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How academic librarians, IT staff and research administrators perceive and relate to research

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Abstract

Academic libraries are changing how they support research. For example, their involvement in Research Data Management (RDM) implies a much deeper relationship with researchers throughout the research lifecycle. Perhaps we are witnessing a shift from support to partnership. The study reported here examined how librarians, IT staff and research administrators see research and their own relation to it. Within an interpretative methodology, twenty semi-structured interviews with librarians, IT staff and research administrators were analysed thematically. Librarians often talked about research via the discourse of research-led teaching. They also conceived of it via notions of collection and to a lesser extent through reference work or copyright expertise. They saw some of their own continuing professional development or service development work as akin to the work of university researchers, but at the other end of a spectrum. Some saw a categorical difference and considered that research was only conducted by people who had a job title of researcher. IT managers tended to see research via infrastructure or specialist expertise. But at least one IT staff member saw himself as both partly a researcher and a bridge between research and support. Research administrators tended to see research through the roles of administrative support and policy influence. In summary, seven broad narratives about research were identified, namely: influencing researchers to align with policy; being a researcher; being a bridge with research; offering expertise; providing infrastructure; supporting a research/teaching nexus; relieving researchers of administrative burdens. As institutions develop research partnerships, e.g. around RDM, training and curricula will need to expand existing conceptions and build deeper empathetic relationships with research.

1. Introduction

Research Data Management (RDM) is one of a number of agendas that are leading to a re-evaluation of how academic libraries support research. After a period when the demands on libraries to support learning and teaching (particularly through information literacy) intensified, there seems now to be a rebalancing with a greater focus on building services around research, particularly tied to open access (Corrall, 2014). Involvement in RDM also draws libraries into a deeper engagement with researchers across the whole lifecycle of research, from conception, data collection and storage to long term data preservation (Cox et al., 2012; Lyon 2012). Given the centrality of research to universities (Scott, 2009) the imperative to support research is not surprising. From primarily providing access to a collection of sources and helping and training people to use it, there may indeed be a move towards becoming partners in research (Corrall, 2014; O'Brien and Richardson, 2015).

Yet what constitutes research is fuzzy and contested (Fanghanel, 2012). We do know quite a lot about how researchers themselves view this complex concept. One seminal perspective is summarised by Becher and Trowler's (2001) notion of academic tribes. This emphasises the different conceptions of research that exist across disciplines, even sub-disciplines. Such an understanding is reflected in the RDM literature in the strong sense of diversity in existing data practices and attitudes to data sharing (Borgman, 2015). Another strand of scholarship investigates the experience

of research, using phenomenographic methods and identifies a range of typical ways researchers conceptualise it (Brew, 2001; Akerlind, 2008).

2. Problem statement

What is less explored is how librarians view research, in order to understand how this aligns with new roles in supporting it. Are they equipped to make an imaginative connection and empathise with researchers? In addition, it is widely accepted that support of research – at least in the RDM area - by necessity will require the library to work very closely with a number of other professional service departments, such as IT and research administration. The views of research current in these groups become salient. Given the need to align understanding of research between support staff and researchers, the purpose of the study described in this paper was to explore how professional services staff thought about research and their own relation to it. More specifically it addressed the following two questions:

1. What was their perception of their relation to and existing interactions with research?
2. How did they conceptualise research?

3. Background

Historically the library's relation to research has been understood through the lens of the library's principal roles of collection management, reference work and library instruction (Jaguszewski and Williams, 2013). Research has often been equated simply with information seeking (Falciani-White, 2016). Yet core library roles and their relation to research seem to be undergoing more or less fundamental reconstruction. Commentators are increasingly identifying that academic libraries are moving from being support services to becoming a "professional/scholarly partner" (Corrall, 2014: 19). Such a role implies active and creative engagement in the research process (Monroe-Gulick et al., 2013). A number of studies have suggested that the importance of the book collection has declined and researchers are now less directly engaged with the library (Corrall and Lester, 2013). Partly in response to a perceived decline in researchers use of libraries they are "moving into areas such as funding opportunities and grant writing, ethics review, data curation and repository management, poster design and conference hosting, journal and monograph publishing, bibliometric evaluation and impact assessment" (Corrall, 2014:18) The increasingly multi-disciplinary and collaborative nature of research aligns with the library also participating as a partner (Hoffman, 2016). As an example, evidence from recent surveys suggests that academic libraries are taking on or planning a range of roles in RDM (Cox and Pinfield, 2014; Corrall et al., 2013; Tenopir et al., 2012; Tenopir et al., 2014). Roles have been identified in the areas of: policy; advice and signposting; training; auditing of research assets; creating institutional data repositories (Corrall, 2012; Cox et al., 2012; Lyon, 2012; Alvaro et al., 2011; Lewis, 2010; Gabridge, 2009; Flores et al., 2015). This work could be spread across a number of library teams, e.g. the liaison team, metadata specialists, special collections, and systems. Activities such as helping with Data Management Plans, building data catalogues and running data repositories are particularly significant changes in terms of repositioning the library more deeply in the research process. Incorporating data to the library collection is a major part of a shift from "outside in" to "inside out" collections (Dempsey, Malpas and Lavoie, 2014).

Corrall (2014) acknowledges that some authors have queried whether librarians have the skills to fulfil such roles. In order to understand how librarians and professional services staff can support research and RDM in particular we need to understand how they conceive of research and how this aligns with researchers' own views. There have been few studies of professional services staff views on research. In contrast, we know more about how researchers conceive the research they do.

The importance to universities of research grew gradually through the nineteenth and twentieth centuries (Brew and Lucas, 2009). In the present century, research has been reshaped, like all academic practices, by globalisation, neo-liberalism and new public management (Scott, 2009). The contribution from research to the economy has both led to increasing state funding but also to an environment of increasing evaluation and performance measurement. Thus for many commentators how research is done is increasingly shaped by "performativity", the measurement of performance often against quantitative standards (Thornton, 2009). Research is undertaken in heavily proscribed ways (Fanghanel, 2012). Equally, what is research is itself contested; there are an increasing number of modes of research, partly created by the pressure for "application, interdisciplinarity and usefulness" (Fanghanel, 2012: 87). For many HEIs a discourse of "research-led teaching" helps tie their "excellence" in research to teaching quality and so student recruitment. Yet, generally, research carries more symbolic capital than teaching (Fanghanel, 2012).

Becher and Trowler's (2001) notion that disciplines are global "tribes" has been very influential in our understanding of research. The concept draws attention to the way that scholars operate in social worlds, sharing a sense of identity and personal commitment to the field, a common sense of what is a "contribution," and developing institutions such as journals and conferences that act as formal communication channels as well as an "invisible college" of informal networks. The logic of such a viewpoint is that what constitutes research is defined within disciplines. Much of the literature on RDM, for example, reflects the variation of definitions of data and practices of sharing across disciplines (Borgman, 2015). Yet disciplines have a complex nature, most combine "soft" and "hard" elements. It is increasingly understood that "research tracks and specialties grow, split, join, adapt and die" (Klein, 1996: 55). At the same time, various flavours of interdisciplinarity and multidisciplinarity (Huutoniemi et al. 2010) are increasingly emerging, suggesting a much less monolithic picture than implied by a focus on discipline. Funders seek to support research that addresses key social problems, and by definition this implies large scale projects and inter-disciplinary and collaborative working.

A number of authors, but in particular Angela Brew (see also Åkerlind, 2008) has brought out a somewhat different emphasis in understanding the nature of research through exploring it as an experience. Brew (2001) found that differences in how research was seen did not relate to discipline. Rather, she identified four broad conceptions of research among the 57 experienced researchers she interviewed.

1. The domino conception, in which research is seen as an ordered process in which different atomistic elements are synthesised.
2. The layer conception that sees research as more of a process of uncovering layers to reach underlying meanings.
3. The trading conception that sees research as about operating in a kind of "social market place" and has a focus on products such as projects and publications.

4. The journey conception that sees research very much as a personal, potentially transformational journey for the researcher.

Brew does not report the relative prevalence of these conceptions. She does ask whether certain research agendas are being driven by particular conceptions of research. Indeed, one can certainly see an alignment between the domino conception and the stress in the digital curation agenda on the data lifecycle. Equally, since the trading conception of research focuses on things like projects and citation patterns, it aligns with the case to share data as a valid research output. The transformational journey conception of research seems much more aligned with a sense of the creation of data as a researcher's life project, creating resistance to data sharing.

Similar research has not been carried out for professional services staff, certainly not for librarians or IT staff. Yet if they are seeking to establish research partnerships the character and alignment of conceptualisations of research will be increasingly important. Where there have been some studies is into the professional identity of research administrators and managers, mostly in relation to the academics they support. Such studies have happened because 1) research administration involves liaising closely with academics about research, more so than is the case for the other support services, and 2) the function of research administration originally belonged (and to a large extent still belongs) to the standard task set of academic staff. Macfarlane (2011) discusses how "all-round" academic practice – consisting of teaching, research, and administration – is being unbundled and some specialist functions have become the domain of what he calls the "para-academic"; institutional research officers are amongst his examples. Institutional research offices thus operate on the "interface, between academic research and corporate management" (Green and Langely, 2009: 1.1.2), implying divided loyalties. Such a position of being administrative staff but very closely involved with academics' research can be the cause of tensions between academics and the research administrators and generate issues of identity and credibility. Collinson (2007; 2006: 274) found that research administrators perceive themselves to be in a no man's land with a "dual workplace identity, rather than a single one": sometimes they play the role of administrative support officer, sometimes they "participate as a full colleague in academic affairs." But there were a wide range of views of where the boundaries lie between the academic and the administrative. Many research administrators have undergone academic socialization and they feel that their work would be more difficult if they did not have sufficient academic capital both for functional reasons (being able to understand the research they are supporting) and more importantly for credibility.

4. Method

In order to explore these questions the study adopted an interpretivist methodology, since the purpose was to understand how social actors themselves saw research. Data was collected through semi-structured interviews with professional services staff in one Higher Education Institution (HEI) in England. This institution is a research intensive university with separate departments for library and IT services (not a converged service) and with a centralized research office, henceforth referred to as Library, IT Services, and Research Office. Cox and Pinfield (2014) found that most HEIs in the UK are still in the early stages with regards to planning and implementing an RDM support service and that libraries are usually taking on a leadership role. In that light, the HEI in this study could be seen as having many typical features. At the time the interviews were conducted (February-April 2013) the institution was only just starting to set up Research Data Services, such as a support web site,

and it did not have a data repository. Nevertheless, the library had already played an important leadership role, for example in the creation of an institutional RDM policy. Choosing participants from one institution allowed comparison to be made of views within a broadly similar institutional context, so effectively controlling for such variations. Yet the approach does limit the study, since the range and strength of the discourses found cannot be assumed to apply in other institutions. Further research will be required to explore the transferability of the findings to other institutions.

A series of twenty semi-structured, one-to-one interviews lasting between 45 and 90 minutes each were conducted. The researchers applied for and received approval from their home university (University of Sheffield) to conduct the research. In line with their institution's policy, participation was on the basis of voluntary informed consent. The purpose of the interviews was to gather insight into participants' notions of research, how they related to it in their current role and whether they in any sense saw themselves as researchers. The approach to sampling interviewees was purposive, seeking to represent a good spread of job roles. It may be that views on RDM not only differ between the professions and specific roles within these professions, but also depend on seniority in the institution. For each of the services, therefore, both managers and non-managers were interviewed; the sample was also deliberately chosen to explore different relevant units within each department. Interviews included managers, subject liaison librarians, metadata specialists and systems librarians in the Library (eleven interviews); those involved in infrastructure (hardware) and applications (software), information security and records management in IT Services (five interviews); and both income capture officers and those involved in research governance in the Research Office (four interviews). The interviews were recorded, transcribed and then analysed using thematic analysis (Braun and Clarke, 2008). After immersion in the data through re-reading, initial ideas for codes related to the research questions were generated. As the data was coded, codes were refined. Themes were then developed, and then reviewed in relation to coded quotes. A written account of the data was produced by organising these themes. The data set contained over 170,000 words. After conducting a reading of the data grounded in the material itself, the findings were reconsidered in relation to Brew's suggestions about how researchers conceptualise research.

5 Findings

5.1 The librarians' conceptions of research

The commonest reference point among librarian interviewees was to see research through the institutional commitment to "research-led teaching". Nearly all library staff interviewees explicitly mentioned this concept, but none from IT Services or the Research Office did.

> "If you are having a conversation with a lecturer, you can't say: "oh, we are only going to talk about your teaching", or: "we are only going to talk about your research", because it's a bit farcical, really, isn't it?"

The interviewees' stress on research-led teaching as a way of explaining their relation to research, reflects the importance of teaching in library practice (information literacy). Several interviewees from the other professional services departments also made comments that reflected an assumption that librarians' interest was in teaching (and implicitly querying their role in research).

Indeed, it emerged from the interviews that librarians' networks are primarily based around teaching:

> "But it's usually through learning and teaching that I get the contacts. And people who are purely research staff, I don't tend to meet them in the normal way of things."

A second discourse was to see researchers as stakeholders in the Library's collections. This narrative implied a weak sense of the importance of research, since it identified researchers as just one stakeholder among many others:

> "So we provide the metadata for that, we are providing resources, so I would say that we do support research. Yes, in that sense. In the fact [that] we are making things findable for researchers."

Such a relationship to research is rather abstract, as is suggested by the interviewee's tentative reaching for words. This interviewee was not identifying particular ways in which metadata was created in order to help researchers, but simply realising that in general creating metadata makes material findable, including for researchers. Another interviewee had an even more abstract sense that research (and research data) were part of general information management practices led by the library.

> "We look after stuff, we look after academic stuff. […] it could be a printed notebook or it could be a really complex experimental output, it could be raw data, it could be publications, all sorts of stuff. We are in the business of looking after whatever this institution puts out into the world, and not just in the business of buying stuff in from elsewhere."

The quote gives an abstract sense of providing an infrastructure within which research occurred, and where research data and outputs, alongside bought-in content, are all "stuff" that needs to be managed.

Yet such an abstract way of looking at support to research as part of a larger infrastructure could also be more concrete, where the interviewee was very active in developing the collection as a resource specifically for researchers:

> "I think the main thing that they think I have to offer is purchasing resources, to be honest [...] because History and the rest of the [Humanities and Arts] faculty to a certain extent see the library as their laboratory and that this stuff is crucial for them to do their research."

Offering a new support service to pay for Gold Open access was also creating a more direct relationship.

> "it's not a kind of "we provide it, you look at it", it is much more interactive than that and it's a different emphasis really, it is about trying to get researchers to be responsible for their own outputs."

The service was based on specialist understanding of the publication process.

> "So [...] it is a supporting role, and it's an educational and information awareness type role I think. Plus trying to put into place the most streamlined systems you can to make it as easy as possible."

A third discourse was apparent from one respondent who drew on yet another view of librarianship as being about reference work:

> "The reason that I chose a career in the library profession was primarily because I loved finding things out, and I loved working with people and dealing with people."

She returned to this when asked to define research:

> "…to go back to my very simplistic early statement: it's finding out, it's investigating things, isn't it? Trying to answer questions that maybe nobody has asked before. Or trying to find new answers to questions. I mean it's interesting when you talk to students about research because at its most basic level research could actually be finding things in the library. […] But then of course it can go right through the spectrum of interviewing people, doing experiments, collecting data."

This was an unusual viewpoint in that it has a strong sense of research being core to librarianship as a personal experience. It links to the practices in librarianship of the reference interview.

Another interviewee developed a fourth narrative about research. She had helped with running an open access journal and was thus involved in the publication aspect of research and she was also regularly consulted for her expertise about copyright. These were other important ways of being connected into research.

A library manager interviewee had a conception of research which, unlike others, emphasised current "political" agendas around research, such as competition between institutions and research impact, discourses largely missing from what others said:

> "We are described as a research-led institution so […] I see researchers informing the teaching at the university. And I also think it's very key, because at the moment, especially with funding and so on, we want to be up there, one of the top universities, and we have to be showing what research, what value the university is contributing generally. And so we need to make sure we are doing valid, valuable research that will improve people's lives and so on. And also we are competing with other institutions."

This is less a professional viewpoint than an institutional, managerial viewpoint, where "we" is the university rather than the library.

Most of the personal experience of research that the interviewees identified as relevant, was not through dissertation work in studying, but research for their practice and for continuing professional development (CPD). Such experiences were often seen as somewhat relevant to talking about research and were placed on a spectrum with academic research, but generally at the opposite end of it:

> "Quite often when we are trying to address issues or resolve problems within the library, one of the first steps is […] to […] think: "Well, who else has tackled this? Has anybody

> written about it? What approaches did they take?" So you will do a little bit of a literature search on that area. And […] I quite often use discussion forums to ask colleagues what they think about certain things and gather information and data like that, to help inform what is going on here."

So participants recognised that at some level CPD or research into service development could constitute a type of research. But it fell short of being counted as research for a number of reasons, particularly because it was not about finding out something new to the world. It was just something new to the person doing the investigation:

> "And maybe I do a bit of research, but it doesn't feel important enough to call it research. Doesn't contribute. There is no originality or anything. It's just me finding out information, and that's what I do."

One interviewee also mentioned pedagogic research, projects working with academic staff on teaching innovations.

Pedagogic research or research for service development was not taken very seriously compared to academics' research. Indeed, a number of interviewees hinted at or directly identified a categorical difference between what they might do and what academics do. Here research is only what people who are called "researchers" do on funded projects.

> "I think to be taken seriously as a researcher by academics, they are not interested unless you are doing proper funded research and you are an academic. "

> "I think most people, myself included, would imagine that most of the research is done by academics or research assistants, PhD people. And that most of that is supported by grants from outside external funders."

Both interviewees see that the difference lies not just in what is done, but in who does it and whether or not it has funding.

5.2 IT Services staff views

The interviews with managers from IT Services suggested a lack of a strong focus on support of research as such, which was a little surprising given the centrality of research to the identity of the institution. Within IT Services, it was acknowledged that support specifically for research had declined relative to support for teaching and business processes. Researchers' needs were seen as met by the general infrastructure and services.

Indeed, interviewees reported that there was not much direct contact with researchers as such. Contributing to this was a sense that research did not speak with a coherent voice in most faculties, each department having a different viewpoint. The project-funded nature of research made it complicated to fund IT research support. A sense of disconnection was reinforced by there being specialist front facing teams in IT Services, while staff working on core infrastructure services had no direct contacts with users. RDM was mostly seen through the lens of storage of active data, and the concern was to discover how the cost of extra storage space could be recouped, particularly given that actively managed storage services had to be charged at a more expensive rate than simply purchasing disk space.

These interviewees did not see themselves as having experience of research; they saw themselves squarely as IT managers. This was ironic since they had often started their careers as academics. One manager who was asked to define research, said:

> "It's one of the major activities the university undertakes. It generates £X00 million a year income."

Rather than defining research through qualities such as a systematic approach to producing a new answer to a question, as most interviewees did, such an answer emphasises it, very pragmatically, primarily as a business process.

While the managers were quite removed from researchers as such, there were some areas of intensive engagement with research in High Performance Computing (HPC), where support was bespoke and specialist. The interviewee who worked in HPC area saw himself as part IT specialist and part researcher.

> "I see myself as a computational scientist. […] somebody who is using computers for scientific research. […] I see myself as being in the middle. […] So I have got to have an understanding of the science side and I have to have an understanding of the IT side."

In addition to this bridging or in-between role, he did also see himself as a researcher.

> "I do see myself as a researcher, yes. So I work with the department of [name] one day a week on a research problem. So I keep my hand in. And it's quite funny, because I really feel if something isn't quite working, I get the angst. So I really do appreciate what researchers go through."

Here the identification with research is claimed through the sharing of an emotional experience. None of the other interviewees talked about this sort of affective connection to research.

Interviews also included specialists in the areas of information security and archiving, which sat within IT Services. The archivist/records manager saw research through the lens of his professional specialism. Research data was simply one of a number of types of record produced by university activities.

> "But I certainly come to it from quite a specific point of view, which is in terms of managing and ordering stuff, and making sure you know what you've got and where it is, and how long you need to keep it for, and who has access to it. So those very kind of traditional views, I suppose."

The archivist/records manager labelled his view as traditional, perhaps in the sense of being founded on solid professional principles. In this sense his view that research data is like any other record, was akin to that of computing managers as well as to that of the library systems manager who thought of services as communication channels or storage facilities – infrastructures - that were made available to all university members regardless of their role, including researchers.

5.3 Research administrators' views

Whereas for IT Services and the Library, relations with research and researchers were not always seen as very strong or direct, naturally research administration revolved much more around researchers. There were two main ways of talking about the relation to research. There was a service or "administration" discourse about relieving academics of administrative burdens around research proposals. Here there was a sense of academics under pressure. A second discourse around "strategy" and "culture change" was more about being agents of change in research.

> I am a research administrator in the sense that I help do quite a lot of the administration in terms of preparing the proposals. […] I suppose it's a bit more strategic than just a set administrator, because I do a lot of networking. I go out and do a lot of interfacing with the academics and really focus on pulling the academics together across faculties and work on initiatives where we think the government are going to fund. […]You know, we help quite a lot with impact, we try to build up relationships with the external funders so that we understand more about what they want from us. […] Because [academics] are so focussed on their own research areas they don't necessarily think outside the box […] and it just opens up their horizons.

The administration discourse implies a supporting role with an implication of taking on bureaucracy as a burden. The strategy discourse, in contrast, relates to promoting collaboration, interdisciplinarity, impact or ambition, i.e. the key agendas of the funding bodies (and so the institution itself). It was this part of the role, closely linked to compliance, that inspired interviewees.

Whereas the former interviewee constructed the role as wholly beneficial, another, in a more managerial position, talked more of the challenges in communicating these agendas:

> One of the challenges we have is "initiatives". So in between a push from […] the Research Council or the Quality Assurance Agency or whoever, saying, "We expect the University to do XYZ", and then knowing how academics are burdened, how are we going to introduce these initiatives in a way that actually reaches the troops on the ground? […] It's the way you communicate it, who does the communicating, the language you use, how you make it feel like it's just going to become ingrained as part of normal business, rather than an added "Why on earth are we doing all this?"

So here there is a communication challenge, about reaching everyone and ensuring an "initiative" becomes part of daily practices, with the multiplicity of cultures in faculties and departments being an obstacle. A later comment from this interviewee suggests a deeper sense of the barriers. He is struck by an image articulated by a researcher that reinforces the sense of academics being "burdened" not merely by administrative tasks, but by multiple surveillance and different levels of commitment, themes which are strong in some of the wider literature on research (Fanghanel, 2012).

> One used the analogy: "imagine you're in a prison", so the academic's in the centre, and there's like a prison wall, and there's all these different cells around, so the cells are the different professional services and academic departments, and they only see a bit of that academic, ok? So Student Services only think "Their teaching's got to be top quality when they're teaching undergrads", we say "Get more grants in", the head of department is saying

> "Oh, could you do this?" you know, so he mentioned this, and he also mentioned the fact that some academics feel that they're taking on the weight of the department.

In contrast to the previous speaker's account, where the research administrator operates to relieve the academic of a burden and expand their vision, this interviewee acknowledged that they themselves are agents of surveillance and pressure, through their strategic role.

6. Discussion

What is striking from this study is the variety of views of research within the different professional services as well as between services. Research is a complex idea. Concepts of research were often strongly linked to specific aspects of service or areas of expertise. Yet there was not a strong sense of deep practices of engagement with researchers on a daily basis, except amongst research administrators and one of the IT staff who was involved in HPC. Managers had more awareness of wider agendas, line staff tended to see research through their immediate role.

One could summarise the interviews by identifying a range of distinct orientations to research. Ranked in terms of descending power and status one could list them as follows:

1. Influencing researchers to align to institutional and funder priorities;
2. Being a researcher;
3. Being embedded in research or being a bridge with research;
4. Offering expert advice (e.g. on copyright);
5. Providing infrastructure (storage or library collection, IT or archival services);
6. Supporting a research/teaching nexus;
7. Relieving researchers of administrative burdens.

This framework constitutes an analytic tool to clarify perspectives on the nature of research among professional staff. The ordering is based on the assumption that the degree of expertise required implies higher status. This could be seen as misleading because although mundane the administrative tasks of research administrators are high status because they relate to an activity of central symbolic significance to the instituion, funded research. Library and IT roles are generally more independent professional services, to whom research is just one form of client.For librarians an important part of their way of talking about research was the discourse around research-led teaching. Yet this seemed primarily to be a way to say that supporting teaching was equivalent to also supporting research. Secondly, librarians also saw support to research as happening through collection management and less often through the notion of reference work, or for particular areas of expertise, such as copyright, thus through well-established areas of library practice. Collection-related thinking was paralleled in the thinking of IT managers about providing generalised infrastructure to multiple stakeholders, including researchers. This suggests an area of common ground around an *infrastructure* conception of supporting research. A service is being provided to many groups, of whom researchers are an important if perhaps not very clearly distinguished one. Yet the infrastructure can, at times, exist to promote high level policy agendas, as with open access. A third discourse from librarianship as about finding things out (inquiry work) placed a notion of research at the heart of librarianship, but only one interviewee espoused this viewpoint. A fourth was around specialist expert advice.

Librarians saw their own personal experiences of CPD and service development, and sometimes research on pedagogy as potentially a form of research. But these activities were very much seen as on the other end of the spectrum from university research. Sometimes participants talked about a categorical boundary: research is what people with the title of researcher do. While this demarcation mirrors researchers' own privileging of funded research, it is perhaps unhelpful in developing support services if this boundary is seen as so marked. One would expect the boundary to dissolve as embedded roles (Carlson and Kneale, 2011; Delaney and Bates, 2014; Wang and Fong, 2015) and third space type positions (Whitchurch, 2012) emerge.

Interestingly, the notion that research is very various across disciplines – the academic tribes paradigm - did not arise in discussions with librarians, nor did some of the conceptions of research identified by authors such as Brew (2001). A trading conception of research (focussing on publications as goods produced for a market place) emerged from some of the interviews. But although libraries as bureaucratic organisations have an emphasis on processes which might align well with the domino conception, this did not come to the fore in the interviews. Also, importantly, but less surprisingly, the appreciation of research as a personal transformative journey was lacking. This points to a significant imaginative gap between librarians and researchers. Finally, there was little sense in the interviews with librarians of the wider pressure for performativity, which is central to many accounts of research from the academic's point of view (Fanghanel, 2012; Thornton, 2009). All these differences reflect fundamental gaps between librarians' conceptions of research and that of researchers themselves.

IT managers saw research primarily via infrastructure. But there were specialist viewpoints, e.g. from a records management perspective, which had resonances with the library idea of collection management where researchers are one of many stakeholders. The one IT interviewee who saw himself as both a bridge to research and a researcher in his own right was supporting HPC, which necessitates a close collaboration with academics on a more content-focussed level.

Research administrators related to research through the two concepts of service and influence. This duality echoes the sense of a split identity identified by Collinson (2006), but the interviewees had a very strong sense of empowerment through playing the role of facilitating change in the direction of institutional and funder policy but also some concerns about the pressure being put on academics. Managers in the other two services sometimes echoed the discourses around influencing researchers in line with wider agendas. In terms of formal status and power research administrators' different narratives are the most extreme, combining both controlling and rather mundane relationships to research.

The paper makes a contribution by identifying a framework of seven themes which capture some of the range of fundamental ways professional services staff conceive of their current relation to research. The strongest common ground was between the Library and IT around providing infrastructure. But in most respects what is apparent is the lack of common ground between professional services, as well as the gap with researchers' own conceptions as they are reported in the literature. These gaps echo other work that has pointed to the way that RDM in particular is seen differently by different professional groups (Williamson, 2013; Verbaan and Cox, 2014). Such differences can be interpreted through the theories of Abbott (1988) in terms of competition for

jurisdiction between professions, based on differing knowledge bases. The existence of such differences is not surprising, but the paper gives a starting point for clarifying these differences.

More studies are needed on how support staff conceptualise research and how this conception evolves as Research Services emerge. If we were to conduct an extended study across other universities, institutional variations in how services are organised (e.g. converged/not converged services) and their state of progress in developing research-related services would produce different conceptions, perhaps very different conceptions of research. After all, increased exposure to research as Research Services are built up, will change views organically through daily practices and encounters. The literature on the experience of research by researchers (such as Brew and Åkerlind) seems to be a very rich source of inspiration for such further studies, and has not yet been drawn on in the scholarship around RDM. Such further research would look at how these differing perspectives shape collaborations between professional services in supporting RDM. As part of this research agenda, understanding more about how researchers themselves see the role of professional services in supporting research would be of great interest.

The findings have implications for practice. For example, as universities build Research Data Services (RDS), a recognised barrier is library staff skills and mindsets (Corrall et al. 2012; Cox and Pinfield, 2013). Building RDS will arguably require all staff to have some awareness of the issues, rather than a single expert or team of experts handling every aspect. One strategy for developing RDS is thus for research data coordinators to train large numbers of staff to understand the issues in RDM. In developing a sensitivity to the nature of research, the current study suggests a promisingly rich pre-existing set of views of research, that are, not surprisingly, tied to specific pre-existing roles. We suggest that in increasing staff understanding, building on and further developing prior understandings makes sense. Explaining RDM to LIS practitioners as about a new form of collection and stewardship is a good starting point, for example. The concept of data information literacy, points to the connection between information literacy training and the role in RDM. Other concepts can be greatly enriched: e.g. at the moment “research-led teaching” is not understood in any depth. There remains a large gap in terms of identifying and empathising with the research experience, and it may be difficult, for example, for many LIS staff to truly grasp as the way that researchers experience it as a transformational journey (Brew, 2001) or the sense of increasing pressure for “performativity” (Fanghanel, 2012). Ways to build more empathy with researchers are certainly needed, to ensure support services can be really effective.

Furthermore, if academic libraries are really seeking a partnership with researchers, the idea of a categorical difference between what librarians can do and what constitutes true research is particularly unhelpful. Such gaps should be directly addressed in training. Training for responsive, user centred research partnerships will address fundamental issues around the nature of research, not just focus on the mechanics of depositing in a repository or technical curation issues. This is also an inherently fascinating aspect of RDM. Initiatives such as science bootcamps for librarians (Schmidt and Reznik-Zellen, 2011) are highly relevant in this context. Library staff are often encouraged to interview researchers about their work as part of RDM awareness training, this gives them an insight into the very personal relationship researchers have to their work (e.g. Cox et al., 2014).

Finally, greater direct engagement with research could have additional benefits for LIS staff. As well as making RDS more user centred, it has long been thought that many aspects of CPD and

developmental work in LIS would be improved if practitioners had a deeper understanding and involvement with research (McNicol and Nankivell, 2003; Powell, Baker and Mika, 2002; Buckley Woods and Booth, 2013). Indeed, collaborations between practitioners and LIS researchers have been advocated for some time. Such closer relations could be one important outcome of the academic library's partnership with research.

7. Conclusion

As libraries become more deeply engaged in research support, it becomes critical for librarians to have more empathetic grasp of the nature of research, as experienced by researchers themselves. To construct coherent and usable services, such as RDS, librarians' understanding must also align with that of other professional services, such as IT and research administration. Reporting one of the first investigations of how professional staff see research, this paper has captured evidence of a number of quite divergent narratives in use. It reveals the extent of the gap that needs to be bridged to build close partnerships among professional services themselves and with researchers. It has identified some views of research that are not well understood by professional services staff though they are prevalent among researchers, such as the notion of research as a transformational journey. Developing a deeper grasp of researcher perspectives is a key challenge for the next decade.

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