Academic Libraries' Stance toward the Future

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abstract: The literature about academic libraries takes a strong interest in the future, yet little of it reflects on academic libraries' underlying stance toward the years ahead: is there a sense of change or continuity? Is there optimism or pessimism? Consensus or divergence? This article explores these questions using data from interviews with a broad range of practitioners, commentators, and experts. The findings reveal that some participants see libraries as fundamentally unchanging, while others perceive innovation as a given. There is little consensus about upcoming trends. Some interviewees doubt libraries' ability to deal with change, but others feel considerable optimism.

Introduction

The Heritage Futures program (https://heritage-futures.org/), an interdisciplinary research project at University College London in the United Kingdom, examines the challenges of conservation into the "deep future"——10 or more years from the present——in the context of the themes of uncertainty, transformation, profusion, and diversity. At one of their events, the Heritage Futures researchers asked experts what object they would choose to preserve for 100,000 years and why? (https://heritage-futures.org/from-the-archive-to-the-vault/). The Heritage Future investigation poses profound questions about what the future is and how conservators, museum curators, and archivists conceptualize it. It also prompts additional inquiries, including how do information professionals in general conceive of and relate to the years ahead, and how do they see the key changes affecting them and their role? Heritage Futures asks these questions of one group of information professionals; this paper asks them of academic libraries.

The core notion of a library collection implies a long-term commitment to preservation and enduring access, but as academic librarianship has come to focus more on

access and information literacy, what sort of relation to the future emerges? As the literature review will show, works proliferate that advise academic librarians on trends that will likely affect them and how they should respond. This literature gives us a sense of upcoming changes, but it does not tell us how librarians feel about the future or their underlying assumptions of how to respond to it. In a society suffused with talk about the future, an important aspect of any profession is how it sees itself in relation to whatever is to come. Little empirical research has evaluated the academic library profession's stance toward its future and the assumptions on which this attitude is based. The aim of this paper is to address this gap, focusing not on trend spotting or scenario planning, but more on consideration of how libraries conceive of the future and the assumptions underlying their responses to it. This topic involves consideration of a wide range of issues, including:

- How the future is perceived by libraries (including whether they are experiencing more change now than before);

- Whether they agree what the key trends are;

- Whether they see the future as threatening or encouraging;

- How well equipped libraries are to undertake change; and

- How far ahead library professionals think and plan.

All these issues are important ones that together help define the nature of the academic library profession. The orientation of a profession to the future is critical in a society preoccupied with foresight.[1] In practical terms, how a profession conceives its future will affect its ability to offer leadership. Academic library leadership has sometimes been criticized for its lack of vision in shaping change.[2] This present study aims to address the question of whether this shortsightedness might be linked with how academic libraries currently orient to the future.

The Future in the Library Literature

Many works attempt to predict the future of academic libraries. Some come in the form of reports that identify key trends for college and university libraries and are published on a regular cycle, for example, the Association of College and Research Libraries (ACRL) biannual Top Trends and ACRL's environmental scans.[3] These accounts capture the main trends in the academic library sector, often with a focus on the United States. The New Media Consortium (NMC) Beyond the Horizon series has an annual library-specific report that concentrates on technologies and the drivers and barriers to their implementation.[4] It differentiates more complex, "wicked" problems from those that are more straightforward. The Ithaka S+R library surveys are another regular series, in this case examining senior managers' views on various aspects of change.[5] Other regular reports focus on a specific aspect of academic library work, such as the library systems study published annually by Marshall Breeding in American Libraries Magazine.

In addition to regularly updated studies, many individual publications—reports, books, or journal articles—attempt to summarize the changing position of academic libraries. One example is the Society of College, National and University Libraries (SCONUL) report "Academic Libraries of the Future: Scenarios beyond 2020."[6] Rather than make specific predictions, it creates four scenarios that narrate alternative futures based on radically different assumptions. Monographs by such scholars as David Lewis and R. David Lankes and edited collections such as that by David Baker and Wendy Evans cover much of the same ground.[7] Individual articles do similar work, including some based on literature reviews, others on Delphi studies successively collating the judgments of experts, and still others on a combination of sources.[8] Individual library initiatives also examine trends to come. These initiatives include the Massachusetts Institute of Technology (MIT) report on the future of libraries,[9] the FutureLib project at the University of Cambridge in the United Kingdom

(https://futurelib.wordpress.com/), and various unpublished studies by NOMAD (http://www.nomad-rdc.com/Projects-1), a Glasgow-based design studio that specializes in architecture for British universities.

Other reports deal regularly with changes in higher education (for example, NMC Horizon and Nesta, formerly the National Endowment for Science, Technology and the Arts) or innovations in IT (for example, the reports on business and technology trends published by Gartner Inc.). Gartner's "hype cycle" concept, a graphical representation of the stages a technology goes through from conception to maturity and widespread adoption, is widely referenced as a model of how new technologies gradually achieve usefulness. Such bodies as the World Economic Forum, which gathers international business and political leaders for an annual meeting in Davos, Switzerland, also publish many examinations of the future, including new technologies. The International Federation of Library Associations and Institutions (IFLA) trend report and subsequent updates have explored the wider global information environment.[10] It identified five key trends, recognizing both positive and negative aspects of major changes in how information is accessed and used globally.

In addition, a large proportion of all publications about academic libraries relate at some level to the future, either focusing on an individual problem area, exploring case studies of the implementation of a new technology, or proposing new ways to manage specific services. Dan Dorner, Jennifer Campbell-Meier, and Iva Seto estimate that 500 articles were published about the future of libraries between 2011 and early 2016 alone.[11] Through all these works, the academic library community is well served in terms of perspectives helping the profession keep up-to-date, learn from good practice, and scan the horizon.

More conceptual pieces may also contribute to our understanding of the future of academic libraries. Literature reconceiving the nature of the academic library through new paradigms—such as the "hybrid library," which has a mix of print and electronic resources;

the "inside-out library," which focuses on serving external users; or the "library as a platform," which hosts resources for community learning and creativity—engage in thinking about the future.[12] The strength of these descriptions lies in capturing fundamental changes with many implications, some still being worked through, resulting from a particular concept or paradigm. Indeed, such concepts provoke us to think through the implications of change in a complex way.

A different body of literature are studies of individual library strategy making. For example, Laura Saunders compares the content of library strategic plans to predicted key trends to reveal areas where libraries may fail to respond to anticipated change, for example, in data services, and surprisingly, technologies.[13] John Meier examines how academic librarians make decisions and what important strategies are.[14]

Reviewing this literature gives us a good sense of what lies on the horizon for academic libraries. It is not the aim of this paper to summarize these trends. Rather, we propose to investigate how libraries and librarians relate to the future. A vast amount of literature identifies current trends within libraries or in the wider environment that could affect libraries, and some even describes how strategy is made, but little reveals the stance of libraries toward what lies ahead. Such a study would look at how change is experienced, examine the degree of consensus about what changes are important, and reflect on libraries' ability to cope with innovation. The volume of literature could in itself reflect a widespread sense of the need for change, but there is little about how libraries orientate themselves to such futures.

There are certainly some suggestions about how librarians should approach the task of envisioning futures. Several authors advocate scenario planning and explain what it would involve.[15] Brian Mathews suggests adopting some of the techniques of futures studies,[16] noting that scenario planning has already received some recognition in LIS.[17] He concludes

that curiosity is the best orientation to change, not positivity or negativity. John Fenner and Audrey Fenner recommend how to think like futurologists.[18] Yet there is a paucity of empirical research investigating how the academic library sector perceives the future. Do stakeholders in the academic library community experience things as unchanging or as continuously changing, even disruptively? If there is a sense of change, do they view it with pessimism or optimism? Are there unanimity and clarity about the key trends affecting academic libraries? Within what time frames do libraries plan for the future?

The research questions posed for this analysis are:

1. How is the future perceived in academic libraries?

2. To what extent is there agreement on what trends will affect academic libraries?

3. How capable are academic libraries believed to be to respond to the future?

4. Within what time frames do academic librarians tend to think?

Discourses about Futures

Society offers many discourses and practices dealing with the future, which might prove useful to help place the views uncovered in academic libraries in a wider context. For example, organizational strategy promotes thinking about how organizations can adapt to a changing competitive environment. The chief methods in the strategic management toolkit include analysis of the political, economic, social, and technical (PEST) aspects of the environment, sometimes expanded to PESTLE (which adds legal and environmental aspects). These techniques are designed to help structure our thinking about how the environment is changing.[19] Notions such as emergent strategy acknowledge the increasing impact of complexity on an organization's relationship to its environment.

Another way of talking about the future, common in journalism, centers on technology as the driver of social change. Authors from the field of information science have challenged this view when it is manifested as technological determinism, the assumption that

changes in technology alone drive social change. Technology is made by people, its use expresses cultural values, its diffusion is a social process shaped by social structures of power, and it is often reshaped by people during its adoption.[20] Another counter to the technocentric view of change is captured by David Edgerton with the term "the shock of the old," referring to the persistence of older technologies alongside the new.[21] Technology can provide an important locus of change, but its significance needs to be considered in a wider social context.

Another common perspective on the future is summarized by the acronym VUCA: volatile, uncertain, complex, and ambiguous.[22] This mantra, apparently first coined by the U.S. Department of Defense, encapsulates our common anxiety and disorientation in the face of the future.

Two other discourses are worth acknowledging. Both revolve around a sense of crisis. In many spheres, critical scholarship identifies neoliberalization as a fundamental global trend. In higher education, this direction of development is often referred to as the "new public management," an approach to running government and public service organizations to make them more businesslike by adopting management techniques and practices from the private sector. New public management implies increasing managerialism, commodification of learning, and a culture of performance measurement. It can also take the form of an attack on professionalization because it emphasizes corporate priorities over professional values.[23] There is related work around the "McDonaldization" of libraries, meaning the spread of corporate values, including increased stress on competition, profit or value for money, and enterpreneurship.[24] Neoliberalization often seems to involve a sense of crisis that may drive public sector organizations to become more like businesses.

Another influential discourse centers on global climate change and issues around water, food, and energy security. Radical voices call for society to change its ways in the

Anthropocene, the era in our planet's evolution in which humankind has become the dominating force and might irreversibly change our world. An example in the library sector is UNESCO's 2013 call for heritage institutions such as museums, libraries, and archives to contribute to sustainable development goals. The American Library Association (ALA) and IFLA have echoed UNESCO's call.[25]

Meanwhile, within futures studies, the fashion has moved away from seeking to predict what lies ahead and toward considering productively how we can influence the future.[26] Thus, our ability to shape the future could represent a further discourse. Relating the analysis in this paper to such discourse will enable further reflection on the stances toward the future taken by academic libraries.

Method

The data reported in this paper came from a set of interviews with stakeholders both within and beyond the library community. We interviewed 33 participants in total, 23 from the United Kingdom and 10 from other countries, consisting of 15 women and 18 men. The researchers chose participants based on their own knowledge and Web searches and with the approval of those at SCONUL commissioning the report. The authors aimed to capture a full range of views, such as those of library professionals in both research-intensive and teaching-led institutions, those working in various parts of the United Kingdom, and those with different degrees of embeddedness in library practice. With their permission, a full list of participants was published with the project report.[27] To give a broader perspective, participants included some within the library profession itself (referred to in later sections as "library managers"), commentators who write from a more distant perspective (called "library commentators"), and experts in the wider educational scene ("nonlibrary participants"). All quotations in this paper have been anonymized using the three categories described. Such categorization was not always straightforward because our participants carry

out a wide range of roles and came from a variety of backgrounds, but the categories are referenced with each quotation to give some context to the remarks. However, no pattern of systematic difference of perspective appeared between the groups of interviewees. The paper reflects the range of views across the whole body of interviewees. Because the participant base was small but broad, we made no attempt to attach significance to the frequency of the views expressed as representing a population as a whole, but we suggest that the data probably capture a range of viewpoints.

The interviews were wide-ranging and focused on the long term rather than immediate concerns. The investigators asked interviewees to try to identify the top three current trends affecting libraries, to respond to some scenarios of change (such as whether books would ever completely disappear from library collections), and to answer some direct questions about how they study the future. The interviews were conducted between May and July 2017, with each typically lasting an hour. The researchers gained voluntary, informed consent from the participants, and the research approach had ethical approval from the formal research ethics process of the University of Sheffield in Sheffield, United Kingdom.

The interviews were recorded and fully transcribed. The investigators carried out systematic thematic analysis on the interview transcripts, in which the researchers reviewed their data, made notes, and sorted the results into categories, including a process of detailed coding, from which they identified major themes in the data.[28] The authors collaborated in reading and reflecting on the interviews, in developing codes, and in writing about the themes. Much of this material described specific trends and is reported elsewhere.[29] A series of explicit and implicit beliefs about the future emerged from the data, and this paper is primarily based on those data.

The study in which the interviews were conducted also included a survey of library staff at all levels in the United Kingdom carried out online during July and August 2017.

SCONUL distributed the survey to its closed lists but also made the poll available more widely on open lists, including LIS Links. The researchers received 261 usable responses; the full demographics of the response are reported elsewhere.[30] The survey tested several issues arising from the literature and particularly from the interviews. Because most questions related to beliefs about actual trends, rather than attitudes to the future, it is less relevant to this paper, but some limited reference to the survey findings are integrated into the current paper to supplement the main qualitative analysis.

Findings

The following sections present findings in response to the four research questions: (1) How is the future perceived in academic libraries? (2) To what extent is there agreement on what trends will affect academic libraries? (3) How capable are academic libraries believed to be to respond to the future? and (4) Within what time frames do academic librarians tend to think? In the first section, the analysis describes the diversity of views around the extent of change, from those who emphasized continuity to those who saw turnover as a given. The analysis also reflects a range of feelings around the future, from anxiety to confidence. The second section focuses on trends, describing and explaining a lack consensus among interviewees and survey participants about what important changes are coming. The third section considers views about libraries' ability to cope with innovation, again highlighting the variation. The fourth and final section reflects on the wide range of time frames within which participants seem to perceive the future.

Perceptions of the Future

Some participants emphasized a sense of continuity, the enduring centrality of the library to the idea of a university, and the wide understanding across society of the "library brand":

> You know, it is very entrenched in university life. For many centuries, a library has been second perhaps only to the classroom as a reification of the idea of what a university means.

> There is something about the university and its learning and scholarship where a library has to be at the heart of that.
>

For them, the library has traditionally been central to the idea of the university, itself a long-enduring type of institution, and there has also been broad social awareness of what a library is:

> Library is a well understood brand that doesn't just apply to university campuses, but it applies to all walks of life. People are familiar with what a library is usually from their earliest childhood.
>
> (library manager)

The interviewees did not necessarily say that nothing has changed, but they suggested that perhaps the fundamentals have remained unaltered for an extended time, and some expect this stability to continue:

> I think that the basic functions are not that different to what they have always been in that libraries are about organizing and providing access to information resources, broadly interpreted, that people need. I don't think that is going to change, no matter what format and no matter the fact that it includes a much wider range of resources now including data resources, as well as more conventional information resources.
>
> (library commentator)

> I think that the actual things that people need libraries for is remarkably persistent. I think that what shifts are the different ways that that can be provided . . . Just thinking about furniture: the most flexible and effective piece of furniture in a library these days is a big table. And, there have been big tables in libraries since there have been libraries. So, there is a whole lot of persistence.
>
> (library commentator)

> INTERVIEWER: Do you think we will reach a position when there is no building called a library?

NONLIBRARY PARTICIPANT: No. [laughs] I think we have been having this conversation for about 30 years, haven't we?

Some felt that, despite all the focus on change, libraries had not altered fundamentally in what they provide, even if the way they did it had shifted. Many participants based this perception on the continuity of the idea of a library as a collection, but this view could also arise from the essentially unchanging nature of learning itself. Asked to consider a 10-year time frame, one participant commented:

> Well, the technology will be unrecognizable by then, but learning is still going to be hard, it is still going to require effort, it is still going to require conversation, and we are still going to have students on campus, so I think all that will change in libraries is the technology will evolve, but I think we will still have the students [sit] working in groups and working individually because that has to happen for learning to happen.
>
> (nonlibrary participant)

Whereas some participants' answers emphasized continuity, others, in contrast, saw fundamental change as a given of professional life:

> We keep reforming ourselves because we have been doing that for my whole career.
>
> (library manager)

Indeed, some thought the present a time of particular instability and change:

> I think right now, it is such a tumultuous time, for institutions . . . because of the changing relationship with students and the changes within government. We have got changes at Research Council level [referring to seven separate Research Councils that from 2002 to 2018 funded and coordinated academic research in the United Kingdom in the arts, humanities, science, and engineering], the ministry is increasingly interested in open science, and Research UK.
>
> (library commentator)

Even if they did not recognize the present as a tipping point, some felt fundamental change had happened or was occurring:

So, I think libraries are sort of having a bit of an exponential crisis [sic] in some ways because a lot of what they used to do, so they were controllers of access to content in the past, and that has now been democratized in lots of ways.

(nonlibrary participant)

The library, as you know, we have known it for the last several hundred years as a place to bring in content that is hard to find, content that is expensive, and make available to a particular community, a particular privileged community; maybe that role is going away.

(nonlibrary participant)

Many participants felt a sense of fundamental change, frequently seen as arising from the erosion of the importance of library collections. Libraries, one commentator said:

understood what they were there for [historically]. They were there to acquire the materials that were required to support learning and research in the print world, it was clear what that was, and goodness related to basically having more of those materials or the efficiency with which you processed them, and then the services, the space, and so on which surrounded those print collections. [Whereas now] the ends are no longer fixed in the same way, we have to decide whether we get into research data management, we have to decide how much of our effort goes into engaging and liaising with departments, how much of building learning commons do we want. Are we going to have research commons? So, they are having to make decisions, and when you make decisions, it is a decision about investment, and so you are putting resources in particular places which means you are not putting resources in other places.

(library commentator)

Several participants agreed on the need for change:

Should libraries be changing to make themselves relevant, in the twenty-first century? 100 percent. No question.

(nonlibrary participant)

If we keep doing what we have done in the way that we have always done it, you know we will fall off the map.

(library commentator)

Anxiety about what lies ahead ran through some of the participants' comments, including a perception of the future as a "threat," meaning libraries need to work hard to adapt and survive:

> I think the library has to fight for its survival, it absolutely must, you know, at the moment the library is part of the community within its institution, and it has to keep fighting for that, and the way to do that is to show value.
>
> (library manager)

Despite this anxiety, some participants argued that libraries should not become introspective or defensive and make survival their key objective. If they did, one participant suggested, it would likely threaten their relevance:

> I think that if you are—which is ironic, right?—if you are a library director whose goal is to save your library, you are going to find yourself out of step with your university, and you are likely not to save your library.
>
> (library manager)

Instead, libraries should face outward, attempting to support the work of their parent institutions and solving problems on behalf of their users in the management of information. Several participants took up this optimistic sense of libraries actively shaping coming developments:

> I think change is fantastic for libraries . . . but I think we should be taking a more active role in creating more disruptive products and services ourselves as librarians.
>
> (library commentator)

> But it is not just up to librarians to respond. I think librarians need to be driving and pushing these external factors along. So, I think we need to be stepping up and making educators, researchers, and students want to work in different ways and offer them different ways in which they can work. So, I don't think we should be passive in this, because never mind 10 years, I mean in six months something could change.
>
> (library manager)

The survey reflected ambivalence about the future, though within a somewhat different population of participants. Several answers expressed positive views about the exciting role for libraries in higher education (see Figure 1). Yet, participants saw the future of library employment ambivalently: library skills would still be relevant, but there would be fewer jobs (see Figure 2). For a fuller discussion of this material, see Stephen Pinfield, Andrew Cox, and Sophie Rutter, "Mapping the Future of Academic Libraries: A Report for SCONUL," 2017, eprints:whiterose.ac.uk.
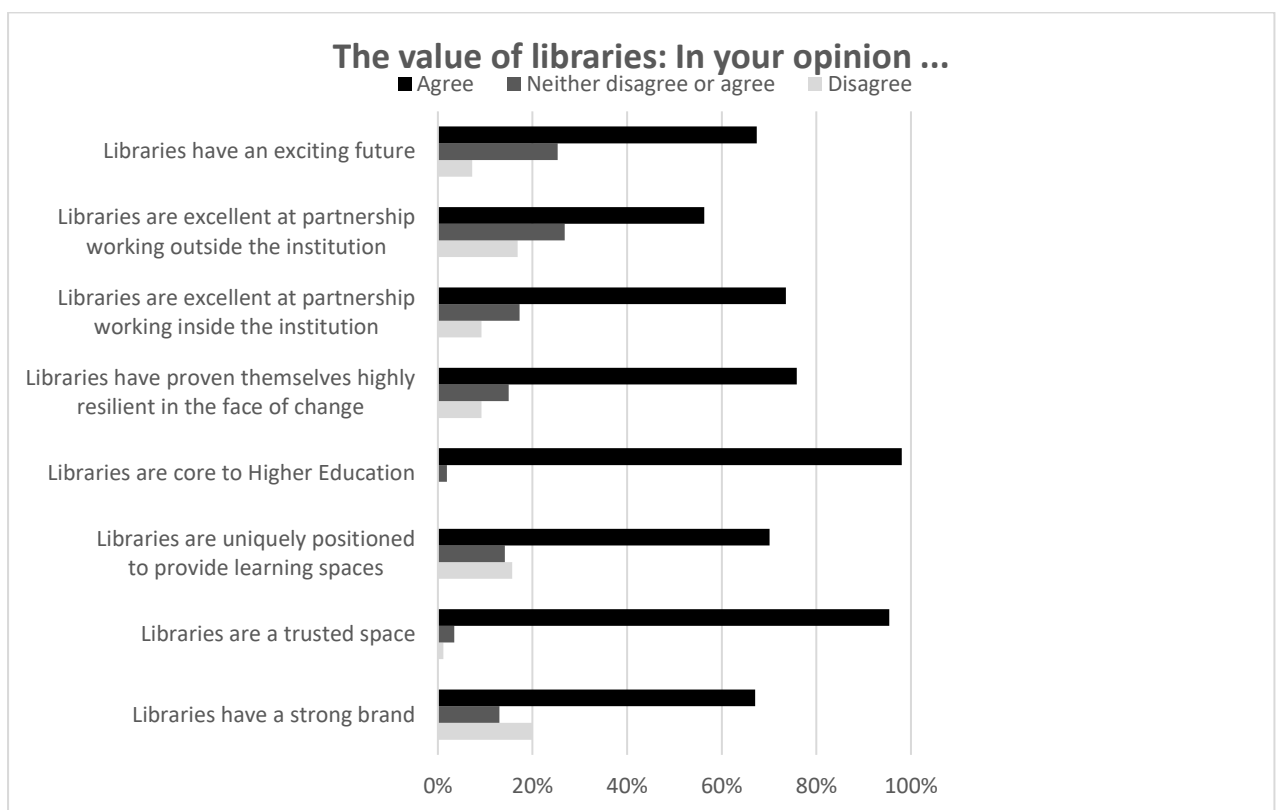

Figure 1: The value of libraries [for this presentation of the data disagree/strongly disagree and agree and strongly agree were aggregated]

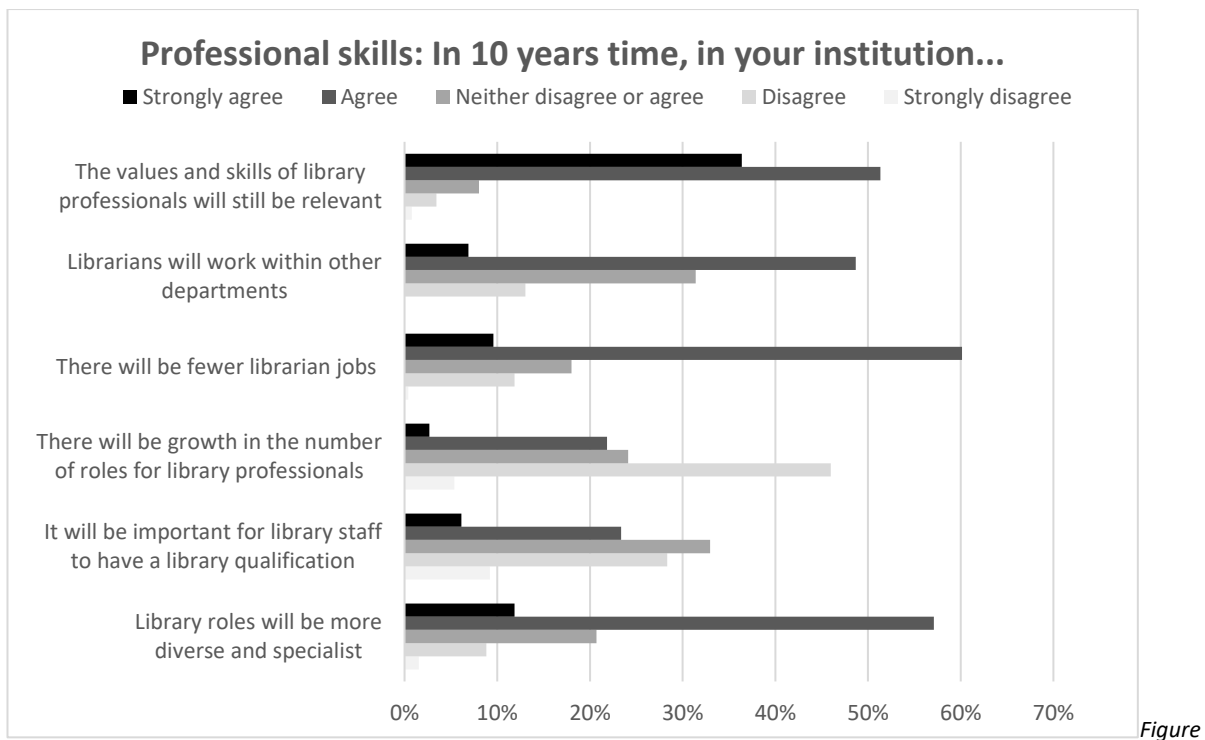Professional skills: In 10 years time, in your institution...

Figure 2: Professional skills

Thus, reflecting on the first research question, there was a lack of consensus. Some participants emphasized fundamental continuity; others felt a sense of continuous change. Some felt pessimistic about the future, others optimistic.

The Clarity of Key Trends

The first question in every interview prompted the participant to identify three key trends impacting academic libraries in the next 10 or more years. Little consensus was evident in the answers. Several interviewees mentioned open access, artificial intelligence (AI), new pedagogies, and space, but most trends were only noted by one individual. The movements singled out were not new to the literature, but the lack of consensus indicated a high level of uncertainty.

As Figure 3 reveals, the survey part of the study produced some support for the importance of such trends as open access, "changing learning and teaching practices," and "anytime, anywhere, any device access" as potentially having a significant or even transformational impact. Nearly all the 30 trends the survey asked about were seen by at least

a few people as transformational. Participants seemed to sense a bewildering array of changes and express a fragmented understanding of how the environment was being transformed. At the same time, interviewees felt that some trends were probably underestimated, notably the potential impact of AI. Thus, a lack of consensus about what critical changes were happening was another major theme in the data.
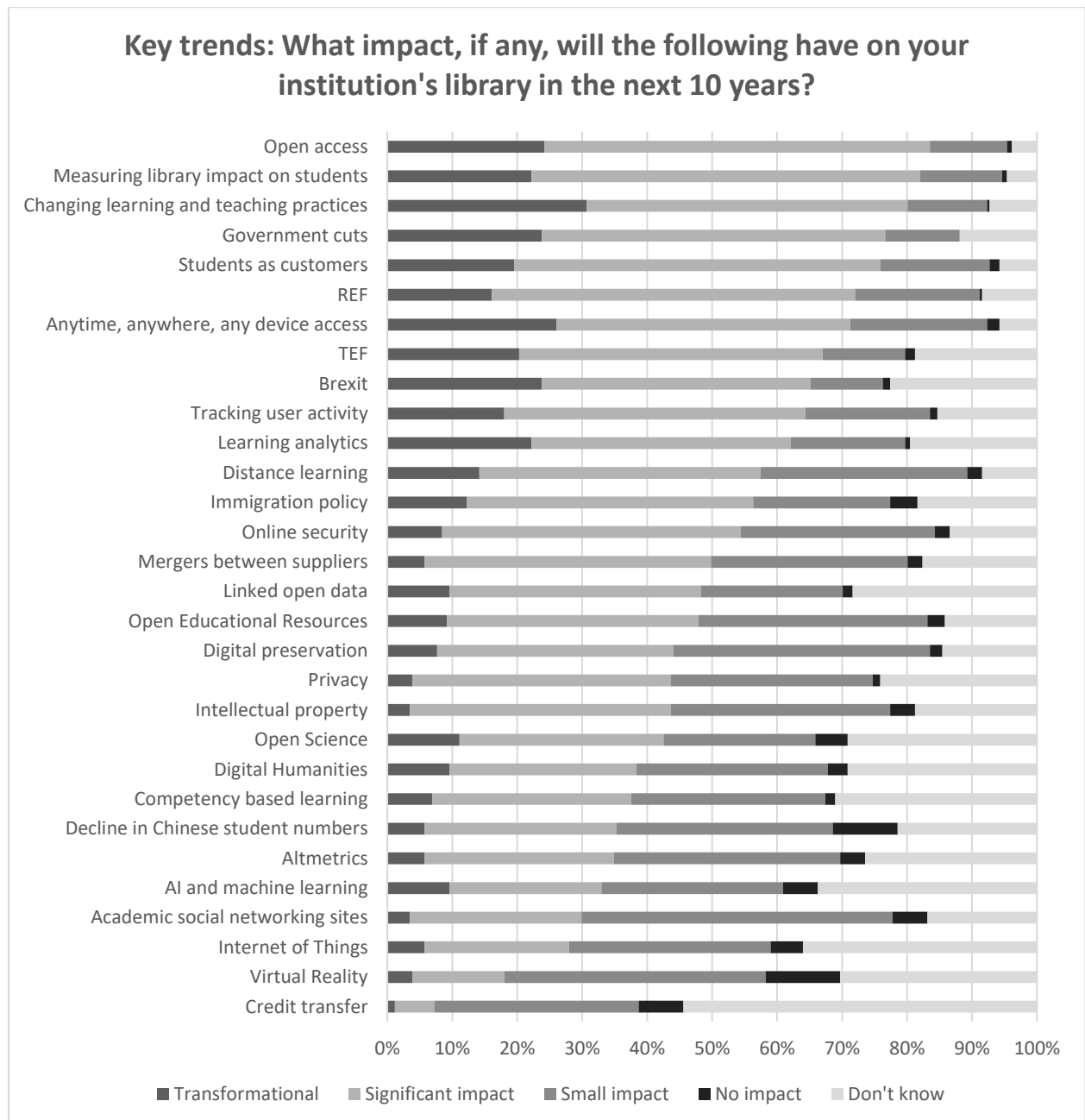

Figure 3: Key trends and their potential impact

Interviewees found it hard to pick out just two or three trends or indeed to decide which developments to focus on in their practice:

Well, I couldn't get down to two or three [trends]. I always start by thinking about what is going on in teaching in my own institution, what is going on in research, and then, you know, I can't help thinking about technology and changing student behaviour and rising costs. But more and more, I find it really difficult to work out what to put my attention to, what is the most important, and there [are] so many things competing for attention.

(library manager)

Although the question was couched in terms of 10 years, many of the trends interviewees did identify were happening now, such as open access. This finding suggests that participants considered only a narrow time horizon, the immediate past and the present, or that they saw many relevant trends as already present even if currently patchily distributed.

Examining the responses, we can begin to suggest why there was a lack of clarity and consensus about what key trends would shape academic libraries' futures. First, many changes are at work. Interviewees find it hard to choose which to focus on. Another factor is that important developments are complex and play out over a long timescale. Thus, directly asked about the impact of AI, some recognized it as an area of development for two decades, others saw it happening now, and still others talked as if it were a potential development. Amid major change, it is hard to discern the scope of the transition and to disentangle different aspects of one general trend. Another factor seemed to be the complex, entangled nature of the trends. Many developments affect more than one area of library work, perhaps in contradictory ways; they may also have direct and indirect effects on libraries:

The first one that I was thinking around was machines and artificial intelligence . . . and linked to that the capture of big data and the use of big data by massive services providers, people like Google, people like Facebook . . . there is the experience that they will deliver and how that raises expectations or alters expectations of students' engagement with institutions, and the library as part of that. And related to that, questions around privacy and what is done with one's data. And the degree to which students wish to hand over data or safeguard their data . . . and we already see this, in a way, with the manner in which some publishers are looking to capture more data on students, on who the students are that are using their services, and things like that. So, I think that is a major change. I do think tied into that changing

expectations of a university education. The burden of debt on students and what that might mean. Changing nature of your student cohort but also possibly your, sort of, your academic cohort and their relationships with the institutions. Things like tenure have decreased. The number of casual employees of universities increases as well. I think that is going to have a, a major impact in terms of the academic library and their ability to reach out to those groups.

(library commentator)

Thus, developments seemed to combine, and especially when changes occurred rapidly. It is hard to disentangle several trends profoundly impacting the behavior of both students and researchers, and what the implications would be for academic libraries:

It is just that it is happening very, very fast. There is a lot of different things going on.

(library manager)

Several participants thought that, almost by definition, the full impact of disruptive change is hard to imagine. Indeed, the impossibility of predicting transformation was for one interviewee a reason not to seek to "spot trends" at all:

It is much more important to keep adaptive and responsive rather than trying to figure out a specific disruptive innovation before it is happening.

(library manager)

Interviewees recognized that some trends gaining attention will happen much more quickly or slowly than expected, or may even not materialize at all:

I am curious, I am trying to see, I am trying to think now what clues can I see in today's environment. Because there is so much, kind of, stuff happening, things happening; you read stuff, you see stuff, you know you think about, you know, the government over the next five years, think about Brexit, you think about educational change, you think about public policy . . . you think about all these things, and you know some of these things are red herrings, they are going to go nowhere.

(library manager)

And some stuff will come faster, and some stuff will come slower.

(library manager)

The repeated use of the word stuff reflects the vagueness or slightly chaotic nature of the processes at work.

Another factor in the lack of consensus was that the trends have different effects across the academic library sector because higher education is itself diverse. In particular, teaching-oriented institutions arguably have a different trajectory from research-led institutions. The former are mostly newer, less conservative universities with less commitment to traditional notions of the library as a collection. They may change in different ways from the older research-led institutions, which have invested in historically significant special collections, for example. Perhaps the future of academic libraries is becoming more divergent. The survey uncovered no strong statistically significant correlations, however, between type of organization and how trends were viewed.

The diversity of the academic library sector underscored the importance of alignment to the library's home institution, to organizational strategy, and to user need:

> You don't have libraries that stand on their own and change over time like independent businesses or something. You have libraries that are part of institutions, and those institutions are going to change, and the most important thing that will affect the library is what the institution requires of it.
>
> (library commentator)

> I think that the long-term future of many libraries is deeply tied to the vision of the long-term future of the institutions that they are embedded in.
>
> (library commentator)

A final factor in the uncertainty across the interviews could have been the timing of the study. The United Kingdom was undergoing a period of uncertainty, led by a government without a parliamentary majority that had undertaken a major and contentious constitutional change, "Brexit," the country's impending withdrawal from the European Union. The government also sought to assert more control over higher education, such as through the reorganization of research funding and reshaping of regulatory arrangements for the sector.

These changes coincided with the first year of the Trump administration in the United States, which had uncertainties of its own. The degree of doubt in answers may partly reflect this wider sense of instability:

> I think that what changes the game for libraries isn't going to be anything to do with the work of libraries, and it is going to be to do with those larger political contexts.
>
> <div align="right">(library commentator)</div>

The uncertainty of this comment may reflect a perception that the real decision-making lay far from libraries themselves.

Regarding "crises" often seen to drive wider societal change, most interviews saw little connection between the future of libraries and climate or environmental change. Whereas parts of the library profession have started to engage with this agenda, academic libraries in the United Kingdom apparently feel little responsibility for such issues.

In relation to another agenda, some responses seemed to accept "McDonaldization" trends as inevitable. They emphasized the customer-provider relationship with students. These participants saw trends, such as a switch to metric units, as an unavoidable part of the current higher education sector:

> It is very easy this word private sector gets thrown in into many conversations, and I don't quite know what it means. So, let me unpick [it]. Should libraries be concerned with their users, i.e. their customers? Of course they should. Should libraries be changing to make themselves relevant in the twenty-first century? 100 percent, no question. Should libraries be looking at the way they do things, so as to be able to climb the twin peaks of efficiency and effectiveness? Absolutely. If that means they have got to be like the private sector, then that seems to me to be a good thing.
>
> <div align="right">(nonlibrary participant)</div>

Other participants, however, refused to accept uncritically many trends related to the commodification of library services or managerial cultures:

> If it is entrepreneurial in terms of seeking out new services and new ways of delivering value for a consumer and that sort of creativity, if you like, I think that that should be absolutely. I

don't think libraries should have any concerns about that at all. I think that is probably a good thing and is probably the only way to survive in the world that we are living in. If it is about going monetizing, commoditizing, every single transaction between individuals, then I do think that that is [different]. There is a real tension there, and I do think also there is something deep within the library sector around access to knowledge as a benefit, as a good thing in its own right, and that that should be protected, and shouldn't just be for financial gain.

(library commentator)

In this view, there was an important difference between being businesslike and an underlying commitment to libraries and education. Libraries need to be enterprising and practical but should do so not in the service profit but of "the value of education, the value of information, the value of libraries, the value of universities as public good" (library manager). The same interviewee was buoyed by the sense that students themselves recognize the value of the library ethos:

The students weren't expecting us to be like the Apple Store: they knew that there was a difference. And that we were operating in different conditions, and they were really comfortable with that environment being different and not so kind of high tech slick. We are not focused on selling, we are focused on experience.

(library manager)

Thus, reflecting on research question two, there was again a lack of unanimity. Many participants saw trends as potentially transformational. They also realized that change was complex and unpredictable, and impacted various institutions differently. Perhaps the study occurred at a moment of uncertainty.

Libraries' Ability to Deal with the Future

In this context, libraries' ability to cope with change was a central issue. Again, the participants lacked consensus, with strong expressions of doubt but also considerable optimism. Many participants indicated uncertainty:

If only university libraries could see the excitement of change. Libraries don't like change. It's like turning around the Titanic.

(library commentator)

Well, I think libraries are conservative institutions: we hang on to the way that we do things sometimes past the point of diminishing returns.

(library commentator)

Most library organizations don't have a very good record of tracking emerging technologies five to 10 years out. They tend to be very kind of in-the-box thinkers.

(library manager)

Some interviewees saw such a failure as linked to poor leadership:

The biggest problem with leadership in libraries, library directors as a rule want to be good boys and girls and get a pat on the head, rather than wanting to disrupt and innovate.

(library commentator)

I think that we are moving too slow . . . and I think it is both due to the library directors and it is also due to staff—we have a lot of staff that have been working here for 20–25 years, so it is a huge skill change and the mind-set change that we need to do a culture change actually, so that is essential for us and that was going to be really hard; culture change is the worst [laughs].

(library manager)

This poor response to change was not only because of librarians themselves but also because of the library's position within large, slow-moving institutions:

We are not taking risks really with research agendas in the way we should be because people are too frightened or they are too constrained by the pressures within their institutions.

(library manager)

I think the challenge for us in the education sector is that we tend not to want to move quickly. If your institution is hundreds of years old, well there is a little bit of a stigma attached to chopping and changing. It is much easier to make slow incremental changes, but the world that we are living in is one where change is happening at an ever-accelerating pace.

(nonlibrary participant)

So there is an arrogance. [This] is the problem particularly with older institutions that can't be seen to get this wrong.

<div align="right">(library commentator)</div>

Another obstacle was the pressure of current demands, leaving little room for forward-looking thinking:

They are just barely trying to stay within budget and, you know, subscribe to the journal packages that their faculty are demanding so they don't really have the room to be thinking about AI very much.

<div align="right">(library manager)</div>

For some, there was a danger in focusing too much on a few trends:

[There is] an unrelenting focus on RDM [research data management] and OA [open access] as the two most important things, and it is something that concerns me deeply because I see this as a real unrelenting focus and I feel that other things are being left behind.

<div align="right">(library commentator)</div>

For all these concerns, many participants still felt optimism, with a sense of many opportunities to be grasped:

I think actually there will be more libraries, better libraries. I think that actually we might be coming into almost a bit of a golden age for libraries, new golden age for libraries.

<div align="right">(library commentator)</div>

So, I think it is a really watershed moment for librarians, and when I say watershed, I mean I think there has not been an opportunity like this, a sea change like this, for 70 years or so since World War II.

<div align="right">(library commentator)</div>

So, quite a lot of opportunity I think . . . if AI, machine learning, and robotics [are] actually developing in the space that librarians can take advantage of, I suspect that might be second order.

<div align="right">(library manager)</div>

Implicit in these opportunities was the requirement to align to the needs of the parent institution:

> I mean fundamentally the library should absolutely be supporting and serving the institution, that first and foremost, that is its job, so anything that affects . . . the way that academics are conducting research, the way that the students are coming into the university, and the way that they are being taught and everything, it all should affect the library, and if it doesn't the library isn't doing its [job].
>
> (library manager)

But taking advantage of the opportunities demanded more than reactive alignment to the institutional strategy:

> So, I think it is about being hungry really, you know about making, being sort of actively interested in what your community, your user community, or potential user community are doing, and how you can best fit your skills and your fundamental professional abilities to make their lives easier and more effective. I think libraries are in a very strong position, because we are fundamentally very focused on our users and meeting their needs, you know the best libraries. It is about being hungry, continuously looking for opportunity, and adapting is really important: you know being efficient, you know, with money, resources offering services that add value, it is looking for where we can add value. Not defending things that used to exist.
>
> (library manager)

> I think where you can see libraries that have been successful it is where library directors have adopted that sort of entrepreneurial mind-set but have persuaded the institution of the direction. They have brought the institution along with them, they haven't been doing stuff on the side and hoping that the institution will notice.
>
> (library commentator)

The library needed to respond to the changing behaviors and needs of its users and make sure that its host institution recognized the importance of such changes. Libraries were, therefore, seen as having a potential leadership function within their institutions in creating a vision of the future, and in spearheading and managing change.

To summarize the analysis of research question 3, there was a mix of optimism and pessimism. Weak areas often revolved around library leadership, slowly changing host institutions, and the pressure of current demands. Many participants saw success as based on aligning to the needs of their institution, but based on an analysis of the institution's needs, rather than passively falling into step with official policy.

Time Horizons

A fundamental aspect of a conception of the future is what time horizons people consider. So, the fourth aspect of academic libraries' stance toward the years ahead investigated in this study revolved around the implicit time frames that interview participants used. Our questions deliberately prompted interviewees to think in terms of 10 years because we speculated that this duration marked the limit of what they would contemplate. Their responses revealed that they operated on a variety of time horizons, partly depending on the issue. For example, many buildings are constructed for a 30-year life. Yet long-term thinking was unusual. Some thought thinking in terms of 10 years was possible but difficult:

> I mean, I try to look at least, you know, 5 or 10 years into the future . . . but I also am aware of the fact that I can't even predict how fast the future will come, so it is hard to even answer that question right.
>
> (library manager)

A common reference point was the three to five years of institutional planning cycles, within which some prediction seemed possible:

> It is generally three to five years if you are planning.
>
> (library manager)

> Thinking about technology, I can't see any further than that. I think, all the advice I have received and all my observations are, if you start to think further ahead than that, it is just impossible, things change.
>
> (nonlibrary participant)

Some participants felt strongly that the focus should be on the present because of things happening now that needed a response:

> I don't monitor the future; I think the activity is pointless . . . [Libraries] should be concentrating on what their users are doing right now, rather than looking into the future and trying to navel-gaze. So, I think libraries are obsessed with the future . . . I think it makes us feel better because librarians feel strategic, if they are using the word future.
>
> (library commentator)

It is paradoxical that trend spotting could be construed as navel-gazing, yet several participants seemed to concur with this comment, perhaps because at least some trend spotting addressed the issue of how to ensure the survival of the library. As already observed, most answers to the question about three key trends referred not to distant change but to developments already taking place in how users behave. Many interviewees believed that change is already happening:

> I am not sure that I see anything absolutely new or different coming along. I think what we will see is almost an intensification of . . . trends that are already there . . . I think a sort of intensification of the trends in the scholarly communications.
>
> (library manager)

> Because some of the future stuff that comes out is about things that are already happening that they just didn't know, because they didn't talk to enough people.
>
> (library commentator)

Again, reflecting on research question 4, views varied on the appropriate time frame for considering the future, but most time spans were relatively short.

Discussion

The interviews revealed a strong but complex relationship between libraries and the future. Some participants emphasized continuity within the ancient institution of the university and an enduring conceptualization of the idea of a library, widely understood across society. Others felt a sense of change in how libraries met demands, if not in the fundamental nature

of what libraries do. Still others saw innovations as continuous and sometimes threatening. A few felt that now was a critical moment of change, or at least uncertainty. A number perceived an urgent need for change but thought that libraries could influence its direction.

There was a sense of many wider trends at work that could affect libraries, but few interviewees articulated this perception with any consistency. There was little consensus about which trends were most important. Most are developments that are already working themselves through, rather than completely new events on a distant horizon. However, librarians likely underestimated some key trends, such as AI. Participants recognized that trends are complex and interconnected. They also often perceived change to occur faster than before.

Many participants emphasized the importance of alignment to the host institution and the variety of paths this implied for different libraries. Yet their views involved responding to the changing needs of the institution and its communities, such as transformed patterns of student and researcher information seeking or learning behavior, rather than simply aligning to the explicit formal strategy of the university. Participants also frequently emphasized that the approach to the future had to be proactive and should offer leadership to the organization, not just alignment in a reactive sense. Many reflections expressed a lack of confidence in libraries' ability to change, yet also considerable optimism and sense of opportunity.

The time horizon most participants seemed to think of was the present and changes that were currently taking place—not some distant time, over the horizon. Planning more than three to five years out seemed to some highly speculative.

Thus, interestingly, the questions posed in the study uncovered a wide range of views. The analysis found no systematic differences between the three groups of interviewees, apart perhaps from nonlibrary participants' willingness to more explicitly contemplate the dissolution of libraries (even if they did not think it likely). Library directors, perhaps the

most uniform group of participants, lacked a common view on what lies ahead. This absence of unanimity reinforces the sense of a profession in a state of uncertainty. The proliferation of literature about key trends may cause as much doubt as it dispels.

Many of the practices and discourses around the future identified in the literature review of this paper are present. The dominance of a planning horizon of three to five years reflects the influence of organizational strategy processes on how academic libraries view the time to come. The notion of alignment is an important concept in strategic thinking. But participants mostly understood alignment to entail the library adjusting to the perceived needs of its university community, rather than simply conforming to a formal institutional strategy. Professional analysis of how changing behavior will impact aspects of learning and research relevant to the library lies at the heart of alignment, not simply a mechanical process of adopting a wider organizational strategy.

Interviewees often mentioned the importance of technology. Though few understood its significance in a technologically determinist sense, they nevertheless saw technology as a locus of change. Yet in acknowledging continuity (especially in the library as a space), there was also an element of the "shock of the old," the persistence of old technologies alongside newer ones. VUCA (volatility, uncertainty, complexity, and ambiguity) was well represented in feelings of the fluidity of the current environment and doubt about key trends, as well as the intricacy and imprecision of the effects. Participants did not think passively about the future; most saw potential to influence it in positive directions.

The sense of the increasing interconnectedness of change itself made it hard to read trends and greatly increased uncertainty. In this context, relatively simple tools such as PESTLE (political, economic, social, technical, legal, and environmental) might seem inadequate. These approaches tend to separate trends across different domains, when in fact developments are increasingly interconnected. One can think in terms of nexuses of change

such as "datafied" scholarship—research increasingly underpinned by such trends as open access, open science, text and data mining, artificial intelligence, machine learning, the Internet of things, digital humanities, and academic social networking services. Another nexus of change is "connected learningwhich incorporates changing pedagogies, learning analytics, students as customers, social media, mobile computing, makerspaces, and blurring of space uses.

Thinking in terms of open-ended new paradigms may be productive. In stark contrast to predictions, these narratives about the future mobilize interest.[32] Another approach would be to adopt more sophisticated models of change, such as causal layered analysis, which analyses different levels of change in an attempt to create a coherent vision of the future.[33]

The interviewees expressed little sense of academic libraries relating to sustainable development and the potential global crises around water, food, and energy. This lack of concern raises the question of whether academic librarians have enough vision of how they connect to wider societal challenges or a clear understanding of their links to change beyond the academic library sector. Familiarity with issues associated with the McDonaldization of libraries was, however, more apparent among some interviewees' comments. They expressed a somewhat equivocal attitude to such changes, with many seeing alterations as an unavoidable part of the current higher education environment but still retaining a community-centered sense of the role of libraries for their users.

Conclusion

The library literature is preoccupied with responding to change. Many studies seek to identify key trends. Yet reflection on how the academic library sector relates to the future is sparse. Thinking about it can help us understand at a deeper level libraries' fundamental stance toward the future and their ability to respond to change. This study identified some of the key features of how academic libraries relate to the years ahead. The analysis also confirmed the

presence of many of the discourses and practices identified in the introduction to the article (strategic thinking, technology-focused thinking, VUCA, and crisis thinking), though academic libraries may have other ways of relating to the future.

Participants had a strong sense of the need and possibility of shaping the future. Although alignment to their parent institutions was important, they often understood it as meeting the needs of the communities within the institution and making these changing needs understood, rather than simply following top-down strategy. This perception suggests the need to think in a different way about the future, beyond the discourses of strategic management. Longer-term thinking is required. This thinking might be done collaboratively, to spread the risk. IFLA's work attempting to create a consensus around key trends is a useful reference point.[34] Yet collaborations probably need to extend beyond the library world because of the complexity of change. The profession could better think about innovation using more sophisticated models, rather than simply listing trends. It might also be productive to think in terms of changing paradigms and thus altering how one thinks about whatever is coming. Through discussing paradigms, the profession can explore the nature of change and its orientation to the future. The growing literature on foresight suggests concrete approaches to influencing the future.[35]

Limitations and Future Research

More research could be useful. This paper presents just a snapshot of views, taken at one time, with a preponderance of respondents from the United Kingdom. Since the interviews were based on a small, broad sample, more data would be needed to identify the frequency with which particular views of the future are held in the wider population—for example, differences between those in research-intensive institutions and others. It would be interesting to see if there are national differences in attitudes to the future and how views change over time. The survey conducted in the study found no major differences in response by age, but

the number of those from younger age groups was small. Because most of the interviewees held senior positions, and consequently were middle-aged, their responses may reflect their personal time horizons. Several participants commented on their difficulty in considering the future beyond their own retirement. It would be interesting to see if younger professionals had a different vision of the years ahead. It would also be useful to conduct similar studies among other information careers and among professions beyond the academic library sector to examine differing concepts of the future as a salient aspect of professional identity.

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Notes

1. Jennifer M. Gidley, The Future: A Very Short Introduction (Oxford, U.K.: Oxford University Press, 2017).

2. Christine Wolff-Eisenberg, "US Library Survey 2016," Ithaka S+R, 2017, https://doi.org/10.18665/sr.303066

3. Association of College and Research Libraries (ACRL) Research Planning and Review Committee, "2016 Top Trends in Academic Libraries: A Review of the Trends and Issues Affecting Academic Libraries in Higher Education," College and Research Libraries News 77, 6 (2016): 274–81, http://crln.acrl.org/index.php/crlnews/article/view/9505; ACRL Research Planning and Review Committee, "Environmental Scan 2017," 2017, http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/whitepapers/EnvironmentalScan2017.pdf.

4. Kornelia Tancheva, Gabriela Castro Gessner, Neely Tang, Erin Eldermire, Heather Furnas, Darcy Branchini, Gail Steinhart, and Nancy Fried Foster, "A Day in the Life of a (Serious) Researcher Envisioning the Future of the Research Library," Ithaka S+R, 2016, http://www.sr.ithaka.org/wp-content/uploads/2016/03/SR_Report_Day_in_the_Life_Researcher030816.pdf

5. Wolff-Eisenberg, "US Library Survey 2016"; S. Adams Becker, M. Cummins, A. Davis, A. Freeman, C. Giesinger Hall, V. Ananthanarayanan, K. Langley, and N. Wolfson, "NMC (New Media Consortium) Horizon Report: 2017 Library Edition," 2017.

6. Geoff Curtis, Claire Davies, Max Hammond, Rob Hawtin, Gill Ringland, and Chris Yapp, "Academic Libraries of the Future: Scenarios beyond 2020," Society of College, National and University Libraries (SCONUL), 2011, https://www.sconul.ac.uk/publication/academic-libraries-of-the-future-6; David W. Lewis, Reimagining the Academic Library (London: Rowman & Littlefield, 2016).

7. R. David Lankes, The New Librarianship Field Guide (Cambridge, MA: MIT Press, 2016); David Attis and Colin Koproske, "Thirty Trends Shaping the Future of Academic Libraries," Learned Publishing 26, 1 (2013):18–23, http://dx.doi.org/10.1087/20130104.

8. David Baker and Wendy Evans, eds., The End of Wisdom? The Future of Libraries in the Digital Age (Cambridge, UK: Chandos, 2016); Derek Law, "The World Is Our Lobster:

Rethinking Traditional Attitudes," New Library World 115, 5–6 (2014): 200–210; Blasej Feret and Marzena Marcinek, "The Future of the Academic Library and the Academic Librarian: A Delphi Study Reloaded," New Review of Information Networking 11, 1 (2015): 37–63; Roisin Gwyer, "Identifying and Exploring Future Trends Impacting on Academic Libraries: A Mixed Methodology Using Journal Content Analysis, Focus Groups, and Trend Reports," New Review of Academic Librarianship 21, 3 (2015): 269–85.

9. Massachusetts Institute of Technology (MIT), "Institute-Wide Task Force on the Future of Libraries: Preliminary Report," 2016, https://future-of-libraries.mit.edu/sites/default/files/FutureLibraries-PrelimReport-Final.pdf.

10. International Federation of Library Associations and Institutions (IFLA), "Riding the Waves or Caught in the Tide? Insights from the IFLA Trend Report," 2013, http://trends.ifla.org/insights-document.

11. Dan Dorner, Jennifer Campbell-Meier, and Iva Seto, "Making Sense of the Future of Libraries," IFLA Journal 43, 4 (2017): 321–34.

12. Chris Rusbridge, "Towards the Hybrid Library," D-Lib Magazine, July–August 1998, http://www.dlib.org/dlib/july98/rusbridge/07rusbridge.html; Lorcan Dempsey, "Library Collections in the Life of the User: Two Directions," LIBER Quarterly 26, 4 (2016): 338, http://dx.doi.org/10.18352/lq.10170; David Weinberger, "Library as Platform: Creating an Infrastructure for the Circulation of Ideas and Passions," Library Journal 137, 18 (2012): 34–36.

13. Laura Saunders, "Academic Libraries' Strategic Plans: Top Trends and Under-Recognized Areas," Journal of Academic Librarianship 41, 3 (2015): 285–91.

14. John J. Meier, "The Future of Academic Libraries: Conversations with Today's Leaders about Tomorrow," portal: Libraries and the Academy 16, 2 (2016): 263–88.

15. Jon Edward Cawthorne, "Viewing the Future of University Research Libraries through the Perspectives of Scenarios," in Delmus E. Williams, Janine Golden, and Jennifer K. Sweeney, ed., Advances in Library Administration and Organization vol. 33 (Bingley, U.K.: Emerald, 2015), 43–88; David J. Staley and Kara J. Malenfant, "Futures Thinking for Academic Librarians: Higher Education in 2025," Information Services & Use 30, 1–2 (2010): 57–90.

16. Brian Mathews, "Librarian as Futurist: Changing the Way Libraries Think about the Future," portal: Libraries and the Academy 14, 3 (2014): 453–62.

17. Sheila Corrall, Strategic Management of Information Services: A Planning Handbook, (London: ASLIB/IMI [Association for Information Management/Information Management International], 2000); Cawthorne, "Viewing the Future of University Research Libraries through the Perspectives of Scenarios"; Curtis, Davies, Hammond, Hawtin, Ringland, and Yapp, "Academic Libraries of the Future."

18. John Fenner and Audrey Fenner, "The Future in Context: How Librarians Can Think Like Futurists," Library Philosophy and Practice 7, 1 (2004), http://digitalcommons.unl.edu/libphilprac/22/.

19. Corrall, Strategic Management of Information Services.

20. Donald MacKenzie and Judy Wajcman, eds., The Social Shaping of Technology (Buckingham, U.K.: Open University Press, 1999).

21. David Edgerton, The Shock of the Old: Technology and Global History since 1900 (London: Profile Books, 2016).

22. Gidley, The Future.

23. Margaret Greene and David McMenemy, "The Emergence and Impact of Neoliberal Ideology on UK Public Library Policy, 1997–2010," chap. 2 in Library and Information

Science Trends and Research: Europe, Amanda Spink and Jannica Heinström (Bingley, U.K.: Emerald Group, 2012), 13–41.

24. Karen P. Nicholson, "The McDonaldization of Academic Libraries and the Values of Transformational Change," College & Research Libraries 76, 3 (2015): 328–38, http://dx.doi.org/10.5860/crl.76.3.328.

25. American Library Association (ALA), "Resolution on the Importance of Sustainable Libraries," 2015, http://www.ala.org/aboutala/sites/ala.org.aboutala/files/content/governance/council/council_documents/2015_annual_council_documents/cd_36_substainable_libraries_resol_final.pdf; IFLA, "Access and Opportunity for All: How Libraries Contribute to the United Nations 2030 Agenda," 2015, https://www.ifla.org/publications/node/10546.

26. Staley and Malenfant, "Futures Thinking for Academic Librarians."

27. Stephen Pinfield, Andrew M. Cox, and Sophie Rutter, "Mapping the Future of Academic Libraries: A Report for SCONUL," SCONUL, 2017, eprints:whiterose.ac.uk.

28. Virginia Braun and Victoria Clarke, "Using Thematic Analysis in Psychology," Qualitative Research in Psychology 3, 2 (2006): 77–101, http://dx.doi.org/10.1191/1478088706qp063oa

29. Pinfield, Cox, and Rutter, "Mapping the Future of Academic Libraries."

30. Ibid.

31. Ibid.

32. Stian Westlake and Jessica Bland, "Don't Stop Thinking about Tomorrow: A Modest Defence of Futurology," Nesta, 2013, https://www.nesta.org.uk/report/dont-stop-thinking-about-tomorrow-a-modest-defence-of-futurology/.

33. Peter C. Bishop and Andy Hines, Teaching about the Future (London: Palgrave Macmillan, 2012).

34. IFLA, "Riding the Waves or Caught in the Tide?"

35. Bishop and Hines, Teaching about the Future.