three from each country so that South Africa (with 23 institutional repositories listed) would not be over-represented. When there were more than three repositories listed, the chosen repositories were randomly selected based on their location in the *OpenDOAR* list. I choose not to include repositories housed in American or British Universities in the African countries. This resulted in 30 institutional repositories. Seven of the repositories originally selected (from Egypt, Ghana, Namibia, Zimbabwe and Cape Verde) had to be eliminated either because of access problems (the server was not available or the link was not working) or my own language limitations (for example, I had to eliminate those in Portuguese or Arabic because I do not read those languages). Institutional repositories that were in

French or English were included. This resulted in a total sample of 23 institutional repositories from the following Sub-Saharan African countries: Botswana, Cameroon, Ethiopia, Ghana, Kenya, Namibia, Nigeria, Senegal, South Africa, Sudan, Tanzania, Tunisia, Uganda and Zimbabwe. Although I did not originally intend to limit to repositories in Sub-Saharan African countries, my language limitations resulted in this more geographically specific sample.

To choose the American institutions and repositories I also used the *OpenDOAR* list of OA repositories. The repositories were randomly selected according to their placement on the *OpenDOAR* list. I chose not to select repositories that also included digital collections in their platform (i.e. digital objects housed or created at the institution that are not scholarly literature). Similarly, I chose not to include repositories that were limited to theses and dissertations. I chose to only include one institutional repository from each U.S. state so that some states would not be over-represented. The repositories were randomly selected from those repositories housed in colleges or universities. I choose not to include repositories housed in research centers or organizations. Although I did not intentionally set out to have equal representation of institutions from the U.S. regions, the resulting random sample of 23 institutional repositories does give substantial representation to each region. The repositories include those from the following U.S. states: Alabama, Arizona, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Utah, Virginia, Washington, DC and Wisconsin.

After selecting the institutional repositories I examined each site for evidence of rhetoric in seven areas: General, Individualistic Perspective, Societal Perspective (Economic), Societal Perspective (Scholarly), Global Perspective, National

Perspective and Local Community/Institution Perspective. I also gathered data on whether or not the sites were engaged in social networking and noted which software they were using to host their repository. The specific criteria used to evaluate each of the seven areas are delineated in the table below.

Table 1: Textual Elements for Analysis by Category	
Category	**Textual Element(s)**
General	Provides explanation of the IR
	Explains the IR's history in the institution
Individualistic Perspective — Benefits, Incentives and Protection	Explains the IR's privacy policy
	Mentions higher visibility (including higher rates of citation or impact)
	Cites benefit of establishing intellectual priority sooner (by posting earlier)
	Cites persistent and durable storage and access to work /archival access as motivation for participating
Societal Perspective —Economic Benefits	Discusses prohibitory costs of traditional scholarly publishing methods
	Relates IRs with economic benefits in some way
Societal Perspective —Scholarly	Relates OA explicitly to the social benefit (for own community) of access to research
Global Perspective —OA Benefits and Scholarly Communication Issues	Mentions OA movement explicitly
	Explains or connects to a site that discusses Scholarly Communication issues more broadly
	Provides a link or indicates it is a signatory to the Compact for OA Publishing Equity (COPE)
	Makes connections to benefits to global community through free exchange of scholarly info
	Makes connections to benefits with global community through reduced costs to scholarship
	Provides links to other OA Institutional Repositories
National Perspective	Highlights the visibility of scholars from that particular country (as opposed to institution) as a goal of the IR
Local Community/Institutional Perspective	Mentions importance of advertising the scholarship of the institution at a whole as a goal of the IR
	Highlights "featured works" within the repository
	Uses the word "community" for their sub-collections
Social Networking	-Employes social network tools such as FaceBook and Twitter in connection with the IR pages.
Type of Software	Dspace
	Digital Commons/BePress
	CGSpace
	IR+
	GNU EPrints
	Eprints3
	Unable to Discern

After each institutional repository was examined for the above elements, descriptive statistics were gathered for the African and U.S. institutional results collectively so that they could be compared.

Results

While I will summarize briefly the findings of the study here, detailed comparative results are presented in Table 2. The U.S. sites took a more individualistic perspective and were more likely to emphasize the personal benefits of contributing to the IR than the African sites. When analyzed from the societal perspective, the rhetoric revealed that the African institutions stressed the prohibitory costs of publishing or related IRs to economic benefits in some way more than the U.S. sites did. With relation to a more global perspective and the OA movement, The U.S. institutions were much more likely to mention and make an explicit connection to the OA movement; however, both groups had similar rates of explaining scholarly communication issues or linking to sites that explained the issues (U.S. 30%; Africa 22%). The African institutions were much more likely to provide links to other OA institutional repositories (U.S. 0%; Africa 22%). The African institutions were also more likely to make the connection between OA IRs and the global community through reduced cost to scholarship (U.S. 4%; Africa 17%) and/or through the free exchange of scholarly ideas (U.S. 26%; Africa 35%). Only one U.S. institution, Harvard, provided a link or indicated it is a signatory to the Compact for OA Publishing Equity (COPE). In terms of a nationalist perspective, only one African institution, the University of Khartoum in Sudan, highlighted the importance of the IR in terms of advertising the scholarly work of their nation.

From the view of a local community/institutional perspective, the U.S. institutions were overwhelmingly more likely to stress the importance of advertising their own particular institution's scholarship as a major goal of the IR. Less than half as many African institutions used this rhetoric (U.S. 57%; Africa 22%). The U.S. institutions were also much more likely to highlight "featured works" within the collection (U.S. 43%; Africa 4%) and the African institutions were much more likely to use the word "community" for their sub-collections (U.S. 26%; 61%); however, this appears to have more to do with the structure of the software being used than it actually reflects any particular ideology or approach. The Dspace software (which features "communities") is overwhelmingly used by the African Institutions (U.S. 17%; Africa 57%) while the Digital Commons/BePress software (which highlights "featured works" by individuals) is overwhelmingly used by the American institutions (U.S. 43%; Africa 0%). Only two institutions in the U.S. (9% of the U.S. sample) were currently using social networking tools (Facebook and/or Twitter) to highlight their IR and connect with users, although many of the U.S. institutions had Facebook pages for their libraries in general that were not specific to the IR.

Table 2: Comparative Results of U.S. and African I. R. Sites by Category				
Category	**Textual Element(s)**	U.S. sites – % of total sample containing element	African – % of total sample containing element	Difference
General	Provides explanation of the IR	87	74	13
	Explains the IR's history in the institution	9	13	4
Individualistic Perspective – Benefits, Incentives and Protection	Explains the IR's privacy policy	13	13	0
	Mentions higher visibility (including higher rates of citation or impact)	43	22	22
	Cites benefit of establishing intellectual priority sooner (by posting earlier)	9	0	9
	Cites persistent and durable storage and access to work /archival access as motivation for participating	52	26	26
Societal Perspective – Economic Benefits	Discusses prohibitory costs of traditional scholarly publishing methods	9	17	9
	Relates IRs with economic benefits in some way	9	17	9
Societal Perspective – Scholarly	Relates OA explicitly to the social benefit (for own community) of access to research	17	13	4
Global Perspective – OA Benefits and Scholarly Communication Issues	Mentions OA movement explicitly	30	9	22
	Explains or connects to a site that discusses Scholarly Communication issues more broadly	30	22	9
	Provides a link or indicates it is a signatory to the Compact for OA Publishing Equity (COPE)	4	0	4
	Makes connections to benefits to global community through free exchange of scholarly info	26	35	9
	Makes connections to benefits with global community through reduced costs to scholarship	4	17	13
	Provides links to other OA Institutional Repositories	0	22	22

Discussion

Several surprising results emerged from the data. One of the most surprising was that a large percentage of the institutions gave no explanation of why the institutional repository is a positive or desirable service at all (U.S. 39%; Africa 52%) – they simply defined it and left it at that. Some institutions did not even explain what the repository was on their website. This could be interpreted in a number of different ways. It could possibly represent a lack of commitment to the IR by the institution; however, it could also indicate a belief that there is no need to advertise, explain or promote the IR. If the later is the case, it could represent an assumption that everyone will already know what an IR is and how it operates or, alternately, that it is not the job of the IR administrators to promote the service – simply to provide it.

The greatest differences between the U.S. and African sites occurred in the criteria related to the individualistic and institutional perspective. The U.S. institutions emphasized personal and institutional benefits to contributing to the IR much more so than their African counterparts. The African institutions were more likely to emphasize the economic aspects and the global perspective of the free flow of scholarly communication than to highlight these individualistic or institutional benefits.

So, what can this analysis of these texts tell us about the rhetoric of green road OA efforts in the U.S. and the African countries represented in the study? As McKee (2003) has eloquently stated:

Performing textual analysis, then, is an attempt to gather information about sense-making practices – not only in cultures radically different from our own, but also within our

own nations. It allows us to see how similar or different the sense-making practices that different people use can be. And it is also possible that this can allow us to better understand the sense-making cultures in which we ourselves live by seeing their limitations, and possible alternatives to them." (p. 14)

While there have been calls from African scholars and information workers for a more globally equitable information regime since the mid-Twentieth century (Poppeliers, 2010; Sturges & Neill, 1998) the modern OA movement is largely a creation of the industrialized nations of the Global North. So what can the results of this textual analysis tell us about the internationalization of the OA movement and its impact on local or national scholarly micro-cultures? How do the differences presented in the sample reflect differing views between institutions in the U.S. and African nations on the importance of OA in terms of cultural ideas about information control, access to information, and social capital? Is it possible, as Ulrich Herb (2010) has asked in his sociological examination of OA and scientific publishing:

If open access is conceptualised as a vehicle to reduce the digital divide, it also reinforces existing dependencies and asymmetric allocations of discursive, political and materialistic power. This implicitly raises the question whether open access, in our discussion about the digital divide, supports Western imperialism. (Digital divide and information poverty section, para. 6)

This question flies in the face of the optimistic and determined rhetoric of many OA proponents who have ardently claimed that OA can provide a more even playing field at the global level for the free exchange of science and scholarly communication. And yet, Herb presents a compelling argument. It is also sometimes impossible not to note that the proselytizing nature of OA proponents occasionally rings a

little too close to the rhetoric of the former European colonialists. Despite this, Herb (2010) does concede that:

Nevertheless, open access gives scientists from developing countries opportunities to make their own scientific information available free of charge and to distribute it globally. In this way, open access provides opportunities for scientists anywhere to become active partners in scientific discussions…open access nonetheless gives the scientists from these countries opportunities to switch more easily from roles of information consumers to roles of information producers. (Liberalising elements, para. 1)

Despite this concession, his final analysis remains bleak as he cites other reasons why "It seems very doubtful if open access will really liberate scientific communication" (Herb, 2010, Liberalising elements, para. 1).

The results of my textual analysis suggest that African institutions are more cognizant of, and vocal about, the economic benefits of OA. They also are more insistent on the global context of the flow of scholarly information and the benefits of the free exchange of scholarly publications than their U.S. counterparts though they may not mention the OA movement explicitly by name as U.S. institutions appears more comfortable doing. I would argue also that the African institutions see the green road of OA institutional repositories as an important method for sharing their scholarship with the world and thus becoming more active participants rather than mere consumers of OA scholarship. One possible explanation for this is that the African institutions have dealt more substantially and repeatedly with access barriers to scholarly products. This also could well reflect the fact that scholars from less-industrialized nations have been excluded from scientific discourse in a number of other ways (Herb, 2010) U.S. institutions are much more likely to emphasize the

personal or institutional benefits for contributing to OA repositories – primarily focusing on increased citations rates and guaranteed archival, permanent access. This seems to confirm Herb's (2010) question:

Is a free and disinterested exchange of information really the prevailing interest of scientists? Or should statements to that effect rather be seen as some kind of "lip service"? Might it not be a more accurate assumption that scientists in reality are acting selfishly, striving for an accumulation of scientific capital that has to be gained and defended in distribution struggles?" (Recapitulation section, para. 2)

I would argue that the results from the U.S. sample would support this claim. It appears OA proponents in the U.S. believe the key to promoting OA repositories for an American audience is through primarily appealing to academic's self-interest rather than to a sense of information equity in a more global context.

Limitations and Conclusion

As with any research, there are limitations to this study which must be acknowledged. The U.S. is a *country* with distinct *regional* histories, economies and ethnic sub-cultures. In contrast, Africa is a *continent* with myriad and distinct *national* histories, economies, cultures and sub-cultures. Additionally, the sample size for this study was relatively small and, due to my own language limitations, I had to exclude IRs where the language of explanation was in Portuguese or Arabic. Further work should be done to compare a greater number of institutional repositories from other parts of the world to see what rhetorical patterns emerge and what they might tell us about the internationalization or homogenization of the OA movement globally and how different world regions are making sense of changes in scholarly communication in

general. Textual analysis can help do this. Understanding the ways that different communities in different parts of the world are interpreting and interacting with OA, be it via the green or gold roads, can give us real clues about the impact of OA and whether or not it is truly succeeding in freeing scholarship from the bonds that have contained it in the past. If OA is not succeeding in that goal, members of the OA community, whether they are located in North America, Europe, Africa, or any other part of the world, will need to look closely at current strategies and assumptions that perhaps need re-evaluation and re-negotiation.

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