Supporting Research:

Environments, Administration and Libraries

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This report presents work done on behalf of the RLG Partnership when John MacColl was its European Director. At the time of publication John had left OCLC Research to become the University Librarian and Director of Library Services at the University of St Andrews.

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Introduction

Our two organisations, OCLC Research and the UK's Research Information Network (RIN), last year undertook a pair of parallel studies in the US and the UK on the theme of research support services in universities (Kroll and Forsman 2010; CIBER 2010). In the US, we commissioned the library and scholarly information consultancy Kroll Research Associates, and in the UK we awarded the study to the Centre for Information Behaviour and the Evaluation of Research (CIBER) at University College London. Working jointly with our two organisations, each team chose four research-intensive universities in which to trawl for data on research support services, by means of interviews and focus group sessions with researchers, research administrators, and librarians. The following table profiles the eight universities sampled.

Universities Sampled

University	Type	Mission Group / Classification	Enrolment
US			
Cornell University	Private	Very High Research Intensive	13,931
Ohio State University	Public	Very High Research Intensive	41,348
Vanderbilt University	Private	Very High Research Intensive	6,794
University of Washington	Public	Very High Research Intensive	29,574
UK			
University of Leicester	Public	1994 Group	22,000
University College London	Public	Russell Group	21,620
University of Warwick	Public	Russell Group	21,598
University of York	Public	1994 Group	13,270

The findings of both studies showed a relatively high degree of convergence on one fairly simple fact: institutionally-provided research support services are not appreciated by researchers in universities, who consider them marginal at best and burdensome at worst. Researchers are often resistant to services which they feel belong more naturally to their disciplines rather than their institutions—especially where these duplicate existing disciplinary

services. They begrudge any time spent on activity which seems to them to serve an administrative need, seeing their job as to perform research, not administration. And the bad—if not unexpected—news for libraries is that institutional repositories fall squarely into the latter category, as far as researchers are concerned, since they lack any essential motivation to deposit their research outputs in them. The fact that this results in a disorganised mess of uncategorised and unsecured research outputs worries librarians, but is not a major concern for researchers. A few quotations from both reports will suffice as illustration, but there are many from which to choose:

> They do not seek, nor do they want, non-specialist advice from the Research Office or any other internal agency remote from the colleagues they work with. (CIBER 2010, 10)

> The majority of researchers interviewed for this study use online tools and commercial services related to their discipline rather than tools provided by their university. (Kroll and Forsman 2010, 5)

> Discussions with researchers revealed little enthusiasm or awareness of the benefits claimed for institutional repositories. Rather, they tend to be perceived as another burden creating additional work, even in areas where there are well-established and effective subject-based repositories. (CIBER 2010, 15)

> Many researchers flounder in a disorganised and rising accumulation of useful findings that may be lost or unavailable when conducting future research. (Kroll and Forsman 2010, 5)

Researcher Environments

The Research Information Management (RIM) programme of work within OCLC Research has sought to consider the library's role in supplying services in a model which puts the researcher at the centre (OCLC Research 2011). When we do this, we see several environments which bear upon the scholarly life and professional progress of researchers. These environments include principally their own disciplinary domain, their institution, and the research funding and assessment environments surrounding researchers, affecting and directing their work. We might represent this model as shown in Figure 1.
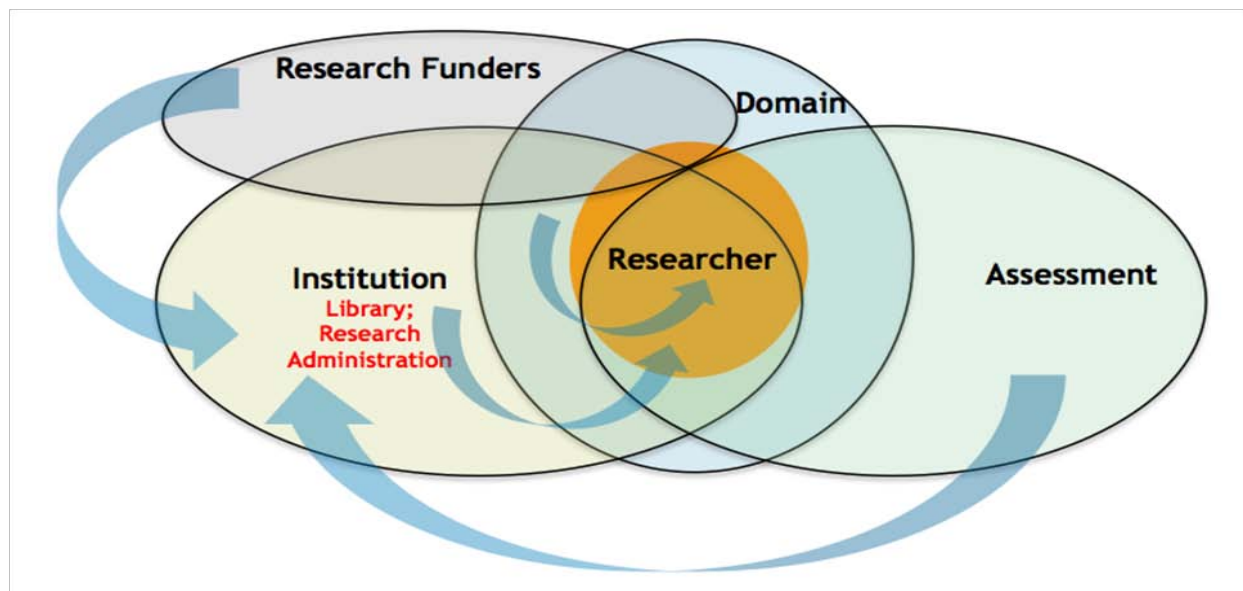
Figure 1. Research environments and impact dynamics

The arrows in this diagram represent the forces that currently have strong impact in the scholarly life of researchers. The disciplinary domain acts upon the researcher directly; the assessment and funding environments act upon the institution; and the institution then reacts by acting upon the researcher with requests and requirements—via the research administration and the library.

New Territory for Libraries

Reading the two reports, it is hard to avoid the conclusion that libraries in recent years have been struggling to make a positive impact on the scholarly work of researchers, but having relatively little effect. There is a growing understanding in the library community that it possesses a new set of stewardship responsibilities towards the materials that are generated on campus—particularly those of researchers and academic staff. Channels and forms of publication have become more diverse, and many materials are published on the Web either instead of, or as well as, in their more traditional form as processed by publishers, or in the various forms previously recognised as 'grey literature'. The infrastructure that libraries have built in recent years for the materials which are not catered for by publishers—a set of new databases for full-text open access materials, or for its entire published record, or to store CV information on all researchers—has been poorly adopted and not considered important. Yet libraries have felt pressure to respond to what is sometimes described as the 'inside out' function, as opposed to their traditional responsibility of managing the 'outside in' (see, for example, Dempsey 2010). While researchers would not argue against the contention that libraries' historical role as managers of bibliographic data equips them to take on the role of service providers in respect of the 'inside out', they do not accord that function the sort of

priority which libraries had hoped. This has taken place within a context where university managements have been keen to develop more integrated systems to monitor and manage the research outputs and performance of their researchers. In both instances, it has been difficult to secure researchers' engagement in these enterprises.

What the studies reveal is that this new area of mission for libraries seems at best orthogonal, and at worst irrelevant, to the support needs of researchers. Academic staff and researchers are time-poor. They want to concentrate on their research with the minimum disruption. They will comply to a limited degree with what they perceive to be bureaucratic intervention in their working lives, because they realise that some of it is necessary. This is true, for example, of the need to provide data for the UK's Research Assessment Exercise (RAE, soon to be called Research Excellence Framework (REF)). It may be becoming true, too, in the case of mandates which are likely to be more firmly enforced over time, such as the Wellcome Trust mandate (2011) to deposit research outputs in the UK PubMed Central repository, where failure to do so may lead to blacklisting for future grant purposes.

But research libraries hold a weak hand when they seek to populate their institutional repositories with the help of researchers as depositors or metadata creators. Their arguments about open access and its role in fighting journal price rises are too abstruse or irrelevant for many researchers. Arguments based upon archival responsibility may be more powerful, but academics see no reason why that is suddenly their problem, when it never has been before.

Research Administration Services

There are two quite significant environmental differences between research universities in the US and in the UK, which need to be understood in any attempt to make comparisons across these two studies. The first is the prominence of the assessment environment in the UK, represented by the domination of the RAE/REF in researcher, librarian and research administrator consciousness. (See these OCLC Research reports on library roles in research assessment for an international overview of this area: Key Perspectives Ltd. 2009; and MacColl 2010.) The second is the clearer division of responsibilities between research librarians and research administrators in the US.

> The UK higher education sector is typified by a lack of professional training, qualifications, and clear career progression within Research Management. This results in difficulties in recruiting candidates of the requisite calibre and retaining and developing existing staff. This is in stark contrast to Research Management in the United States, where university administrators involved in supporting research are considered members of a professional community that provides accredited training and nationally recognised qualifications. (Green and Langley 2009)

This distinction matters little to researchers, who are not interested in which administrative unit provides which service, but it does perhaps explain why the UK situation is more characterised by service offers which are based in more radical reorganisations of responsibility. Research administrators in both countries are the staff responsible for ensuring that university-held data on academic staff are associated with other research profile data, such as grants, postgraduate student numbers, etc. An emerging requirement is for these data streams to be joined up with bibliographic metadata, representing the publications list of a university, perhaps over a defined period (as required by census-type assessment activities, such as the UK RAE/REF). But in general, because the university library service is more likely to be strongly centralised than the research administration, it will have an ability to allocate responsibility for its involvement—usually to repository managers or senior cataloguers. The research administration in a typical UK research university will generally have a smaller centralised operation. It will often be fragmented, with much of the effort being scaled to particular departments, colleges or faculties, and so inherently discipline-oriented. This is in many ways a good thing, but without a centralised structure to coordinate these efforts it can be very difficult for research administration to enforce policy—a point made by Rosemary Deem:

> Research administrators often do not have access to academic power in either of its forms and may have to rely on this power coming from their academic colleagues in research leadership roles. (2010, 41)

This is clearly seen in the UK when the approach of a new RAE/REF deadline requires an ad-hoc centralised structure to be assembled for the purpose of meeting the requirement.

Deem lists the four key areas in which research administrators work:

> Those aspects that are visible tend to fall into four categories—direct help with or intelligence related to bidding for research funds and work on funding contracts after receipt; work on research strategies and policy; work on collecting and collating data on academics' research activity; and work on assisting knowledge exchange and transfer. (2010, 41)

Our reports show that these services, which can be easily categorised into 'pre-research' and 'post-research' services, are those which academics most readily identify as 'research support services' and are not normally associated with the library. The UK report in particular suggests that research offices have been reasonably successful in meeting at least some of the 'before' and 'after' needs of researchers, while libraries have been much less successful; and that libraries have been unable in particular to colonise any territory in the core phase when researchers are actually doing research (CIBER 2010). Services more traditionally offered by libraries, such as information skills training or copyright awareness are generally not highly

regarded. More recent 'virtual research environment' tools ought to provide research support services 'in the middle' of the research lifecycle, but they struggle to gain take-up:

> A number of products are being developed to support research workflows, particularly for researchers working in collaborative teams that cross institutional boundaries. These include Microsoft's Sharepoint, GoogleWave, and the open source Sakai systems, as well as the tools produced by JISC's VRE programme. Although some researchers are making use of services such as GoogleDocs and Dropbox, there is little evidence of the use of these broader collaborative workflow products and services in the four universities, and the researchers interviewed were unaware of them. (CIBER 2010, 13)

Deem's article (2010, 41) argues for better cooperation between research administrators and what she calls 'academic research leaders'. Notably, she does not consider collaboration with library colleagues. Nevertheless, many UK librarians are becoming familiar with their research administrators in the context of the RAE/REF, since they need to supply interoperating systems. There is perhaps a degree of 'turf' at stake here. Some libraries have staked a strong claim in the research administration space, and won champions for themselves with academic research leaders. UK libraries using the ePrints software to manage their institutional repository have seen that system develop into something approaching a full-blown research administration system, with the bibliographic database at its core. Libraries that have taken a strong role in research administration can make use of much of this functionality. More commonly, however, the library's role has remained confined to the 'work on collecting and collating data on academics' research activity'.
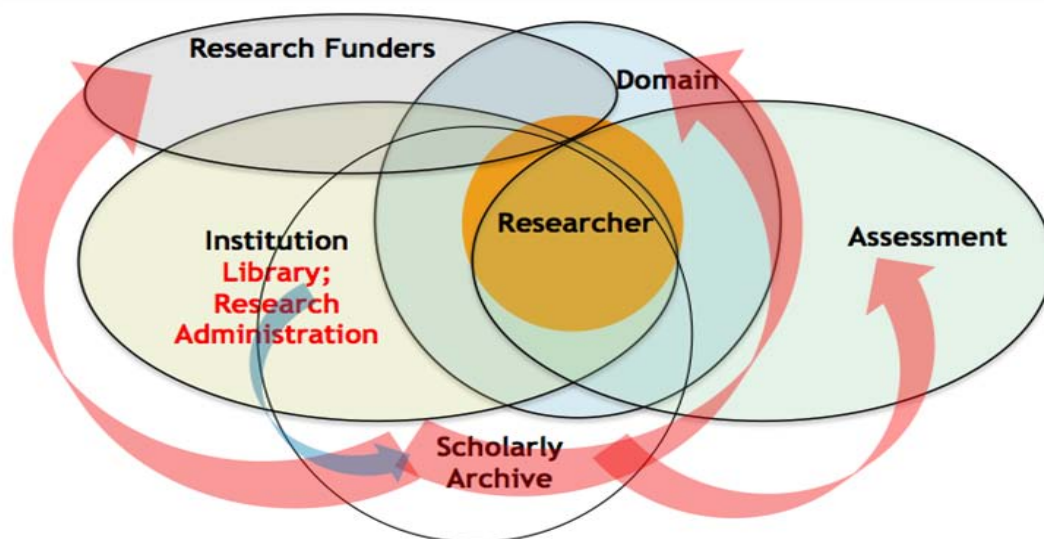
The 'Scholarly Archive'

The research library community is groping its way towards the realisation of a scholarly archive for the digital age, but there appears to be some distance to go here. Its print elements are already in place and are familiar, but the elements of the archive that represent enduring scholarship in digital form are lacking both in legal force and in general acceptance. In place of these we see a welter of experiments and projects both at institutional and national levels, with a few services emerging with traction and the potential to play important, international, roles in this new environment. Although researchers don't offer ideas on how to establish and implement such an archive, it is clear from some of those interviewed that it is something they want to exist:

> One economist summed it up this way: '[I am] very concerned with public data management and ways for the University to acknowledge data collection in the promotion and tenure process. I am very concerned about the "intellectual lineage" of data and citation connections'. (Kroll and Forsman 2009, 21)

Defining, establishing and implementing this archive is a task for cooperatives, national agencies, national libraries, publishers, disciplinary hub services and international collaborations. Partnership organisations like SPARC and the OCLC Research Library Partnership [formerly known as the RLG Partnership], together with services like Portico and Hathi, open access publishers and disciplinary archives like arXiv and PubMed Central, all need to be involved, if a shared view of a scholarly archive and how it should be established and run by various players is to be reached. Ideally, we want to see the current researcher environment develop into one in which the scholarly archive emerges, with its own impact dynamics.

Figure 2. Potential research environments model, showing impact dynamics for a Scholarly Archive environment

A strong scholarly archive environment will influence assessment requirements, research funders and domains themselves. The domain requirement for good archival behaviour will directly affect the researcher, just as the mandates from the bodies handing out grant monies and funding (and ranking) institutions via assessment exercises will do so indirectly, via institutions. In this model, while the library still works with the research administration unit in making requirements of researchers, it also influences the development of the scholarly archive. This wider, research sector view is one that urgently requires the attention of institutional library directors, together with the agencies and collaborative services described above.

Researchers have little interest in the support services libraries have built for them in recent years, yet they are aware of support needs that are not being met. These vary from discipline to discipline, and some of them point to a need for the existence of an archive:

> One astronomer sees a need for 'people double-trained as scientists and IT workers to manage data smarter'. The African Studies art curator wants 'a digital media center so [materials] are organised and searchable'. In the life sciences, one participant 'would be interested in tools that can scan lab notebooks and assign metadata for retrieval'. A mechanical engineer says she would like a service 'where someone put up her research data and allowed others to add information like a wiki'. An economist describes his need in detail: 'I make working papers which are under review publicly available. When they're accepted I take down the links and then release the published links. This process is very tedious and [I] would love a tool that migrates the paper according to its status'. (Kroll and Forsman 2010, 22)

The diversity of the needs summarised in the quotes here illustrate one of the dilemmas for libraries: how do they meet all the subject domain-specific needs of researchers without employing large numbers of librarians with domain expertise?

These two reports bear witness to an awkward transition, as universities adjust to a requirement to manage their outputs from the 'inside out'. Libraries within institutions are not strong enough to dictate which of these outputs—from the vast stream being produced on every campus—should be stored, preserved and linked in to the scholarly archive. Arguably, library staff at these institutions don't know how to manage these outputs. So the services 'in the middle', which librarians would see themselves as providing, cannot exist in any authoritative way. But we cannot abandon the attempt to reach that shared understanding. We need to define what a scholarly archive is in an open, webscale world of non-profit and commercial players. Once it exists in a mutually reinforced way by the various communities that provide research support services, the mandates that will sustain it—enforced by funding agencies—can follow effectively.

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