Seeking Impact and Visibility

Trotter, Henry, Kell, Catherine

Published by African Books Collective

Trotter, Henry and Catherine Kell.
Seeking Impact and Visibility: Scholarly Communication in Southern Africa.
African Books Collective, 2014.
Project MUSE.muse.jhu.edu/book/32990.

Chapter 4
Scholarly communication policy landscape in Southern Africa

In this chapter, we examine the policy landscape shaping Southern African research and communication activities, especially as they pertain to our four partner universities. We do so by viewing this landscape from three vantage points: the international context, the national context and the institutional context. Through this nested approach, we will get a clearer idea of how the universities' scholarly communication activities respond to their surrounding policy environments. Through a thick description of these landscapes, we will be able to set the stage for our later analysis of the scholars' actual research and dissemination practices as they occur within these "rules" structures.

The international context

The scholarly communication policy environment in Southern Africa remains highly influenced by academic norms established in the global North. This is not only due to the historical foundations of the universities themselves – derived from British models in the cases we studied – but the nearly hegemonic position that European and North American universities enjoy in setting global academic standards. This helps to explain why, even though Northern and Southern universities are often animated by different values and missions, their scholarly communication methods are largely the same, even if those divergent missions might be better served by different communication strategies.

The scholarly communication norm up until recently has been characterised by three prevailing features. In this "traditional" model, scholarly communication is:

1. disseminated primarily through journal articles, books and book chapters, thus equating to scholar-to-scholar communication
2. published by third-party commercial publishers that charge subscription fees (for institutions) or purchase costs (for individuals) to access their publications
3. often assessed according to a work's Impact Factor, the metric purporting to measure a work's prestige and "importance" based on the average citation rate the publishing journal's articles collectively achieved during a two-year period.

However, these normative standards are in a massive state of flux as the open access (OA) and alternative metrics movements challenge the utility of the traditional scholarly communication model and the arithmetic sensibility of the Impact Factor. These challenges emanate largely from within the institutions of the global North, but they also shape Southern scholarly communication opportunities, offering new possibilities for greater visibility and social "impact".

Open access goes mainstream

Over the last five years, global scholarly communication discourse has changed dramatically, moving from a discretionary consideration in academic research activity to an integral component of that process. In many ways, this is due to the achievements of the open access movement, which gained the scholarly, institutional and governmental support necessary to move from the activist fringe to the mainstream. This transition was signalled by the raft of policies adopted by major research-funding bodies which required that all research funded by them was made OA, such as the:

- European Commission (EC)[64]
- European Organisation for Nuclear Research (CERN)[65]
- European Research Council (ERC)[66]
- Max Planck Society[67]
- Research Council UK (RCUK)[68]
- UK government[69]
- UK Department of Health (NHS/NIHR)[70]
- UNESCO[71]
- US government agencies[72]
- US National Institutes of Health (NIH)[73]
- World Bank[74]

64 European Commission MEMO/12/565 (17/07/2012), Open access to scientific data – Communication and Recommendation – background, available at: http://europa.eu/rapid/press-release_MEMO-12–565_en.htm?locale=en

65 CERN Scientific Information Service, Supporting Open Access Publishing, available at: https://oldlibrary.web.cern.ch/oldlibrary/OpenAccess/PublicationPolicy.html

66 Open Access Guidelines for researchers funded by the ERC, available at: http://erc.europa.eu/sites/default/files/document/file/open_access_policy_researchers_funded_ERC.pdf

67 Open Access and the Max Planck Society: http://edoc.mpg.de/doc/help/mpg_oa.epl

68 RCUK Policy on Open Access, available at: www.rcuk.ac.uk/research/outputs/

69 Finch J (2012) *Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications*. Report of the Working Group to on Expanding Access to Published Research Findings: The Finch Group. Available at: www.researchinfonet.org/wp-content/uploads/2012/06/Finch-Group-report-FINAL-VERSION.pdf

70 Statement on DH/NIHR-funded research and UK PubMed Central: www.nihr.ac.uk/files/pdfs/OpenAccessPolicyStatement.pdf

71 Swan A (2012) *Policy Guidelines for the Development and Promotion of Open Access*. Paris: UNESCO. Available at: http://unesdoc.unesco.org/images/0021/002158/215863e.pdf

72 John Holdren (22 February 2013) Memorandum for the Heads of Executive Offices and Agencies, available at: www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf

73 NIH Public Health Policy Details: http://publicaccess.nih.gov/policy.htm

74 World Bank Open Access Policy for Formal Publications, available at: http://documents.worldbank.org/curated/en/2012/04/16200740/world-bank-open-access-policy-formal-publications

With these major funders[75] requiring that their research outputs be made freely available to the public, scholars and universities have had to think beyond the traditional scholarly communication paradigm, a reality with which our partner universities in Southern Africa were just beginning to grapple.

Another key implication of these mandates is that while some funders such as the European Commission focus their OA requirements on traditional scholarly outputs (such as peer-reviewed journal articles), others such as the World Bank require it for all types of research outputs (including reports, working papers, policy briefs, data, etc.), thereby broadening the very notion of what constitutes scholarly communication. SCAP argued for this enlarged approach to scholarly communication throughout its engagement with Southern African universities, but it will likely only become a mainstream proposition through the continued production and dissemination of such alternative outputs by the scholarly community in response to incentives such as funder mandates and institutional reward systems.

Along with these funders, many universities have also adopted OA policies governing the dissemination of their faculty members' research outputs, including Concordia, Dartmouth, Duke, Edinburgh, ETH Zurich, Harvard, MIT, Princeton, UC Berkeley and the University College London.[76] These universities are contributing to a groundswell of institutionally based action endorsing OA principles.

While funder mandates have given a major financial and policy incentive for scholars to communicate their research openly, the growth of open dissemination platforms – such as OA journals and institutional repositories (IRs) – has also made such a choice more feasible. For instance, according to Laakso and Björk (2012), between 2000 and 2011, the number of OA journals worldwide has grown significantly, as has the number of articles published in an OA fashion. In 2000, 744 OA journals published 20,700 articles. In 2011, 6,713 full OA journals published approximately 340,000 articles. Each year, the proportion of OA articles rises by about 1%, totalling approximately 17% of the 1.66 million articles listed in the Scopus journal article index in 2011. The fact that many smaller OA journals are not even featured in indexes such as Scopus or the Web of Science suggests that the proportion of OA publishing is even higher than often recognised, a fact that confirms the considerable impact that OA outlets are having on scholarly publication (Laakso *et al.* 2011).[77]

This growth has been matched by the expansion of open access IRs where universities curate, profile and disseminate their scholars' research, some of which has been formally published elsewhere. According to the Open Directory of Open Access Repositories (OpenDOAR), the number of IRs worldwide has increased from 128 in December 2005

75 For a more comprehensive list of funder open access mandates from BioMed Central, see: www.biomedcentral.com/funding/funderpolicies

76 For a list of universities worldwide with Open Access policies from BioMed Central, see: www.biomedcentral.com/funding/institutionalpolicies

77 For an incisive summary of Laakso and Björk's article, see Ben Mudrak (10 November 2012), New Study Tracks Growth of Open Access Publishing, *AJE Expert Edge*, available at: http://expertedge.journalexperts.com/2012/11/10/new-study-tracks-growth-of-open-access-publishing/

to 2,454 in October 2013.[78] This includes 81 repositories currently in Africa (3.3% of the global total)[79] of which 69 are located in sub-Saharan Africa (40 of these are in Southern Africa). The proliferation of repositories worldwide offers new possibilities for universities to take greater control of their scholarly communication destinies.

These two dissemination mechanisms – open access journals and open access IRs – are the subject of an intense debate concerning which platform offers the most viable, sustainable and affordable OA dissemination mechanism going forward. This debate is known as that between the "gold route" and the "green route".

According to the Joint Information Systems Committee (JISC), the gold route involves "publishing in a fully open access journal or website. Subjected to the same peer-review procedures as a traditional journal, the open access journal will usually be available online. Authors may need to pay for their work to be published, although this is rare as it is often provided for by the research grant. Some institutions even pay these article processing charges (APCs) out of a central fund to account for the differences between research councils."[80]

The green route involves "self-archiving in a repository." While this can lead to logistical challenges (such as getting scholars to upload their own materials), "repositories offer a number of benefits. They increase the availability of some published journal works with restrictions on reprinting or text mining, and may enable work to be propagated across the internet and used for novel applications. Repositories also allow authors to keep track of who is downloading their data."[81]

While SCAP believes that there are merits to both approaches, we did not promote one over the other in our engagements with our partner universities. We were more interested in helping to establish an open access ethos where scholars, managers and librarians could identify and pursue OA strategies in line with their own interests and capacities. Because of this, during the course of our research and interactions with these universities, project participants became attuned to the ways in which international OA trends were impacting scholarly communication opportunities.

78 Growth of the OpenDOAR Database – Worldwide, available at: www.opendoar.org/onechart.php?cID=&c-tID=&rtID=&clID=&lID=&potID=&rSoftWareName=&search=&groupby=r.rDateAdded&orderby=&chart-type=growth&width=600&height=350&caption=Growth%20of%20the%20OpenDOAR%20Database%20-%20Worldwide

79 OpenDOAR Proportion of Repositories by Continent – Worldwide, available at: www.opendoar.org/onechart.php?cID=&c-tID=&rtID=&clID=&lID=&potID=&rSoftWareName=&search=&groupby=c.cContinent&orderby=Tally%20DESC&chart-type=pie&width=600&height=300&caption=Proportion%20of%20Repositories%20by%20Continent%20-%20Worldwide; see the distribution of repositories worldwide through this dynamic Google map from Repositories66, available at: http://maps.repository66.org/; see also the Registry of Open Access Repositories (ROAR), available at: http://roar.eprints.org/

80 JISC, Gold and green: the routes to open access, available at: www.jisc.ac.uk/whatwedo/topics/opentechnologies/openaccess/green-gold.aspx

81 Ibid.

Revised approaches to assessing impact

Another key debate shaping international scholarly communication discourse and the policies that universities use to assess their own academics' research revolves around the value and utility of the Impact Factor, a common performance assessment metric. The Impact Factor is a number representing the average number of citations that a journal's articles collectively receive during a two-year period. Thus if the Impact Factor for a journal in 2012 is 1.5, then the articles published in that journal in 2010 and 2011 collectively averaged one-and-a-half citations in 2012. The point of the Impact Factor – devised by the Institute for Scientific Information (ISI) in the 1960s and now known as the Thomson Reuters Web of Science (WoS)[82] – is to measure the "impact" of a journal within a given academic field and, by proxy, suggest an evaluation of the relative impact of the articles published within it.

For university managers, the Impact Factor offers a handy "objective" means for estimating the quality and "impact" of a scholar's publication. For instance, during a scholarly assessment exercise (such as for promotion), managers can utilise the Impact Factor to help them gauge the level of contribution that a scholar is making to his or her field. Because there are tens of thousands of journals published globally, and because it is difficult for managers otherwise to evaluate the quality of a scholar's output, the Impact Factor provides a seductive shorthand for helping with that process.

However, in the digital age, where individual articles, chapters and books (or any digital scholarly object) can be tracked and measured through internet technologies, the traditional Impact Factor seems to obscure as much as it reveals. As a tool from the print era, it remains wedded to an outmoded citation-averaging technique (at the journal rather than the article level); it narrowly defines impact as citation rather than use (meaning that it privileges an insular form of scholarly impact rather than a broader notion including social, developmental or industrial impact); and it renders countless research outputs invisible because it excludes thousands of journals (many from the global South) from being considered for an Impact Factor score.[83]

Because of these problems, the Impact Factor has been heavily criticised by scholars (Clobridge 2012; COAR 2012; Ernst 2010; Lawrence 2008; Lehmann, Lautrup & Jackson 2003; Patterson 2009; Rossner, Van Epps & Hill 2007; Seglen 1997; Vanclay 2012), leading many of them to express their collective dissatisfaction by writing and signing the San Francisco Declaration on Research Assessment (DORA) in 2012. The primary recommendation it makes is: "Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions."[84]

82 Thomson Reuters Web of Science (WoS), available at: http://thomsonreuters.com/web-of-science/

83 Thomson Reuters Web of Science does not monitor all journals published worldwide, but just a selected list of 12,000 journals which it considers "top tier international and regional journals in every area of the natural sciences, social sciences, and arts and humanities." This list excludes thousands of journals from the developing world. For more information (The Thomson Reuters Journal Selection Process), see: http://wokinfo.com/essays/journal-selection-process/

84 San Francisco Declaration on Research Assessment (DORA), available at: http://am.ascb.org/dora/

Furthermore, the UK's Research Excellence Framework (REF) – the influential research assessment exercise of British HEIs – has dropped Impact Factors from its evaluation process: "No sub-panel will make any use of journal impact factors, rankings, lists or the perceived standing of publishers in assessing the quality of research outputs. An underpinning principle of the REF is that all types of research and all forms of research outputs across all disciplines shall be assessed on a fair and equal basis."[85]

Meanwhile, as scholars and managers start to move away from the Impact Factor, new opportunities are emerging to assess an output's "impact" in a more precise and comprehensive manner. The most important of these comes from the alternative metrics (or Altmetrics) movement,[86] which promotes the use of data-harvesting technologies that allow computer programmes to track digital scholarly objects as they are cited, downloaded, viewed, liked, tweeted, bookmarked and shared.[87] This permits scholars and managers to get a clearer understanding of an output's impact and use than the blunt journal-level Impact Factor citation metric. Altmetrics allows for the evaluation of any type of digital scholarly object (journal article, conference paper, policy brief, ebook, etc.) while the Impact Factor is confined primarily to formal journal articles. Moreover, alternative metrics allow scholars to gain a far deeper insight into how their outputs are being used and shared, leading to them being able to tell "impact stories"[88] that detail the real-world effects of their research (which has become a growing component of academic performance assessments).

While the alternative metrics movement is not yet as mainstream as the OA movement, it is creating new options for the many who seek to do away with or replace the Impact Factor. However, in the Southern African context in which we conducted our research, we found that these discussions were not as robust as they were in the global North. The Impact Factor remained a powerful assessment tool for scholars and managers. But through our advocacy work, we were able to raise an awareness of these competing scholarly measurement paradigms, an awareness that will likely grow as article- (or object-) level metrics become more common worldwide.

The national context

In emerging economies, such as those in Southern Africa, governments expect their universities to play a key role in national development through the production and dissemination of knowledge. This desire is revealed in policy statements by government ministers, in university mission statements and in the social discourse concerning the role of universities in developing economies. While this is generally true of the four

85 Research Excellence Framework 2014 – Frequently Asked Questions, available at: www.ref.ac.uk/faq/all/

86 The global altmetrics movement was largely born out of the Public Library of Science's (PLOS) work in pioneering article-level metrics in 2006. This shift to a different locus of measurement opened the doors to wide-scale interrogation of previous metrics and exploration of new tools and methodologies which became mainstream in 2011/2012. For more on the ethics and rationale of the movement, see "altmetrics: a manifesto", available at: http://altmetrics.org/manifesto/

87 The most popular services for this are provided by Altmetric, available at: www.altmetric.com/

88 ImpactStory, a service that emerged from the altmetrics movement, provides scholars with usage statistics to allow them to construct narrative interpretations of their works' impact, available at: http://impactstory.org/

universities that SCAP studied, there are crucial differences in how each national government has expected them to fit into their research and development plans.

In this section we look at the national policies that have relevance for our universities' research and communication practices. These plans, strategies and policies are applicable not only to the universities themselves, but to the entire national research infrastructure. Yet as we shall see, the size, diversity and funding capacity of that infrastructure has a major impact on how the universities must engage with those policies.

Botswana

The government of Botswana has written a series of manifestos, plans and policies to guide national development priorities. Key to all of them is the role that education and research is to play in enhancing development opportunities. The University of Botswana, as the major tertiary education provider in the country, is envisaged as playing an important part in these desires, though the government hopes to expand national research capacity beyond what the university can offer. The following policy frameworks are the ones that have the most direct impact on shaping UB's own research and dissemination plans: Botswana Long Term Vision 2016; National Development Plan 10; the National Policy on Research, Science, Technology and Innovation; and the Tertiary Education Policy.

The Botswana Long Term Vision 2016 aims to transform the country into an information society (an "educated, informed nation") by the country's 50th anniversary (PTG 1997: 25). To help with the research element of this vision, the policy calls for the creation of "a National Research Council to promote, facilitate and fund research in Botswana. The council will be responsible for raising funds from Government and donor agencies, which is crucial for disciplines that do not normally attract research funding" (PTG 1997: 27–28). Though Botswana has still yet to establish this Council, the impetus for enhancing the national research infrastructure remains.

In line with the aspirations articulated in Vision 2016, the National Development Plan 10 (NDP 10) (MFDP 2009) identifies the particular strategies it will employ to reach them. While research and dissemination form part of a cluster of strategies for many of the objectives, they form the core strategy in the goal of turning Botswana into a "knowledge society." This ideal is premised on the notion that Batswana[89] "will have easy access to information to improve their lives at home and work. Information about all aspects of the economy, such as education, health, environment and business, will be available through the different information dissemination channels, which include telecommunication, electronic and print media" (MFDP 2009: 115). To do this, the government proposes the creation of various centres, funds, hubs and programmes that will be devoted to research and development, a strategy that would diversify the country's research infrastructure.

89 "Botswana" refers to the country, "Batswana" refers to its people.

In addition to NDP 10, one of policy's objectives of the National Policy on Research, Science, Technology and Innovation is "to promote research and innovation in the areas of priority for sustainable, socio-economic development of Botswana, and foster collaborative scientific research among academic and scientific institutions and the private sector" (MIST 2012: 13). It does so by seeking to increase research capacity, improving researchers' access to competitive funding through the establishment of a National Research Fund, and facilitating "the systematic dissemination of knowledge" through "media and data repositories" (MIST 2012: 20)."

Lastly, one of three main goals of the Tertiary Education Policy (2008) is to develop "a nationally relevant and internationally competitive research capacity." Part of this objective is informed by the fact that "tertiary level research has almost exclusively been centred on the one public university (UB) with very little capacity or opportunity for research existing in the rest of the system" (MESD 2008: 14). Thus the government would like to expand that research capacity beyond UB by "embedding a culture of research through every facet of life in Botswana" (MESD 2008: 14).

In sum, these national strategies and policies establish a context in which research development is valued, new research opportunities (centres, hubs, etc.) are slowly opening, and research activity is gradually being integrated into a broader strategy. And though the documents never use the term "open access" to describe the kind of scholarly communication that they desire, the types of knowledge dissemination that they do propose – to multiple audiences – suggest that an open access approach could answer many of these policies' requirements. This is certainly the direction that UB is taking (in measured steps), as we will see below.

South Africa

In South Africa, the burden upon universities to direct their research efforts towards development-related outcomes is not as heavy as it is in other African countries where there is often a small higher education sector responsible for the nation's research output. In this context, universities form just one part of a diverse research infrastructure that includes public and private research bodies, soft-funded NGOs and profit-sustained industrial corporations. The country's 23 public universities play an important role in this multifaceted research context, but they enjoy relative autonomy, engaging in research activities of their own choosing. Yet despite this plethora of independent research effort – or, more likely, because of it – South Africa ends up enjoying a solid level of research production that has developmental applicability.

The South African government's commitment to research is exemplified in the following national plans, strategies and policies: the National Development Plan 2030, the National Research Foundation Act, the NRF Vision 2015, the Department of Science and Technology Ten-Year Innovation Plan, the National Plan on Higher Education, the National Research and Development Strategy, and the Higher Education Act.

The National Development Plan 2030 acts as the ANC-led government's broad development strategy for the country and includes a number of proposals that have

important ramifications for research dissemination activity. First, it calls for the state to "strengthen universities that have an embedded culture of research and development. They should be assisted to access private sector research grants (third stream funding) in addition to state subsidies and student fees, attract researchers, form partnerships with industry and be equipped with the latest technologies" (NPC 2012: 319). Second, it urges public research bodies (including UCT) to be mindful of national development priorities in their research, calling for the creation of "a common overarching framework to address pressing challenges in the national system of innovation" (NPC 2012: 326–327). This does not prescribe that all research activity be subsumed under a state-sanctioned developmental umbrella, but just that relevant research activity should be identifiable and connected with other efforts through enhanced coordination. Third, in keeping with the country's "differentiated" approach to higher education, the Plan wants to "develop a few world-class centres and programmes within both the national system of innovation and the higher education sector" (NPC 2012: 327), of which UCT would certainly be one.

The National Research Foundation Act established the NRF to coordinate and fund research (especially in science and technology), and to support scholarly communication activities, such as: facilitating liaisons with national and international researchers and institutions; making available scientific knowledge or technology; and promoting the provision of an information infrastructure linking research institutions in the sharing of research knowledge (GRSA 1998). Through activities like these, the NRF has become a major part of South Africa's research infrastructure. Currently, it is guided by the five principles of NRF Vision 2015 (NRF 2008: 19):

1. Internationally competitive science, technology and innovation system
2. Representative research and technical workforce in SA
3. World-class science benchmarking and grant systems
4. Leading edge research, technology and innovation platforms
5. Vibrant national science system

More specifically, the NRF seeks to raise the visibility and effectiveness of South African research outputs by: increasing the proportion of its contribution to global research output to 1%[90]; raising the proportion of its citation intensity to 0.1%[91]; recognising 2,500 "rated researchers" in the country[92]; increasing the national patents per capita rate; and internationalising research performance assessment (NRF 2008: 16).

While the NRF's Vision seeks to make South Africa a globally recognised research player, it largely takes for granted the appropriateness of "international" (i.e. Northern) research assessment norms – which may or may not be appropriate for a developing country – as

90 According to Pouris (2012), South Africa's share of "world's publications" reached "a peak during 1987 (0.65%) and then a decline, which appears to have reached its lowest point in 2003 (0.47%). Since then, the share increased gradually to 0.65% in 2010 and reached the 1987 peak."

91 According to King (2004), citation intensity refers to the ratio of citations to a nation's scientific papers to its national GDP. In 2004, South Africa's citation intensity was well below 0.05% while Greece was at 0.1% and other nations (such as Singapore, Finland, the UK and USA) were well above that.

92 For more information on the current state of NRF rated researchers, see NRF 2012.

well as the value of the conventional scholarly communication model (in which a large proportion of outputs remain unavailable to the public).

The Department of Science and Technology's current ten-year plan provides a roadmap for transforming South Africa into a "knowledge-based economy, in which the production and dissemination of knowledge leads to economic benefits and enriches all fields of human endeavour" (DST 2008: vii). It is premised on "the need to accelerate and sustain economic growth" (DST 2008: vii) while increasing spending on R&D to 1% of GDP and strengthening its international research collaborations (DST 2008: 30).

While the plan does not prescribe how scholarly communication should take place, it suggests that formal peer-reviewed journal articles are the most valuable vehicles for disseminating research results, stating that "the principal qualitative measure of knowledge production is the output of original articles published in scientific journals. From 1990 to 2004, South Africa's output averaged about 7,000 articles a year, despite indications of increased funding" (DST 2008: 26). This sentiment is corroborated not only in other government research policies, but in university dissemination strategies. Only outputs produced in specified WoS or DHET-vetted publications count as "knowledge".

While the plans above speak to research in a broad sense, one of the key priorities of the National Plan on Higher Education is to "sustain current research strengths and to promote the kinds of research and other knowledge outputs required to meet national development needs, and which will enable the country to become competitive in a new global context" (GRSA 2001: 60). When the Plan was written in 2001, part of the impetus for this focus came from an anxiety about the drop in South Africa's proportion of ISI-rated research outputs in the mid-1990s, an outcome that the writers suggested was due to scholars' shift from basic research to more applied research (GRSA 2001: 61).

However, in the post-apartheid context, it could be argued that this was strategically valuable to shift attention from basic to applied research so that the country's intellectual power could have a greater impact on the nation's poor. Indeed, the Plan acknowledges there might be other ways of assessing national research productivity than only through the ISI indexes, but it goes no further (GRSA 2001: 62). Rather, it simply notes these concerns while maintaining its belief in the accuracy and credibility of the ISI indexing mechanism. This ambivalence remains prevalent in South Africa today. While many educationalists continue to acknowledge the limitations of the ISI/WoS ranking system in the Southern context, the country's policymakers, funding agencies, universities and scholars still rely to a high degree on the WoS index to assess their research performance.

Lastly, the Higher Education Act's Policy and Procedures for Measurement of Research Output of Public Higher Education Institutions (GRSA 2003) incentivises the production of scholarly research outputs through a unique subsidy system that creates a virtuous funding cycle in which the production of research at a university leads to it obtaining money from the government to fund further research projects. According to Mouton (2010: 25), "as of 2005, an amount of approximately USD180 million was available (on a competitive basis) for rewarding research output. The monetary awards for publication units [i.e. a single WoS-rated journal article] increased significantly from approximately

USD9,000 in 2005 to nearly USD12,000 in 2009." For universities and scholars, this system has a powerful effect on structuring research and dissemination decisions.

Once paid, each university handles the distribution of these subsidies differently, with some paying a portion of it into individual scholars' research accounts and others paying a portion into the relevant faculty's research fund. Other portions may be used by the central administration for other purposes. (At UCT, individual scholars do not receive any of the subsidy directly, but enjoy the expanded pool of financial resources that the faculty and university obtain as a result of it.) Thus, every year, South African universities compile and submit a publication count to the DHET, which then allocates subsidies based on how many and which types of recognised outputs they produced. However, the policy "is not intended to measure all outputs", but only "the major types":

- Articles published in journals listed by the ISI, the DHET[93] and the IBSS (International Bibliography of the Social Sciences)[94]
- Peer-reviewed books/chapters in books[95]
- Peer-reviewed published conference proceedings

(GRSA 2003: 4)

However, this South African Post Secondary Education (SAPSE) list of accredited publications does not include "correspondence to editors, abstracts or extended abstracts, obituaries, book reviews, news articles, advertorials, and editorials" appearing in those journals.[96]

In sum, these national policies assume that research can lead to economic growth which can, in turn, lead to social development. They are not prescriptive, but seek to establish an enabling framework that optimises research production. Because of the size, diversity and relative wealth of this research sector, the government believes that, by allowing the various research entities to pursue their own research desires, they will end up producing a multitude of outputs, of which a good portion will have commercial or developmental applicability. However, this powerful production system is not yet backed by similarly imaginative dissemination policies, as they rely wholly on a traditional mode of scholarly communication through commercial publishers (which are typically not OA).

Mauritius

In Mauritius, the Ministry of Tertiary Education, Science, Research and Technology (MTESRT), the Mauritius Research Council (MRC) and the Tertiary Education Commission (TEC) are the bodies driving higher education, research and innovation. Their primary ambition is for the island nation to be transformed into "a knowledge-based economy" through greater education, research, innovation, collaboration, connectivity and capacity: "henceforth, knowledge-based industries will be an increasing source of

93 DHET-approved list of SA journals, available at: www.researchoffice.uct.ac.za/usr/researchoffice/publication/SA-JournalList2013.xlsx
94 IBSS bibliography, available at: www.researchoffice.uct.ac.za/usr/researchoffice/publication/IBSS-2013-List%20of%20accredited%20journals.xlsx
95 UCT Research Office publication count overview, available at: www.researchoffice.uct.ac.za/publication_count/overview/
96 Ibid.

value added for the economy and a significant component of the new economic model. To that end, [the government] is promoting a Knowledge Hub agenda in which tertiary education will be given greater prominence" (MESR 2006: iv).

This desire has important implications for scholarly communication, in that a knowledge economy is premised on the easy flow of information and ideas, unconstrained by legislative, technical or financial obstacles (except perhaps for commercial purposes, as with patented knowledge). Thus the government has placed great emphasis on reducing the impact of these various hurdles. But because it is also keen to exploit the commercial potential of knowledge production, it has not yet stressed an "open" approach to knowledge. It focuses more on person-to-person connectivity and collaboration. This fact dictates the current strategies taken by the University of Mauritius, discussed below, which aims to be a "knowledge hub", but not necessarily an *open* knowledge portal.

The most relevant scholarly communication-related policies nationally are the TEC Publishing Grant Scheme and the Education and Human Resources Strategy Plan 2008–2020.

The TEC allocates government funding to Mauritian HEIs. According to the TEC's Strategic Plan 2007–2011, its vision is to "Make Mauritius the Intelligent Island of the Region in the Global Village" while its mission is to "Position Mauritius in the Region as a world-class Knowledge Hub and the gateway for post-secondary education" (TEC 2007: 5). Though it typically strives to achieve this through high-level funding efforts, it also promotes scholarly communication through the Publication Grant Scheme which provides "up to MUR25,000 [USD806] for the publication of books and research materials."[97]

The Education and Human Resources Strategy Plan 2008–2020 (MECHR 2009) states that "the main objective for the tertiary education sub-sector is to make Mauritius a Knowledge Hub to serve the Region and a Centre for Higher Learning and Excellence" (MECHR 2009: 112). It shares how research must contribute to the knowledge economy, how it should be attentive to industrial requirements and how it should be curated and disseminated. The plan suggests why this is so important to policymakers:

> *To ensure the success of the knowledge hub, efforts will be undertaken to strengthen the linkages between tertiary education, government and industry. Knowledge hubs generate new basic knowledge of relevance to many industries, as well as applied knowledge that is directly and immediately relevant to local industries. They also capture knowledge generated elsewhere, nationally or internationally, and develop this further to meet specific local needs. TEIs will be called upon to design their programmes with the assistance of industry.* (MECHR 2009: 117)

In sum, Mauritian national education policies stress the importance of innovation (the commercialisation of knowledge), the knowledge economy, knowledge hubs, research

97 The TEC Publication Grant Scheme, available at: http://tec.intnet.mu/resrch_pubgrnt.php

for development and inter-disciplinary cooperation. This helps to explain why scholarly communication plans at UoM are focused so much on collaboration, consultancy, connectivity and commercialisation rather than, say, openness, non-traditional outputs or alternative metrics. For the government, research for development is ideally channelled through industry so that it spurs economic growth along the way. Through research-based industry-led growth, the country will develop. However, as we will later argue, this approach presumes that industry is the only audience that has a stake in research that could lead to broader social development. It is a narrow conception of research dissemination.

Namibia

In Namibia, the young nation faces a number of social and economic challenges, thus the government is keen for research to make a direct contribution to national development. The University of Namibia, as the major producer of research in the country, is keen to oblige. Here we will look at that intention as expressed in the government's Vision 2030, National Development Plan (NDP4) and the Research, Science and Technology Act.

The major directive guiding all of Namibia's governmental policies is Vision 2030 which is meant to "promote the creation of a diversified, open market economy, with a resource-based industrial sector and commercial agriculture, placing great emphasis on skills development."[98] It also calls for the country to move towards a "knowledge-based economy" through ICT development, production technology, education and training, policy expansion and so forth (Government of Namibia 2004a: 77–100). As the flagship university of the country, UNAM is imagined to play an important role in this process.

The current National Development Plan (NDP4) is defined by three overarching goals: high and sustained economic growth, increased income equality and employment creation. To reach these ends, this NDP has identified key areas of focus that will create the necessary momentum for higher economic growth, namely logistics, tourism, manufacturing and agriculture.[99] Higher education is not the focus of the plan, though its role is implied in the priority given to increased research and development (R&D) funding and activity, as well as the government's desire to "promote the establishment of centres of excellence, more applied research, and additional institutions of higher learning" (Government of Namibia 2012: 121).

Lastly, the Research, Science and Technology Act aims to "provide for the promotion, co-ordination and development of research, science and technology in Namibia" by establishing a National Commission on Research, Science and Technology (NCRST) to regulate, oversee and fund local research efforts (Government of Namibia 2004b: 2). The Commission has only recently been established, but the law is intended to enhance the national research infrastructure and strengthen its relationship to development. However, the Act has come under criticism by Namibian NGOs, research entities and civil society

98 Government of Namibia, Vision 2030 Overview, available at: www.gov.na/vision-2030
99 Government of Namibia, Fourth National Development Plan (NDP4), available at: www.gov.na/ndp-4

bodies which claim that the law serves more to stifle and control research than promote and open it. These organisations argue that the law:

- defines research too broadly (such that a student's essay or a piece of investigative journalism could be defined as "research" and therefore subject to the Act)[100]
- stacks the commission with political appointments, minimising the participation of researchers, academics and civil society organisations
- gives the president of the country absolute discretion in issuing "general policy directives" to the commission, thereby limiting its autonomy and independence
- requires all researchers and research institutions to register with the Commission and gain permission to conduct research from the relevant Minister.[101]

Though this is an issue that will likely take some further time to sort out, the critiques levelled at the Act remind us that there is a fine line between what a government calls "coordination" and what researchers experience as simply "control". While SCAP has, in general, supported the idea of vertical policy alignment – such as when university research fits in with institutional and national research policy aims – this support has been predicated upon a policy structure informed by civil society participation, openness, transparency and intellectual freedom. Policy "alignment" or "coordination" should not act as a discursive tool to legitimate the suppression of research activities. At the moment, it is difficult to tell what impact this Act will have in the future, but it will likely determine whether Namibia becomes a site of research innovation or stagnation.

The institutional context

For the most part, the four Southern African universities profiled below try to align their research and communication policies with the strategies, plans and policies of their governments. But due to national policy differences, variant institutional missions and distinctive historical legacies, cultural norms and scholarly practices, the institutional policies that these universities have developed to guide their research and dissemination activities are unique. They share certain features, of course, as these institutions are engaged in the same global economy and shaped by the same international academic trends, but they remain focused on particular objectives that speak to their current visions for their futures. In this section we look at how each university has tried not only to align to with national government policies, but how they have responded to changing international practices. Through this, we will gain a greater understanding of how these universities see themselves and how they should approach scholarly communication.

University of Botswana

At an institutional level, the University of Botswana's Strategic Plan – "Strategy for excellence" – is closely aligned with the goals of the government's National Development Plan

100 Namibia Economist (2012), Research Act a threat to researchers – MISA, available at: www.economist.com.na/general-news/2169-research-act-a-threat-to-researchers-misa

101 For the three final points of this list, see Delme Cupido (19 October 2012), Clear and present danger, OSISA, available at: www.osisa.org/law/blog/clear-and-present-danger

(NDP 10) as well as the Long Term Vision 2016. Its scholarly communication approach also emerges from this sense of policy alignment, though the university has had to translate some of the broader national goals when it comes to dissemination issues. These institutional strategies are best expressed in UB's mission and values, Research Strategy, Digital Repository Policy and Performance Management System guidelines.

At the heart of the university's mission is a commitment to national socio-economic relevance, research excellence and the broad dissemination of knowledge.[102] Two of the ways that it will achieve these goals is through "advancing scholarship and generating research through the discovery, integration, dissemination and application of knowledge" and by "providing leadership in responding to the nation's cultural, economic, political scientific, social, technological and industrial needs and contributing to the qualitative development of Botswana's higher education system."[103]

The UB University Research Strategy (2008) elaborates on and sharpens the focus of a previous Research and Development Policy from 2002 when UB first intimated its desire to move towards a more research-intensive mission. In that earlier document, UB established three core desires that continue to drive its policy today: it seeks for UB research to be locally relevant, internationally recognised and widely shared (UB 2002). Though the updated Strategy does not spell out the precise mechanisms by which research outputs should be disseminated, scholars often produce a wide variety of outputs that achieve one or more of the policy's desires.

To help UB achieve its "goal of being a research intensive higher education institution by the year 2021," it has sought "to create an effective mechanism for storing, managing and processing research information" (UB 2009: 2) by investing in an IR called UBRISA (University of Botswana Research, Innovation and Scholarship Archive). Established in 2009, "the initiative is open access and openarchive compliant" and seeks to increase "the institution's visibility, status and public value" (UB 2009: 2). Its objectives are to:

- promote and encourage the dissemination of research findings
- increase the level of African content in scholarly publications that are unduly dominated by Western academic discourses
- enhance socio-economic development through research that feeds into national systems of technology transfer and innovation
- strategically increase the visibility of the University of Botswana nationally and internationally in scholarship and knowledge creation, application and exchange
- preserve the University's intellectual heritage for future use. (UB 2009: 2)

The administration's ambition is that "all vetted research outcomes whether published or not, and other works be deposited in UBRISA as soon as possible after completion of the research. The premise of the policy is that knowledge is a public good and that publicly funded research outcomes must be made widely available and accessible, in line with international practice" (UB 2009: 2). The IR will host the following research outputs:

102 UB Vision, Mission and Values, available at: www.ub.bw/content/id/1576/Vision,-Mission-and-Values/
103 Ibid.

- papers
- peer-reviewed published articles
- pre-prints
- monographs
- electronic books
- book chapters
- vetted conference papers
- theses and dissertations
- other research outputs that are not necessarily meant for publication
- computer programs
- artistic works (photographs, film/video clips, paintings, etc.)(UB 2009: 3–4)

Though the policy stops short of mandating that all UB scholars deposit their work on the IR, it suggests that other policies – such as the performance management system (PMS) – will be able to achieve that compliance over the next few years (UB 2009: 3).

The UB PMS comprises a complex auditing and accountability process that is based, in part, on goals that academics set with their supervisors. The "PMS was inspired by the New Public Management doctrine emphasising efficiency" (Marobela & Andrae-Marobela 2013: 173) and the "audit revolution" (Deacon, Osman & Buchler 2009; Lomas 2004; Power 1997; Shore & Wright 1999; Strathern 2000; Wood 2010) that has swept across higher education in the global North. It asks employees to benchmark themselves, identify production targets, and then assess whether they have lived up to their personalised agreements. However, due to questions raised about its efficacy, certain elements of the PMS were put on hold in 2012.

Nevertheless, the PMS is meant to appraise and motivate scholars in almost every domain of academic activity (teaching, researching, supervising, attending departmental meetings, etc.). But of the three broad categories assessed by the PMS – teaching, research and service – scholarly communication falls under "research and publications" activity which is supposed to take up between 20–40% of scholars' time (while teaching should comprise 55–75%; and service and academic leadership should comprise 5–20%).

To assess the value of scholars' research productivity, the PMS allocates points to a list of outputs based on their value in the eyes of the management. It reveals a conventional preference for high-Impact Factor, peer-reviewed journal articles (with eight points minimum), "highly commended" books (eight points), books (six points), articles in nationally listed journals (six points), followed by conference papers, keynote addresses, seminar papers and other types of research outputs (one to four points each). These scores are then tallied and weighted according to the "research and publications" weighting that each scholar uses to assess his or her own performance.

This point system represents an attempt by the administration to balance "our dual responsibility for academic excellence, together with the importance of advancing the intellectual and human resource capability of the Nation" (UB 2008a: 27). In this

respect, the PMS is successful because UB scholars produce a good proportion of outputs in each of the listed genres. However, the key element missing from this system is any recognition of whether an output is profiled on UBRISA or published in an OA format.

In sum, while UB's research and dissemination policies are aligned with the government's research and development agenda, they are not necessarily in alignment with each other. This is because the university has had to interpret the broad desires of the national interest in line with changing trends in scholarly communication. It has developed multiple strategies simultaneously – such as the Research Strategy, Digital Repository Policy and PMS – to achieve international recognition, national relevance and broad distribution through its research outputs. However, as we have seen, these different strategies have not always been tightly integrated: for instance, the Digital Repository Policy promotes open access dissemination of scholar-submitted materials, while the PMS does not incentivise open access dissemination or scholarly submission to UBRISA at all. This ends up rendering the former policy less effective since it is not reinforced by the PMS. Such discrepancies are to be expected in the early phases of a policy roll-out, but it can nonetheless hamper the effectiveness of the institution's research and dissemination effort.

University of Cape Town

At an institutional level, UCT's scholarly communication policies are aligned with the government's to the extent that the university is given the freedom to make its own autonomous decisions regarding how it incentivises, produces and disseminates research. As one of many elements in a diverse national research infrastructure, UCT is able to determine its own research and communication policies, though due to the lucrative funding opportunities afforded by the SAPSE subsidy system, it tends to reinforce the one established by the DHET, which prioritises the publication of high-Impact Factor international journal publications and books.

These commitments are best expressed in the UCT Mission and Values, Strategic Plan and Research Strategy (as well as each faculty's assessment and promotion guidelines, which we will discuss in Chapter 5).

At the heart of UCT's mission is a commitment to networking, research, social relevance, quality and diversity:

> *UCT aspires to become a premier academic meeting point between South Africa, the rest of Africa and the world. Taking advantage of expanding global networks and our distinct vantage point in Africa, we are committed, through innovative research and scholarship, to grapple with the key issues of our natural and social worlds. We aim to produce graduates whose qualifications are internationally recognised and locally applicable, underpinned by values of engaged citizenship and social justice. UCT will promote diversity and transformation within our institution and beyond, including growing the next generation of academics.*

This mission is informed by values that encourage the institution to create "an encompassing ethos" which promotes excellence, social responsiveness, transformation, human rights and communal responsibility.[104]

According to the UCT Strategic Plan (UCT 2009: 2), the university is a "research-led" university whose goals are to:

- enhance UCT's position as an *Afropolitan university* by making it an intellectual meeting point for scholars who have an interest in Africa's place in the world.
- strengthen UCT's *international research profile* through academic exchanges and research dissemination and partnerships worldwide, especially South-South links
- enhance *graduate attributes* by equipping students with knowledge and understanding of and exposure to continental and international contexts
- internationalise the student experience, through recruiting an internationally diverse student body and *innovative curricula development* relevant to Africa and beyond
- ensure that *staff development* includes skills for teaching diverse student bodies as well as significant international exposure
- contribute to the resolution of problems of global significance through a wide range of *socially responsive* activities, including research, teaching and policy engagement.

To achieve these goals, the university has committed to a number of strategies including raising research visibility (through improved ICT tools), making research relevant to teaching and socially responsive work, bringing research into teaching and strengthening UCT's "role in addressing key development challenges facing our society through engaged research, policy and advocacy" (UCT 2009: 14).

Meanwhile, the UCT Research Strategy follows the principles stated in its plans and policies listed above, such as having a research-led identity shaped by a commitment to: academic freedom; research informing all activities; disseminating knowledge that addresses key challenges facing society; protecting "curiosity driven research"; nurturing creativity; and stimulating international research linkages.[105]

In sum, between UCT's various research policies, plans and strategies, two key points emerge regarding scholarly communication. First, the university wants to produce and disseminate research that both secures greater international recognition (prestige) and contributes to dealing with local challenges (relevance). Unfortunately, due to South Africa's relative marginality in global affairs, it is difficult for UCT scholars to achieve both at the same time. This is not always the case, but often, the more that scholars make their research relevant and useful for a particular local context, the more difficulties they face in making it appeal to those who decide what is globally "excellent" and "important" (i.e. Northern journal editors). Second, UCT places a great deal of trust in conventional

104 UCT Statement of Values (adopted in 2001, currently under review), available at: www.uct.ac.za/downloads/uct.ac.za/about/introducing/uctvaluestatement.doc

105 UCT Research Strategy, available at: www.researchoffice.uct.ac.za/usr/researchoffice/info/policies/UCT_researchstrategy.doc

scholarly communication mechanisms – such as commercial journal publishers who usually locate outputs behind subscription paywalls – to achieve the "impact" it desires. Along with the DHET subsidy policy, UCT appears to accept the verdict of the Thomson Reuters WoS index and its Impact Factor for deciding what is "excellent" scholarship internationally. Furthermore, the university's research policies also do not say anything about whether its scholarly outputs should be made open access, a silence that favours that status quo in which scholar-to-scholar outputs are more likely to be disseminated through traditional closed methods.[106]

University of Mauritius

At an institutional level, UoM's official scholarly communication approach is very much in line with national strategies. It is best expressed in the UoM's mission and values, the UoM Strategic Plan 2006–2015, the UoM Strategic Research and Innovation Framework 2009–2015 and the academic staff performance assessment guidelines.

At the core of the university's mission is a commitment to scholarly "dissemination" to both Mauritians and the international community: "The core mission of the University is the creation and dissemination of knowledge and understanding for the citizens of Mauritius and the international community." This is further inflected by the university's vision which imagines its role as a connective one globally: "The University of Mauritius aspires to be a leading international university, bridging knowledge across continents through excellence and intellectual creativity."[107] These sentiments are in line with the government's desire for the island to become a regional knowledge hub and a space characterised by high levels of collaboration and connectivity.

The UoM Strategic Plan 2006–2015[108] provides the roadmap that the institution is currently using to fulfil its mission and values. It is comprised of six strategic directions: knowledge creation; knowledge diffusion; investing in resources; quality culture and good governance; national, regional and international collaborations; and community outreach. Each of these directions contains a number of sub-goals and strategies, three of which deal with scholarly communication at some level: fostering innovative e-learning systems (laptops, e-tools, etc.); increasing provision for state-of-the-art technologies (Excellence Parks, e-conferencing, etc.); and reinforcing UoM's networking role (regional and international collaboration, exchange programmes, strategic partnerships, etc.).

While these goals are important for enhancing the dissemination of Mauritian-produced knowledge, they do not speak to some of the core issues that define current debates around scholarly communication, such as openness, dissemination formats and metrics. They deal rather with technology development, infrastructure capacitation, skills training, collaboration (both virtual and physical) and networking which, as we will discuss later,

106 At time of publication, UCT senior management was engaged in discussions about adopting a more pro-open access approach to scholarly communication.

107 UoM, Mission and Vision of the University, available at: www.uom.ac.mu/ABOUTUS/INTRODUCTION/missionvision.html

108 The University of Mauritius Strategic Plan 2006–2015, available at: www.uom.ac.mu/ABOUTUS/StrategicPlan/index.htm

do not always achieve their developmental potential if they are constrained by inappropriate policies, paradigms or incentives.

The UoM Strategic Research and Innovation Framework (SRIF) 2009–2015 seeks to: foster and grow an active research culture that inspires discovery and innovation with emphasis on research of excellence that is world-significant; strengthen inter-disciplinary and collaborative research through increasing the number of functional and strategic internal and external links; build future research and research capacity; and increase research income from external sources to support more research broadly.[109] These goals stem mostly from a desire to ramp up UoM's research intensity, effectiveness and commercial viability. This would appear to be the next logical step in the institution's development. As the SRIF's Executive Summary states, "from this research-informed base, the University is now well underway to become a research intensive institution."[110]

Lastly, for individual scholars, the most important policy shaping their actions at a personal level is the UoM Academic Staff Performance Assessment Guidelines, which delineate the rewards and incentives attached to their research activity. It represents the university's key source of leverage in influencing the quantity and quality of institutional research activity.

We will discuss university rewards and incentives in more detail in Chapter 5, but for now it is important to note that at UoM, these guidelines form a crucial part of the scholarly communication policy landscape. They are based on a simple point system in which various types of scholarly outputs are allocated a numerical value that are then weighted according to whether the outputs are considered of a "very high category" (1 × full mark), "high category" (0.8 × full marks) or "average category" (0.6 × full marks) and totalled to give assessors a raw score to grade them. This process becomes operational when a scholar decides to apply for promotion, which may happen after a few years in a given rank. The point system rewards the publication of internationally published books, journal articles, book chapters and refereed papers in conference proceedings over those published nationally (by a two-to-one margin) and provides mild recognition for alternative outputs such as reports, technical papers, briefings and so forth.

However, the major piece missing from this promotion policy is any strategic concern for dissemination practices beyond a traditional understanding of scholarly communication. Scholars are rewarded for publication, but without any regard to whether it is open or closed. Essentially, while the policy pushes for research publication, it does not imaginatively try to use the act of dissemination to achieve national development goals by making sure that UoM research reaches the broadest possible audience in the most open fashion.

109 UoM Strategic Research and Innovation Framework (SRIF) 2009–2015 Executive Summary, available at: www.uom.ac.mu/provcr-ci/research/ResearchStrategy/EXECUTIVESummary.pdf

110 Ibid.

University of Namibia

At an institutional level, UNAM's official scholarly communication approach is very much in line with the national policies discussed above, though it has had to translate the desires of the government creatively for its own academic context. This process – of policy alignment and translation – is best captured in UNAM's vision and mission, UNAM's Research Strategy, UNAM's 5-Year Strategic Plan and the university's various promotion and teaching and publication assessment guidelines.

At the centre of the UNAM vision and mission is a commitment to developing the potential and prospects of the Namibian people. The vision of the university is to:

> *engage with society in the creation and dissemination of knowledge, through teaching, research and advisory services, and a commitment to lifelong learning; thereby becoming a treasure house of knowledge at the service of national development, and available to all in forms directly relevant to the improvement of the quality of their lives.*[111]

This is further inflected by the UNAM mission to:

> *engage in socially and nationally relevant, academic and technical training, research and educational programmes with the involvement of all stakeholders in a conducive environment for learning, innovation, knowledge creation, professional development, functional skills development and development related competencies, within the cultural context of the Namibian people.*[112]

In order to achieve this, the university has committed to a number of operational principles, including: prioritising "applied research" and "inter-disciplinary approaches" to solving "real-world problems"; serving as "a repository for the preservation, development and articulation of national values and culture, through the promotion of Namibian history, art and languages"; undertaking "basic and applied research, with a view to contributing to the social, economic, cultural and political development of Namibia"; providing "advisory, consultancy, and extension services throughout the country, with the view to promote community education and appropriate know-how, thus enhancing Namibia's productivity and socio-economic development."[113]

What this vision and mission suggest is that the university sees itself as a servant to society, seeking to make a direct contribution to the development of Namibia with teaching, research and service that is locally relevant. While mindful and interested in also securing international recognition and prestige, the top priority by far is having an institution that is responsive to Namibia's immediate and long-term needs.

111 UNAM Vision and Mission, available at: www.unam.na/about_unam/vision_mission.html
112 Ibid.
113 Ibid.

In 2005, UNAM adopted an institutional research strategy that aimed for the university to "become a research institution of international repute in various key areas of research excellence which create and share knowledge needed for the upliftment of the quality of life of our people" (Kiangi 2005: 1). While the strategy emanated from the values of the university's mission and vision discussed above, it took on a more ambitious language as far as impact goes, pushing for research not only to impact nationally, but regionally and internationally as well. It is a document that asserts an ambition for the university to see itself as more than a teaching university, but one with a solid research contribution to make. Generally, the research strategy intends to:

- guide UNAM to carry out research relevant to national and regional importance
- encourage interaction with, and attract eminent scholars of repute who will catalyse research activities, and raise the research profiles of the various research groups in different areas of excellence, to ensure that the University conducts research that makes a difference
- increase the proportion of staff engaged in internationally excelling research
- improve research funding, and the overall financial return on investing in research
- promote research collaboration within the University, and with the private and public sectors, and any associated strategic alliances, in order to encourage commercial exploitation of the University's research outputs
- promote a culture of research within the University where all staff members willingly cherish the novelty of engaging in research, where trust and confidence prevail to support free expression of ideas, as these are essential for discovery and innovation
- develop a framework for quality assurance, monitoring and evaluation. (Kiangi 2005: 4)

This Research Strategy marks a key moment for the university in terms of broadening its mission to include greater research commitment in an otherwise teaching-oriented institution.

The current UNAM Strategic Plan also identifies a number of ambitions aimed at improving its teaching, research and service dimensions. First, UNAM seeks to increase its number of refereed publications from a baseline of 90 to 160 by 2015 and its number of other publications from a baseline of 305 to 400 by 2015 (UNAM 2011d: 15). This shows a desire by the university to ramp up its research activity during this five-year period. It also reveals how important non-refereed outputs remain for the university because scholars are incentivised to produce outputs not only for other scholars, but also for the government, industry and civil society.

Second, UNAM aims to "strengthen international liaison and collaboration" by raising the number of existing and operational international cooperations from a baseline of 30 to 80 by 2015 and by increasing the number of active collaboration agreements from a baseline of 14 to 80 in 2015 (UNAM 2011d: 23). This represents a massive upgrade in in collaborative interactions, but the stability and growth of the institution bodes well for such ambitions.

Third, UNAM wants to "enhance community engagement" by raising the number of successful community interactions from 35 in 2011 to 50 in 2015. It also wants to raise its stakeholder satisfaction rating from 20% in 2011 to 60% in 2015. It will do this by conducting surveys, formulating and implementing policy on community service and engagement, and documenting and publicising its activities (UNAM 2011d: 17). This will extend the reach of the university's research to the non-academic audiences of the country who would also benefit from its results.

Fourth, according to UNAM's various teaching, publishing and promotion assessment guidelines (UNAM 2011a, 2011b, 2011c), academic staff are expected to spend about 60% (24 hours/week) of their work time teaching and giving lectures, 30% (12 hours/week) doing research and publishing and 10% (four hours/week) doing service, administration and community work. As we will see in the next chapter, these proportions are difficult to achieve for many Faculty of Humanities and Social Sciences (FHSS) scholars who find themselves stretched in terms of teaching and administration work.

However, when research outputs are published, they are evaluated and rated by the university depending on their type and distribution mechanism. Academic books, book chapters, journal articles, academic conference/workshop proceedings, reports (consultancy, technical and commissioned), teaching manuals, contributions as editor and creative works are all considered published works worthy of assessment (UNAM 2011a, 2011b). The point allocation system rates the value of these outputs for promotion purposes, giving greater weight to international peer-reviewed outputs compared to locally published non-reviewed items (which is similar to the other university assessment systems we looked at). Though none of these take into account whether an output is open access, the sheer variety of outputs recognised in the system allows for scholars to produce outputs that can reach a diverse number of audiences locally and internationally.

These guidelines and policies are suited for an academic environment characterised by high levels of teaching engagement, modest levels of doctoral degree attainment and mild levels of research publication productivity. They recognise both teaching-oriented and publication-oriented career choices, though they signal a desire for more research production through greater status and financial rewards for those who achieve high levels of publishing productivity.

Lastly, UNAM's new Scholarly Communications Policy (UNAM 2013) – developed during the university's engagement with SCAP – accepts and promotes the need for open access dissemination practices, stating:

> *The University recognises that as a largely public-funded institution, it has an obligation to share its research findings and scholarly outputs with all stakeholders and the wider society. It also recognises that the Open Access model of scholarly communication is a means to advance research. It allows scholarly outputs to reach a much wider audience, and thus to be cited more often, which raises the profile of the author/knowledge producer and the University.* (UNAM 2013: 8)

It goes on to state that, "the fundamental purpose of the Scholarly Communications Policy is to increase access to information, knowledge, research, and artistic and creative works, in order to facilitate the academic enterprise at the University and advance the progress of society" (UNAM 2013: 5). With this open access commitment in mind, the Policy (UNAM 2013: 5–6) aims to:

1. provide a framework and guidelines for communicating UNAM scholarly outputs
2. raise the profile of UNAM's research and enhance its impact and contribution to national development
3. establish common standards of academic writing and scholarly outputs at UNAM
4. ensure quality by promoting adherence to best practices in UNAM's outputs
5. make UNAM's outputs accessible in different formats to different audiences
6. establish sustainable management strategies for communicating UNAM outputs
7. strengthen the preservation and archiving of UNAM's scholarly outputs .

The policy goes on to discuss other critical areas of concern, including quality assurance practices, types of outputs covered by the policy, the role of the new IR, the meaning of the policy for the university's various research centres, the role that UNAM Press will play in making the policy effective and various budgetary issues for implementing the policy. And though this policy has only just been ratified, it likely marks the beginning of a new era for UNAM research and its visibility.

Analysis

In this chapter, we have explored the policy landscapes shaping research and communication activities at Southern African universities. As we have seen, the international context is being radically reshaped by the OA movement, which has been embraced by numerous funders, institutions and scholars. It is turning conventional understanding of scholarly communication on its head. The global context is also being informed by provocative demands for a new type of scholarly metrics, one that goes beyond the traditional Impact Factor towards alternative or complementary metrics that leverage the data-generating capacity of the internet. These alternative metrics seek to broaden the social and developmental meaning of a scholarly output's "impact".

In Botswana, the government has created an internally consistent set of policies related to transforming the country into a participant in the knowledge economy while also diversifying its industrial capacity. This includes a focus on research production at both the academic and commercial level. While these policies do not deal directly with scholarly communication, they rely on a traditional understanding of what that communication would entail. This has an important knock-on effect for the university context where research is produced.

At UB, scholarly communication is imagined as fitting into the government's broader objectives surrounding research production, especially national socio-economic relevance, research excellence and the broad dissemination of knowledge. To help achieve that, the university has invested in an IR to profile and disseminate research, and a PMS to motivate the production of research. It has not, however, utilised the policy space to

leverage these innovations because they are not aligned in terms of promoting open access publication. The IR establishes the technological means to disseminate UB scholarship openly, but because there is no mandate for scholars to submit their outputs to the IR, nor is there any reward (in terms of greater points offered by the PMS) for them to produce OA outputs, these miss a critical opportunity for UB to disseminate their research broadly to the national community. Thus, UB achieves policy alignment with the government, but not with itself internally.

In South Africa, the government has supported the development of a diverse national research infrastructure with multiple research bodies and funds to leverage the country's intellectual capacity for development. These policies broadly seek to transition the country to a more knowledge-based economy. But the government has also had a major impact on how university research is communicated by providing subsidies for research published in ISI/WoS-listed journals, DHET-listed publications and peer-reviewed books and conference proceedings. These subsidies reinforce a vision of research dissemination based solely on scholar-to-scholar communication, and only the most prestigious forms at that. The policies say nothing about whether such outputs should be open access, thereby missing an opportunity to broaden the impact of South African scholarship beyond the scholarly community.

At UCT, the university research benefits from the government's SAPSE subsidy policy which incentivises high-prestige scholar-to-scholar communication. This also suits UCT's desire to be a highly ranked university as those rankings are partially determined by the number of outputs a university produces in WoS-rated journals. But the university is also seeking to assure that its research is more developmentally relevant for the broader community and that it takes on more of an "Afropolitan" identity through greater linkages with other scholars on the continent. At this point, UCT has largely assumed that these goals can be met through a conventional scholarly communication model, as it has only recently started to engage with how OA dissemination strategies might benefit its goals.

UCT's research policies are fully aligned with the government's research plans. This is mainly because the government has sought to create an enabling research framework into which the diverse elements of the national research infrastructure can fit according to their own strengths and weaknesses. That is, the government is not highly prescriptive about the type of research than any one university should carry out, but has established a diverse set of bodies and funds to incentivise universities to contribute to that broader research mission on their own terms. In this way, UCT is able to leverage its particular capabilities not only to achieve its own research goals, but to allow for its scholars to contribute to the government's national research goals as well. This is a crucial point: the fact that UCT is just one part of a broad and diverse national research infrastructure allows it to retain the autonomy it desires because it shares the country's research burden with multiple other entities. This is unlike the case at UB, UoM and UNAM which must shoulder a high proportion of the country's research requirements because it does not enjoy the support of a robust national research infrastructure. Thus, UCT's research and dissemination policies are in line with the government's, but they have not kept pace with the changing international policy landscape.

In Mauritius, the government has created a tightly focused set of policies and plans related to transforming the island from a material economy to a knowledge economy. Its policies seek to turn the island into a knowledge hub for the region by embracing technology, innovation, research, collaboration and connectivity. While these policies do not deal directly with scholarly communication, they rely on a traditional understanding of what that communication would entail.

At UoM, scholarly communication fits in with the broader national objectives surrounding research production, but it does not establish how the traditional scholarly communication model either helps or hinders university research in achieving these objectives. It takes for granted that these objectives can be achieved through either a conventional scholar-to-scholar communication model that is largely mediated by high-impact international journals or a consultancy contract model where the university's research is bound up in the intellectual property regimes of industrial partners. In both cases, this impacts the ability of the university's research to gain visibility, to enhance development and to reach a broader audience that might be able to utilise it for social or developmental purposes. Thus, while UoM's policies are in alignment with the government's, it is not clear that those shared policies – which rely on closed, not open, dissemination strategies – are the best ones for meeting their own stated objectives of ushering the country into a knowledge economy.

Lastly, in Namibia, research policies are highly self-reflective, focused on meeting the immediate, local socio-economic challenges facing Namibians. This approach hopes to harness the potential of national research for the sake of making a direct impact on the lives of the country's residents. The policies discussed above lay out the broad parameters of the government's developmental desires, but it is only now starting to establish the research infrastructure necessary to leverage its desires through a national research commission (NCRST) and fund. However, this process has raised many questions, as civil society organisations warn that the Research, Science and Technology Act may end up controlling rather than promoting research outcomes.

At UNAM, research and communication policies have largely followed the government's guidelines, though the university has also creatively translated them for its own academic purposes and increasingly referenced global trends in research and scholarly communication. This was made most clear in the recent ratification of a Scholarly Communications Policy that is based on OA principles. Thus, UNAM's policies are aligned with the government's, but they also go beyond them in important ways, a fact which may grow more important over time if the government's research policies end up controlling, rather than inspiring, greater research production and dissemination.