Towards User-Centric Evaluation of UK Non-Print Legal Deposit

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TOWARDS USER-CENTRIC EVALUATION OF UK NON-PRINT LEGAL DEPOSIT

A DIGITAL LIBRARY FUTURES WHITE PAPER

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**TOWARDS USER-CENTRIC EVALUATION OF UK NON-PRINT LEGAL DEPOSIT:
A DIGITAL LIBRARY FUTURES WHITE PAPER**

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ABOUT THIS DOCUMENT

This white paper reports on the findings of the **Digital Library Futures** project (2017-2019), which investigates the impact of Non-Print Legal Deposit (NPLD) on academic legal deposit libraries and their users in the United Kingdom. It argues that discussions of NPLD have paid too little attention to user behaviour and requirements, and that it is necessary to adopt an ongoing user-focused evaluation framework to inform NPLD planning and implementation.

Core research was carried out at the University of Glasgow, the University of Edinburgh, the University of East Anglia, and University College London. We are grateful to our project partners, Cambridge University Library and Bodleian Libraries, University of Oxford, and to the British Library, for their assistance and support.

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EXECUTIVE SUMMARY

The *Digital Library Futures* project was funded by the Arts and Humanities Research Council (2017-2019) to investigate the impact of Non-Print Legal Deposit (NPLD) upon UK academic deposit libraries and their users. The project was led by Dr. Paul Gooding (University of Glasgow) as Principal Investigator, with the Co-Investigator, Professor Melissa Terras (University of Edinburgh) and Senior Research Associate, Linda Berube (University of East Anglia). This white paper provides the first research into this topic, and represents a benchmark study which holds relevance for other nations dealing with the implementation of e-legal deposit.

Legal deposit, which ensures the systematic preservation of published output for future generations, has existed in English law since 1662, and British law since 1710. The Copyright Act 1911, updated by the Legal Deposit Libraries Act 2003, makes provision for six legal deposit libraries to receive copies of print publications including books, pamphlets, magazines, newspapers, sheet music, and maps. In 2013, legal deposit was extended to non-print publications published online and offline, including eBooks, eJournals, electronic mapping, the UK Web Archive and other electronic materials.

While the regulations support the systematic collection of born-digital publications, they also restrict access to this collection to protect the interests of rights-holders and content creators. The aim of *Digital Library Futures* was therefore to understand how the posterity-driven mission of NPLD interacts with contemporary access and usage. We worked with the Bodleian Libraries , University of Oxford and Cambridge University Library, with the support of the British Library, to understand the impact of NPLD upon two key stakeholders: 1.) academic deposit libraries in the UK; and 2.) users of academic deposit libraries in the UK. Our findings therefore focus on scholarly and non-commercial usage of NPLD collections. We collected a broad primary evidence base: expert interviews with librarians, academics, publishers, and policymakers; surveys of current users of academic deposit libraries; and webometric data relating to usage of NPLD collections. We draw here upon this robust empirical evidence to propose a new paradigm for evaluating NPLD in the UK.

The white paper is split into five sections. Section 1 provides an introduction to the research context of the project and defines the research questions. Section 2 presents the background for the introduction of NPLD in the United Kingdom and explains the access protocols for users of NPLD collections in the legal deposit libraries. Section 3 presents the research project, introduces our project partners, defines how we understand impact and value in relation to NPLD, and outlines the project methodology. Section 4 summarises the research findings, in sections relating to the five key challenges identified in Section 1. Section 5 concludes by introducing a framework for user-centric evaluation of Non-Print Legal Deposit.

Our conclusions approach the research questions in terms of value and impact. First, we found that the NPLD regulations were seen as a huge success when considered in terms of the intrinsic value of legal deposit collections. Our interviewees emphasised the prestige and posterity value of NPLD collections; they associated NPLD with the core mission of legal deposit libraries; and they

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valued the unique digital materials that comprise NPLD collections. Legal deposit regulations therefore remain essential to ensure a comprehensive national collection that will provide a vital resource for scholars in years to come.

However, the instrumental value of NPLD has not been fully realised. As a result, the impact of NPLD upon users of academic deposit libraries has been limited and is likely to remain so until several aspects of NPLD access are addressed. First, access protocols for NPLD fail to support information seeking behaviour and user needs in respect of digital library collections. Users increasingly rely upon personal devices and specialist software, and remote access to materials, whereas NPLD was designed to mirror access to print legal deposit collections. Second, the access arrangements restrict all actions relating to NPLD materials, except for those allowed in the regulations, and in perpetuity. The restrictions have already led to problems: the libraries can only provide accessible copies to visually impaired users, whereas the Equality Act 2010 extends these rights to all disabled users; and text and data mining with NPLD collections is not allowed despite the 2014 exception to copyright law. Third, little work has been done by academic legal deposit libraries to connect specific user groups with relevant NPLD collections for various reasons. Web archives, for instance, are still poorly used by scholars, and it is therefore difficult for librarians to be clear about the value of the UK Legal Deposit Web Archive to researchers. Finally, the NPLD regulations were formulated with reference to print materials, despite the differing affordances of digital media and the associated changes in publishing, academic practice, and information seeking behaviour. The continuation of print as a default reference point shows a misunderstanding of the changing requirements for collecting, preserving, and making accessible contemporary digital collections that risks diminishing their relevance to users.

Our research found little evidence of a strategic approach to considering NPLD collections as a service to users, which is a major contributor to the above problems. The existing literature focuses on the following four pillars of NPLD strategy: collection development, including selection and metadata; long-term digital preservation of NPLD materials; technical aspects including systems capture, ingest, and standards; and regulatory aspects. Studies that focus upon users of NPLD collections are notably absent. Going forward, users should be understood as the fifth pillar upon which to develop effective NPLD strategy. To establish users as core to NPLD, we propose an ongoing user-focused evaluation framework to influence NPLD planning and implementation. This framework should be informed by longitudinal data collection and analysis, with the aim of making NPLD collections accessible and meaningful for users. We propose that the framework should be built upon the following five tenets:

1. The long-term beneficiaries of NPLD are users, not publishers or libraries.
2. The diversity of digital media reflect a major change in information sharing, society, libraries, and research communities, which necessitates re-evaluation of the assumption that print media remain the most useful reference point for defining access protocols.
3. Publishers are entitled to protect their commercial and legitimate interests but the impact of Open Access upon academic publishing and licensing cannot be ignored.
4. Libraries must be empowered to take actions to make collections accessible, usable, and meaningful, based on evidenced trends in user behaviour and user needs.
5. The first four tenets require continued collaboration between libraries, publishers and user groups.

1 INTRODUCTION

Legal deposit is a regulatory mechanism that requires organisations to deposit one or more copies of published outputs in specific formats with a recognised public institution. In recent years, the scope of legal deposit regulations has expanded to incorporate electronic materials. This expansion has seen a tension between legal deposit as an activity for posterity, and the increasingly digital material that the regulations encompass. The *Digital Library Futures* project (2017-2019) seeks to understand this shift by asking: what is the impact of Non-Print Legal Deposit (NPLD) upon academic deposit libraries and their users? This white paper therefore focuses on electronic legal deposit, introduced in the United Kingdom in 2013 as "Non-Print Legal Deposit" (2013), in relation to non-commercial usage, including academic scholarship. Its findings arrive simultaneously to the UK Government's Post-Implementation Review (PIR) of NPLD (Department for Digital, Culture, Media & Sport, 2019). However, our findings represent the independent perspective of the *Digital Library Futures* project, and the first empirical research on the subject. The white paper aims to support the long-term success of NPLD for users of UK legal deposit libraries, while providing a benchmark user study which are relevant to other nations in the process of implementing e-legal deposit.

Legal deposit is generally considered a public good that enables the development of comprehensive national collections, but digital materials raise issues of access and use that challenge the spirit and framing of existing regulations. Research has addressed the impact of digital technologies on scholarly information (Warwick *et al*., 2008; Spezi, 2016), research methods (LIBER, 2017), and publishing (Deegan, 2017). However, almost nothing has been written about how these issues overlap with NPLD. We therefore set out to answer five research questions:

1. What impact has the collection of NPLD materials had upon academic deposit libraries?
2. How are NPLD collections currently being used by researchers within UK academic deposit libraries?
3. How do data-driven innovations in academic research and government policy interact with, and challenge, the regulatory framework for legal deposit?
4. What barriers to digital inclusion are created by the current form of NPLD?
5. How can we address the need for stronger methodological interventions into the impact of digital collections?

These questions derive from five key problems identified in our preliminary literature review:

1. NPLD in academic deposit libraries has been under-investigated. The existing literature focuses on four primary aspects that represent the pillars of NPLD strategy: collection development, including selection and metadata (Degerstedt and Philipson, 2016; Derrot and Koskas, 2016), long-term digital preservation of NPLD materials (Beagrie, 2001; Digital Preservation Coalition, 2017), aspects of technical implementation, including systems, capture, ingest, and standards (De Beer et al., 2016), and regulatory aspects including observations on the development of NPLD regulations (Gibby and Brazier, 2012). National libraries share an interest in all aspects of legal deposit, whereas Andrew Green (2012) claims that academic libraries are motivated to secure access to materials for their readers. However, little has been written on how such motivations inform how academic deposit libraries approach NPLD.

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2. Little published data exists on the users of NPLD collections. Preservation, access and security are rigorously assessed by the legal deposit libraries (Digital Preservation Coalition, 2017) to ensure that their technical solutions demonstrate best practice in response to the regulations. However, the same rigour has not been applied to user evaluation. To date, only two published studies have focused on access to materials covered by e-legal deposit. Helen Hockx-Yu (2014) studied scholarly use of the UK Web Archive, finding access to be problematic for two interrelated reasons: because of regulatory restrictions, and because the access model is based upon a single envisaged use case. This use case, consisting of online search via a library discovery system followed by on-screen reading, has been termed "e-reading" by Georgi Alexandrov (2018). Alexandrov outlined access arrangements across European nations with advanced e-legal deposit programmes, and predicted a move towards more liberal access in future. These studies contribute a partial analysis, leaving a significant gap for empirical research into users of NPLD collections.

3. The emergence of digital humanities, data science, and quantitative social sciences have required libraries to develop new forms of licencing, collection management and support for digital materials in response to user needs (Gooding, 2017). Similarly, the UK government supports computational research through a 2014 copyright exception that allows non-commercial text and data mining of copyrighted materials. However, the Legal Deposit Libraries Act 2003 (2003) upon which the 2013 regulations depend, restricts any activities in relation to NPLD publications unless explicitly permitted by legislation. To date, the regulations make no allowance for text and data mining, or to allow materials to be made accessible at the end of their copyright term. There is therefore a need to consider the implications of the legislative divide between NPLD regulations, and regulatory mechanisms for supporting computational research.

4. The NPLD regulations were introduced at a similar time to broader strategies for widening online participation. The UK Digital Strategy (Department for Digital, Culture Media & Sport, 2017) emphasises inclusion and access, and the DCMS "Culture is Digital" report seeks to increase digital skills, digital participation, and "unlock the power of data" (Department for Digital, Culture Media & Sport, 2018). Meanwhile, the mission statements of the UK academic deposit libraries define a broad remit to develop and maintain their collections for scholarship and society (Bodleian Libraries, 2013), and have engaged in digitisation of their collections to serve a global audience (Cambridge University Library, 2014). Furthermore, scholarly publishing is increasingly transitioning towards Open Access, supported by mandates from research councils (RCUK, 2018; Wellcome Trust, 2019), government research evaluation exercises (REF 2021, 2019), and European initiatives (Plan S, 2019). Similarly, copyright regulations have been enhanced to allow the provision of accessible copies of materials for readers with a recognised disability. These changes are not formally reflected in the NPLD regulations, which use as a basis the Copyright, Designs and Patents Act 1988 (1988) as amended by the Copyright (Visually Impaired Persons) Act 2002 (2002). This means that the 2013 regulations only allow for accessible copies of NPLD materials to be made available for readers with visual disabilities, rather than all persons with a recognised disability. As such, there is a gap in understanding of the extent to which NPLD supports emerging practices relating to Open Access and accessibility for disabled readers.

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5. The library sector also lacks established methods for undertaking detailed empirical analysis of use of digital resources (OCLC Research, 2015, p. 6). Scholars have developed models for impact evaluation (Hughes, 2012), but there has been no work to apply these methods to users of NPLD collections. Similarly, these models focus less upon user behaviour than demonstrating the positive impact and value of specific digital collections. Furthermore, the focus upon posterity with NPLD makes contemporary impact evaluation difficult because some existing models refer to measuring impact upon an "intended" community (Tanner, 2012, p. 12) of users. The intended community of NPLD, much like legal deposit more generally, is often framed as future researchers, an indeterminate and poorly defined group. Therefore, there is a need to consider how approaches to evaluating NPLD can contribute to wider methodological debates in the library sector.

The white paper aims to present the background and development of NPLD in the UK and explain the development and scope of the *Digital Library Futures* project. It then presents the project findings aligned with the five areas of focus outlined above. It concludes by arguing that NPLD is increasingly restrictive in comparison to broader responses to the digital shift including changing scholarly information seeking behaviour, Open Access, text and data mining, and improved accessibility for disabled users. We trace these problems to a lack of strategic planning for users of NPLD collections. The white paper's key contribution is to develop a framework for user-centric evaluation of NPLD, which places users as the fifth key pillar of NPLD strategy.

2 BACKGROUND AND DEVELOPMENT OF NON-PRINT LEGAL DEPOSIT IN THE UK

2.1) Background to Legal Deposit

Legal Deposit is a legal requirement that a person or group submit copies of their publications to a trusted repository or repositories. The world's first formal legal deposit regulations date to sixteenth century France (Lariviere, 2000, p. 6), and legal deposit has since been adopted around the world. While voluntary deposit arrangements are common, legal deposit is delivered via legislation that names the parties responsible for depositing materials, the parties responsible for collecting materials, and the scope of the materials to be deposited. This white paper focuses upon **legal deposit libraries**, which are those libraries given regulatory responsibility for collecting, managing, and safeguarding legal deposit materials for a particular nation or region. As of 2016, 62 out of 245 national and state libraries worldwide had legal deposit legislation or participated in legal deposit activities (De Beer et al., 2016, p. 88). Many nations with legal deposit collect via other mechanisms including copyright offices and government ministries (Staff of the Global Legal Research Directorate, 2017). Most legal deposit libraries fit into one of the following categories:

1. National libraries (such as the National Library of Mexico);
2. State libraries (such as the Berlin State Library);
3. University libraries (such as the Library of the University of Botswana).

Legal deposit is widely considered to be a public good that supports the creation of research libraries (Brazier, 2016, p. 42), enables access to published works (Lariviere, 2000, p. 5), and allows national bibliographic control (De Beer et al., 2016, p. 88). Furthermore, it provides the foundations of a comprehensive archive of a nation's published output for use by future generations (HC Deb, 1997; Lariviere, 2000, p. 4).

Electronic legal deposit (e-legal deposit) is used here as a broad term to denote legal deposit regulations that apply to digital materials. **Non-Print Legal Deposit** is the specific term for the UK e-legal deposit regulations. The UK regulations control the deposit of materials to six libraries in the United Kingdom and Republic of Ireland[1]. The British Library is automatically entitled to receive a copy of specific print publications including books, pamphlets, magazines, newspapers, sheet music, and maps. The remaining five deposit libraries each retain the right to receive copies upon request. The British Library has its own legal deposit office, while the remaining five libraries are supported by the Agency for the Legal Deposit Libraries; these organisations are responsible for requesting and receiving copies of publications for distribution to the deposit libraries. The effective implementation of legal deposit is supported by the Joint Committee on Legal Deposit (JCLD), which is composed of representatives from the deposit libraries and publishing trade associations[2]. The Legal Deposit Libraries Implementation Group (LDIG) oversees collaboration between the legal deposit libraries through subgroups including Collection Development and Acquisitions; Reader Services; Security; Web Archiving; Metadata; and Technical Operations.

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[1] The six libraries are the British Library (BL), the National Library of Scotland (NLS), the National Library of Wales (NLW), the Bodleian Libraries, University of Oxford, Cambridge University Library, and Trinity College Dublin (TCD). TCD is in the unusual position of benefiting from both British and Irish legal deposit regulations.

[2] The British Library website lists the current membership of JCLD: www.bl.uk/legal-deposit/joint-committee

2.2) Development of UK NPLD

In the 1990s, the UK legal deposit libraries saw a surge in the publication of born-digital materials that did not fall under legal deposit regulations (Working Party on Legal Deposit, 1998). The then Secretary of State for Culture, Media and Sport, Chris Smith, therefore set up a working party chaired by Sir Anthony Kenny to address deposit of non-print publications. In 1998, the working party concluded that it was necessary to extend statutory deposit to non-print items to secure a comprehensive national collection (British Library, 1998). The working group laid the foundation for a voluntary arrangement that was subsequently introduced in 2003 and allowed the UK legal deposit libraries to make significant progress in protecting non-print materials. The Legal Deposit Libraries Act 2003 (2003) established the principle of e- legal deposit, along with legal protection to the deposit libraries for collecting electronic materials at scale; the Act stopped short of enacting e-legal deposit in law, requiring a later piece of subordinate legislation. The Legal Deposit Advisory Panel (LDAP) was convened from 2005 to 2010 to establish a consensus on the precise nature of this legislation. After a consultation period, the LDAP recommendations for offline media, web materials, paywalled electronic materials, and structured datasets (Gibby and Brazier, 2012, p. 364) formed the basis for the Legal Deposit Libraries (Non-Print Works) Regulations 2013 (2013) which formalised in law the arrangements for collecting, preserving, and using NPLD materials. Subsequently, the Government commissioned the JCLD to conduct a Post-Implementation Review to consider the extent to which the main objective of the regulations had been achieved by their implementation. The review defines this objective to be "to allow for the preservation of the UK's non-print publications for future generations" (2019).

The 2013 regulations refer to work **in writing**, meaning any item that is "(a) transmitted by electronic means; (b) received in legible form; and (c) capable of being used for subsequent reference" (2013). The requirement to submit NPLD materials is additional to existing arrangements for print materials. Where print and non-print materials exist for substantially the same work, publishers are required to submit the work in print form unless the publishers and the library agree to the deposit of a non-print version. Similarly, when the work is available in two or more non-print media, but not in print, the publisher and library may agree on the format for a deposit; in the absence of agreement, the publisher may decide the format. The Copyright, Designs and Patents Act 1988 (1988) informs NPLD access and use protocols. However, it is important to note that UK legal deposit is not dynamically aligned with related regulations, and so new exceptions elsewhere are not reflected automatically in legal deposit.

2.2.1) Provisions for Access to NPLD

Because of this lack of alignment, the 2003 Legal Deposit Act, subsequently informed by the 2013 regulations, define what can be collected under NPLD, from whom, and how it can be accessed and used. In the UK, access arrangements for NPLD materials were explicitly designed to "mirror the level of access to printed publications" (HL Deb, 2013). The 2013 regulations provide for access as follows:

1. Reader access to NPLD materials is limited to computer terminals located on premises controlled by the legal deposit libraries (part 1, regulation 2).

2. Materials must only be accessible concurrently to readers via one computer at each legal deposit library (part 4, regulation 23).

3. For materials published online, seven days must elapse between the date of delivery of that material, and the date on which it is made available (part 4, regulation 24).

4. A copyright owner may request in writing that certain materials should be embargoed for a specific period. Deposit libraries are bound to comply with such requests, provided that:

   a. The period for which materials are withheld is limited to three years from the date of the request;
   b. The deposit library is satisfied that, during the requested timeframe, viewing of the relevant materials by readers would, or would be likely to, "unreasonably prejudice the interests of the person making the request" (part 4, regulation 25).

5. Deposit libraries are permitted to produce and allow access to copies of non-print work on their premises for a visually impaired person, if copies of the relevant material are not commercially available in an accessible form (part 4, regulation 26).

The government guidance to NPLD specifies that access for visually impaired persons is based upon the Copyright, Designs and Patents Act 1988 as amended by the Copyright (Visually Impaired Persons) Act 2002. However, in 2014, amendments to copyright law extended disability regulations to make accessible formats available to all disabled people, and so provision for NPLD materials is now based upon superseded disability legislation.

The legal deposit libraries have developed a "Shared Technical Infrastructure" (British Library, 2013), located in a secure environment, to preserve and make accessible NPLD materials. Each of the national libraries store a full copy of all NPLD materials at local nodes based in St. Pancras, Boston Spa, Aberystwyth, and Edinburgh, while the academic deposit libraries each connect to the British Library nodes. These nodes are set up to manage restricted access in line with the regulations. The libraries currently share a system called ERICOM that delivers NPLD materials through a "secured remote desktop browser system" (British Library, 2013) that stops files from being stored locally; effectively NPLD materials are streamed to library computers.

The 2003 Legal Deposit Act restrict all activities relating to NPLD materials unless provided for in law. This means that those activities stated in the 2013 regulations define the scope of access and use. As a result, unless explicitly incorporated into the regulations, it is not legal for libraries to support text and data mining, or to make provision for disabled users other than visually impaired persons. Additionally, this creates a form of "perpetual copyright" (Green, 2012, p. 108), whereby NPLD materials will not become more accessible after their copyright term expires because no end date to access restrictions is provided. As a result, the NPLD restrictions go further than mirroring access to print legal deposit. It is vital to address how these restrictions impact the institutions and users of NPLD collections, in order to understand the implications of the regulations.

3 THE DIGITAL LIBRARY FUTURES PROJECT

Having laid out the context for NPLD, the rest of this white paper responds to the challenges raised above. It provides a timely evaluation of the institutional and user impacts of NPLD, and the way these result to broader issues for libraries. It is the first project to adopt an explicitly user-centric approach to NPLD and provides a benchmark study that explores the relationship between information seeking behaviour, legal deposit institutions, and the broader regulatory and scholarly context for NPLD. We focus on academic deposit libraries, which provide a unique case study to explore the value of NPLD, and the impact of the framing of the regulations upon institutional and user practices, because of their interest in securing access to legal deposit materials for their current users (Green, 2012, p. 108).

3.1) Project Partners

Each project partner has some autonomy to define local arrangements for providing dedicated legal deposit terminals. This means that their services are not directly comparable, but instead provide two different case studies of user behaviour within academic deposit libraries. As a result of local decisions on implementation, the NPLD user experience differs slightly between each case study partner. However, both still restrict NPLD usage to e-reading on fixed terminals within library reading rooms. This paper will use these case studies to set out the findings of our project, and to set out the case for a user-centric evaluation as a missing pillar of assessing the value and impact of NPLD.

3.1.1) The Bodleian Libraries, University of Oxford

The Bodleian Library dates back to 1598, when Sir Thomas Bodley (1545-1613) wrote to the Vice-Chancellor of the University of Oxford with an offer to redevelop the University Library. The Library thereafter reopened in 1602 and was named in honour of its benefactor. The Bodleian Library became the first de facto legal deposit library in England in 1610, via an agreement with the Worshipful Company of Stationers and Newspaper Makers that permitted the library to claim a copy of everything printed in the UK under Royal Licence. This arrangement was formalised in 1710, when the Statute of Anne introduced a formal copyright framework in the United Kingdom that incorporated an early form of legal deposit.

The Bodleian Libraries now include 28 separate libraries with specific subject specialities. The central area consists of the Old Library, Radcliffe Camera and the Weston Library. There is remote storage at the Book Storage Facility in Swindon. Four main subject divisions are covered by the Bodleian Libraries: Humanities, Social Sciences, Medical Sciences, and Mathematical, Physical and Life Sciences. In addition, colleges and departments of the University have their own libraries. The Bodleian Libraries continue to look at their infrastructure with the aim of consolidating smaller libraries where possible. The Bodleian Libraries provide access to NPLD collections via any fixed PC terminal with an IP address recognised to reside within the libraries reading rooms (Bodleian Libraries, 2019). The image below shows terminals at the Bodleian Libraries which can be used to access NPLD materials.

**PC Terminals in the Bodleian
Reading Rooms**

3.1.2) Cambridge University Library

Cambridge University Library is the main research library for the University of Cambridge. It was founded in the early fifteenth century, and by 1474 had 330 volumes. The status of the library grew in the eighteenth century due to two events: first, in 1710 the Statute of Anne recognised the University Library as one of a number of legal deposit libraries; and then in 1715 King George I presented the library of John Moore, Bishop of Ely, which contained 30,000 volumes and 1,790 manuscripts. There has since been continuous change and growth. In recent years, the university's many libraries have been reorganised, with just over 20 from a total of over 100 libraries now affiliated into the Cambridge University Libraries Network: more are planned to join.

Since 2018, the libraries have shared iDiscover as a common library discovery system and, since 2019, a common library management system (Alma). The Cambridge University Library provides dedicated access to NPLD via ten designated PCs in the reading rooms of the UL, and one PC in each affiliated faculty and departmental library (Cambridge University Library, 2018). Due to incompatibility between their local printing system and ERICOM, they provide access to eBooks and eJournals through a separate local secure system.

Students in a college library, University of Cambridge

3.2) Project Methodology

We adopted a mixed methods case study approach to research two key stakeholders: 1.) UK academic deposit libraries, and 2.) users of UK academic deposit libraries. Data collection occurred between 2017 and 2018, and the findings therefore relate primarily to this period. We used a range of qualitative and quantitative methods to address our research questions:

1. **Interviews:** we undertook interviews with 36 expert stakeholders: responsible officers at academic deposit libraries, across departments with input into the implementation and delivery of NPLD; experts drawn from academia, publishing and legal deposit policymaking; and relevant staff at the British Library. The interviews were transcribed, and qualitative coding was thereafter applied. The coded analysis formed the basis for a consideration of staff and institutional impact.

2. **Surveys:** we surveyed 40 users of the Bodleian Libraries, and 40 users of the Cambridge University Library, focusing upon how respondents' information seeking behaviour related to their experience of using NPLD collections. We undertook heterogeneous purposive sampling to ensure representation from the range of academic disciplines at each university. The responses were processed to extract descriptive statistics, and to analyse qualitative information. This work allowed us to analyse how NPLD fits into respondents' information seeking behaviour.

3. **Web Analytics:** we undertook web log analysis of usage of NPLD terminals in the academic deposit libraries, contextualised with access statistics for all six legal deposit libraries. The academic deposit libraries provided us with web log files, while access statistics were provided by the British Library. The processed data provides headline statistics for usage of and interaction with materials via NPLD terminals but excludes attempted access via other sources. It provides a snapshot of user behaviour, which is contextualised through the other methods.

4. **Subject-based bibliographic analysis:** we created an innovative approach to analysing and reporting user behaviour from bibliographic metadata. Two datasets, spanning 2015-2017, were provided by the BL: title-level access requests for NPLD eBooks; and title-level access requests for NPLD eJournals. We developed a Python-based lookup tool called *Subjectify*, which automatically applies Dewey Decimal and Library of Congress classmarks from the OCLC Application Interface to the NPLD request lists. The classmarks formed the basis of a subject-based aggregated analysis of NPLD access requests, which provides significant insights into user behaviour in a form that addresses ethical concerns surrounding granular reportage.

3.2.1) Defining Impact and Value in Relation to NPLD

Scholars in Library and Information Studies have engaged in the definition (Hughes, 2012), modelling (Tanner, 2012), and development of methods (Meyer *et al*., 2009), for studying the impact and value of digital library collections. This has resulted in a burgeoning body of work concerned with impact evaluation. However, these studies often define impact poorly or not at all. The question of impact in cultural heritage generally distinguishes between **intrinsic value** (the value something has in and of itself), and **instrumental value** (the value something has because it helps to achieve or get something). The former emphasises the social and cultural significance of the existence of

particular materials, whether due to their perceived importance, cultural significance, or prestige. On the other hand, instrumentalism ascribes a clear social function to arts and culture, which since the 1980s has shifted evaluative frameworks toward targets, measurement and demonstrable impact. As Crossick and Kaszynska note, "the need to demonstrate impact led to the cultural sector's objectives and value becoming intertwined with other agendas, as governments of whichever party required that cultural funding help deliver their other policy priorities" (Crossick and Kaszynska, 2016, p. 16). In this paper, we align the instrumental argument more closely with the service-driven values of contemporary librarianship (Shera, 1973; Finks, 1989; Lankes, 2011), by considering the value and impact of collections in terms of how they allow the library sector to serve their users existing and emerging needs, rather than how they serve government objectives.

In light of this debate, and for the purposes of our research, we define value and impact for NPLD as follows:

1. **Value** refers to the benefits, or lack thereof, of NPLD collections for libraries and their users.

2. **Impact** refers to the ways in which NPLD collections effect change in collecting, managing, and information seeking behaviour.
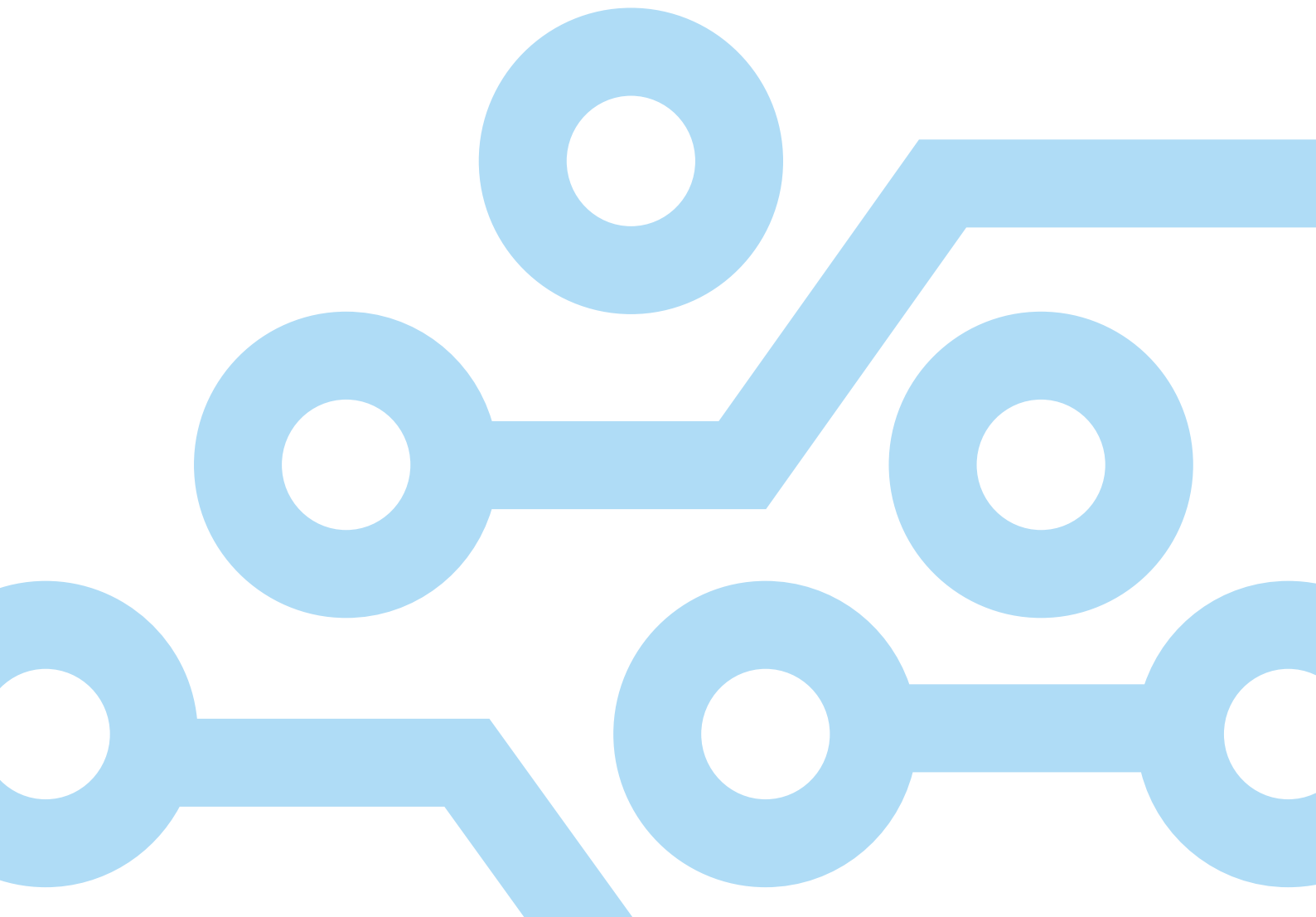
4 SUMMARY OF RESEARCH FINDINGS

This section will summarise our findings from the DLF case studies, with each section addressing one of the five research questions. Despite the differences in implementation between our case study partners, we found that similar themes emerged from each, and therefore present these overarching themes in relation to the research questions stated in Section 1.

4.1) What impact has the collection of NPLD materials had upon academic deposit libraries?

NPLD has had a positive impact upon the deposit libraries, insofar as the libraries now have access to digital collections in unprecedented depth and breadth, and in increasingly varied formats. Indeed, several staff interviewees noted that NPLD, in common with legal deposit, contributed directly to the achievement of the strategic objectives of their institution. NPLD was seen as a "gold standard," and the capture of online mapping and web archival materials were viewed as major steps forward. Web archives were described by one interviewee as a "crown jewel" that allowed new materials to be systematically collected for future generations. This viewpoint was broadly supported by interviewees, leading us to conclude that NPLD has broad intrinsic value due to its perceived prestige, future benefits to researchers, and its role in preserving the published record of the United Kingdom. It can therefore be considered to meet the government objective to preserve non-print materials for the future.

That said, identifying the instrumental value of NPLD was much more complex. Library staff were disappointed with access arrangements, citing the need for researchers to come into the library as contradictory to their efforts to widen access and usage. Interviewees repeatedly noted two points: first, that users were forced to access materials in reading rooms; and second, that they felt readers were frustrated by usage restrictions for NPLD materials. Reader services librarians felt that they were at the forefront of user interaction with NPLD materials, and that the problems they were addressing made them less enthusiastic than their colleagues in strategic roles. Many interviewees were uncertain about the quality of certain resources: some felt that the interface for NPLD materials was unintuitive; some felt that it was hard to convince readers of the benefits of NPLD when they had worked so hard to "make it easier for people to get access to this stuff" for purchased collection items; and others commented that the copies submitted to libraries were inferior to their print and subscription digital collections.

The most commonly raised problem was pagination. Many librarians felt that NPLD posed significant barriers to scholarly citation practices because eBooks were predominantly deposited in ePub format and therefore do not provide page numbers. While our staff interviewees felt this was a problem particular to NPLD, some external interviewees noted that this was a broader challenge. They noted that scholarly citation practices had not adapted to accept the material affordances of digital media formats, leaving print as a preferred citation option. As a result, they felt that new solutions to the problem of pagination would emerge over time. This challenge is therefore indicative of a necessary cultural shift in response to the digital turn, rather than a specific problem with NPLD. However, it should still be noted that the deposit arrangements for NPLD can exacerbate the problem. The Legal Deposit Libraries Act 2003 (2003) requires that copies of deposited print publications are "to be of the same quality as the best copies which, at the time of delivery, have been produced in the United Kingdom." However, the 2013 regulations (2013) merely specify that the quality of the material most suited for presentation may be agreed between the

publisher and the library, or "in the absence of agreement, a quality which the publisher decides." As a result, collections librarians noted that NPLD items removed their ability to select publication formats based on user needs. In order to address user needs, many were still forced to buy duplicate commercial copies of deposited works. One librarian gave the example of novels, noting that patrons who would previously have been content with a print legal deposit edition found reading a novel on screen to be problematic.

NPLD has had a direct impact upon the academic deposit libraries in several ways, although as with citation practices some of this impact is difficult to separate from the wider transition from print to electronic publications. One interviewee estimated that their legal deposit department had seen a 20% drop in receipt of books and journals. The need to process and catalogue physical books therefore continues to diminish, meaning that roles dealing with legal deposit in libraries have been moved, redefined, or lost. One interviewee noted that "we've given them training, they now help out on our electronic resources helpdesk." This reflects a wider "change in how libraries staff enquiry services" (Gooding, 2014, p. 322), as staff are retrained to deal with the increasing number of queries relating to electronic resources.

Our interviewees also felt that user requirements were not fully considered in the development and implementation of the regulations until a late stage, which has made it hard for staff to adequately explain and promote NPLD to their users. It was noted that legal deposit is not cost neutral to academic deposit libraries. Both partners pay a yearly fee to support central infrastructure and staffing costs, and have invested locally in additional servers, dedicated PCs, and staff time. Some interviewees therefore argued that it was necessary to consider "return on investment" in terms of the instrumental value of NPLD for their users. The following section addresses this user context.

4.2) How are NPLD collections currently being used by researchers within UK academic deposit libraries?

It was difficult to assess the impact of NPLD upon users because we found that the libraries had not established success criteria for usage. Very little user assessment had been conducted to contextualise access statistics, and internal studies had instead focused upon user experience with the NPLD user interface. However, library staff generally reported that usage of NPLD materials seemed low, and that this could largely be attributed to the access restrictions. The library annexe to the PIR (2019) also compares usage of the UK Legal Deposit Web Archive (UKLDWA) to the smaller Open UK Web Archive (UKWA) in unfavourable terms. The following charts show the extent of usage of NPLD collections. Figure 1 shows the total usage of NPLD eBooks, while Figure 2 shows the total usage of NPLD journals[3]. There were around 60,000 eBook access requests across all six legal deposit libraries over a two-year period, and roughly 25,000 eJournal access requests. Similarly, from 2014 to 2017, an average of 225 users per month accessed the UK Legal Deposit Web Archive across all six libraries.

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[3] "Accessed" materials refer to titles which were requested, "Turnaway" requests refer to requests for material that was already in use, and "Suppressed" materials are those which were unavailable due to ingest problems
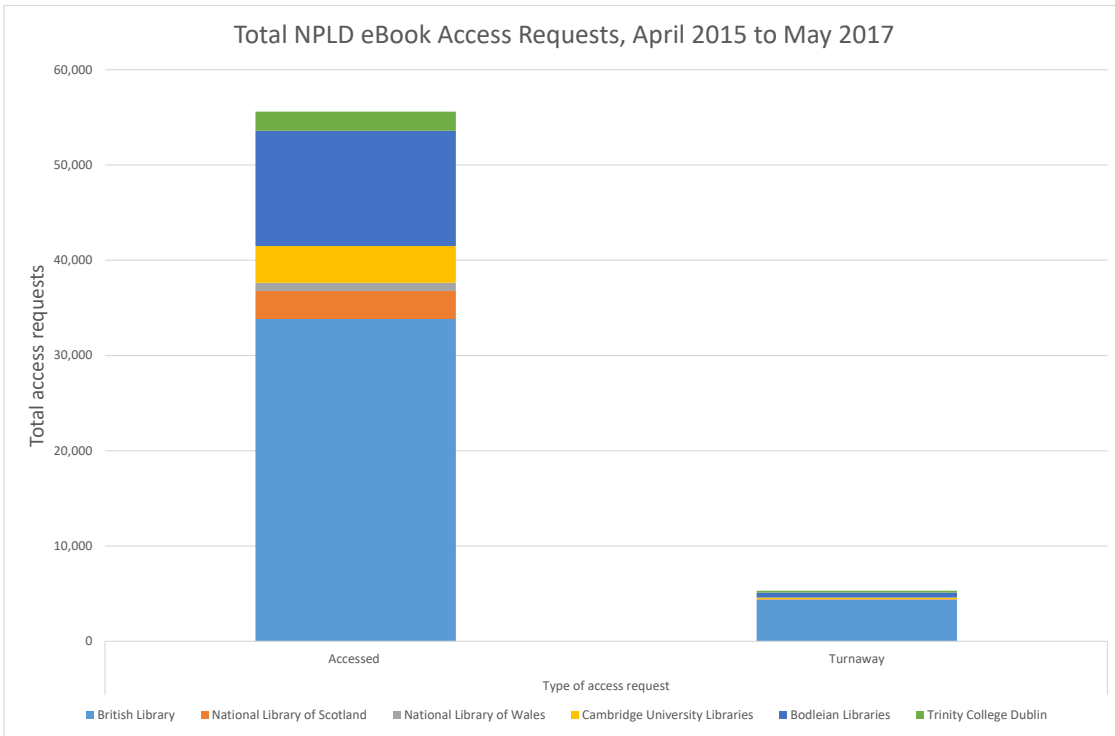
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Figure 1: Total NPLD eBook Access Requests, April 2015 to May 2017
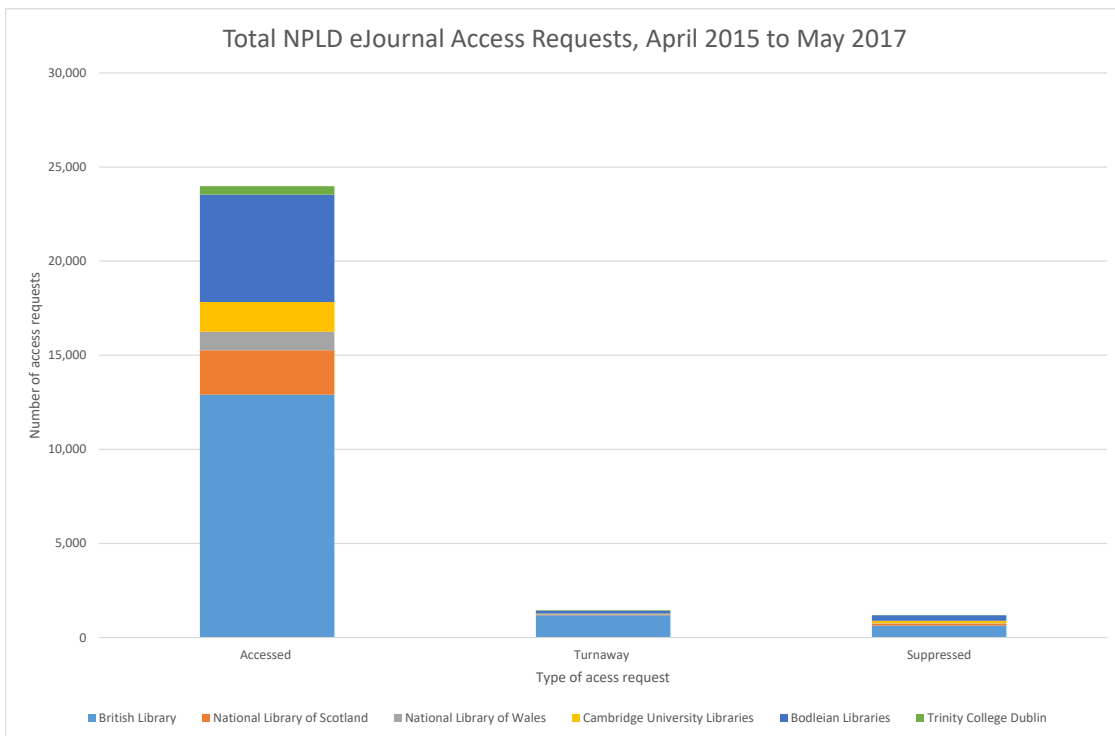

Figure 2: Total NPLD eJournal Access Requests, April 2015 to May 2017

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Due to users being conceptually unfamiliar with NPLD, existing work failed to situate their experiences within a broader framework. We therefore focused on surveying how NPLD fitted into user behaviour by establishing the baseline characteristics of information-seeking behaviour for our sample, further informed by desk research into online user behaviour. We then asked survey respondents to complete search tasks that required them to come across NPLD titles through their established information seeking practices, in order to familiarise them with the collections. Finally, we asked them to respond to questions on NPLD after this familiarisation. While our respondents came from a variety of disciplinary backgrounds, there was common ground that allowed us to establish an archetypal user of academic deposit libraries:

1. Works remotely on a personal device, using commercial search engines or library databases to start their search, using some form of authentication to access subscription materials.

2. Often engaged in work away from the university, including international fieldwork.

3. Depending on discipline, is likely to work with a set group of electronic resources.

4. Uses web archives, including the UK Legal Deposit Web Archive, very little or not at all.

5. Sometimes visits central library sites in person, but more likely to use faculty, department, or subject libraries due to community and relevance.

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This profile maps closely to existing studies which show that users increasingly want remote access to resources, at scale, in the format that they desire, and across a variety of digital resources. Therefore, NPLD access protocols provide a poor match for information seeking behaviours with digital materials, including the "scholarly primitives" outlined by John Unsworth: "discovering; annotating; comparing; referring; sampling; illustrating; and representing" (Unsworth, 2000). Unsworth argues that these scholarly primitives form the basis for higher level scholarly projects, and effective research online relies upon resources that facilitate these functions. NPLD collections impede these established scholarly workflows, making them undesirable to many researchers. As a result of the limitations, the vast majority of survey respondents said they would not use NPLD materials, given the choice, as figure 3 shows:
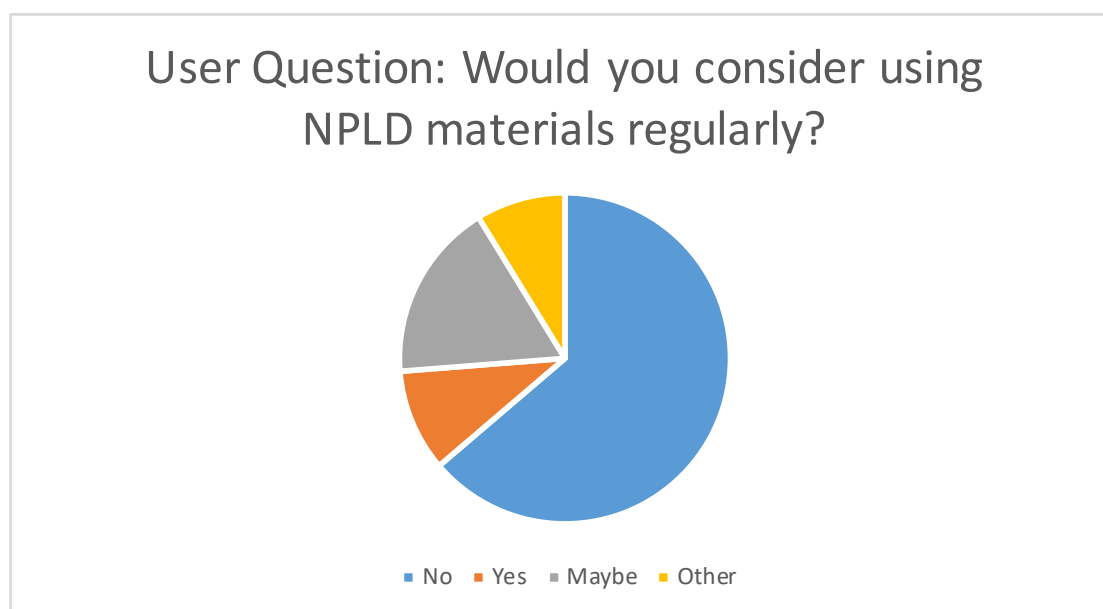

Figure 3: User Question: Would you consider using NPLD materials regularly?

When asked to elaborate, respondents mentioned inaccessibility and the lack of a clear need for NPLD over other resources as two reasons for this decision. That said, for those willing to travel to libraries, NPLD does support certain aspects of what researchers want to do: respondents said that when they discovered sources they preferred to print, save, or read them right away. NPLD resources are designed to allow reading and printing, and it is therefore likely that researchers who overcome their unwillingness to use fixed terminals are reasonably well served in this regard. However, their need for annotation, bibliographic management, and downloading of materials for later reuse and comparison is less well supported, and this puts users off NPLD materials.

We found no evidence that NPLD materials had an impact on the types of resources that were being used. For instance, our subject-level analysis showed that usage of NPLD collections followed long-established disciplinary boundaries. Access requests for NPLD titles in Arts and Humanities subjects were more common for eBooks than eJournals (figure 4), while for eJournals

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Technology subjects were most commonly requested (figure 5). Each chart excludes items with unknown classmarks.
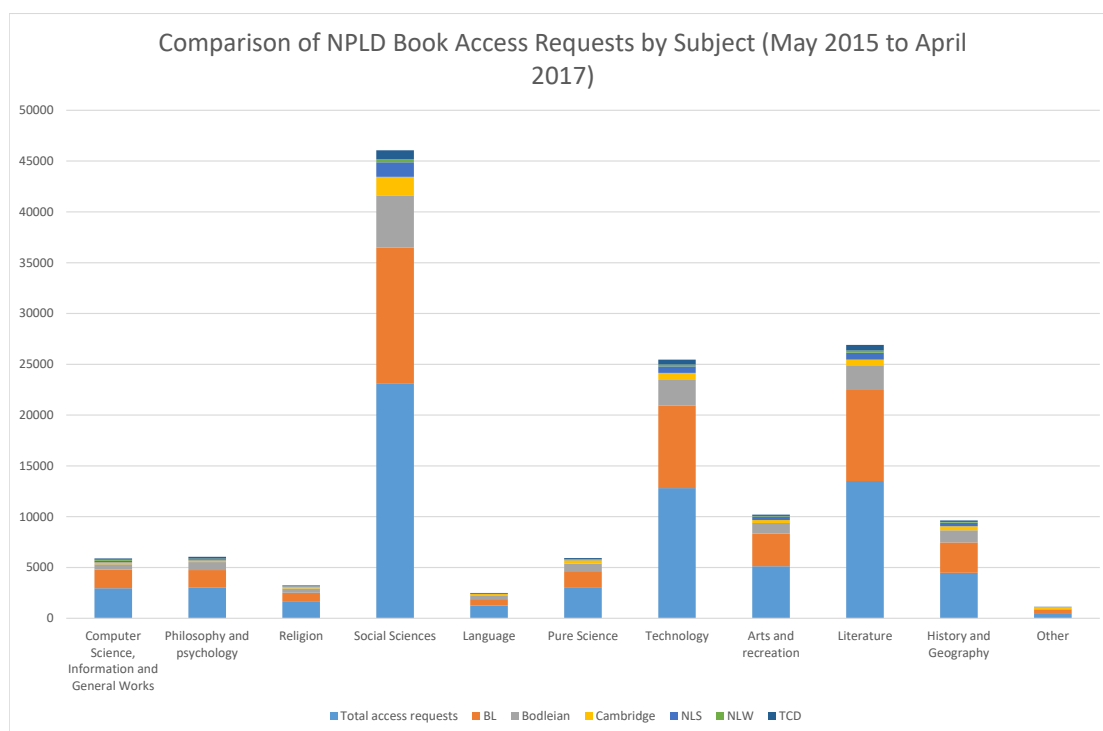

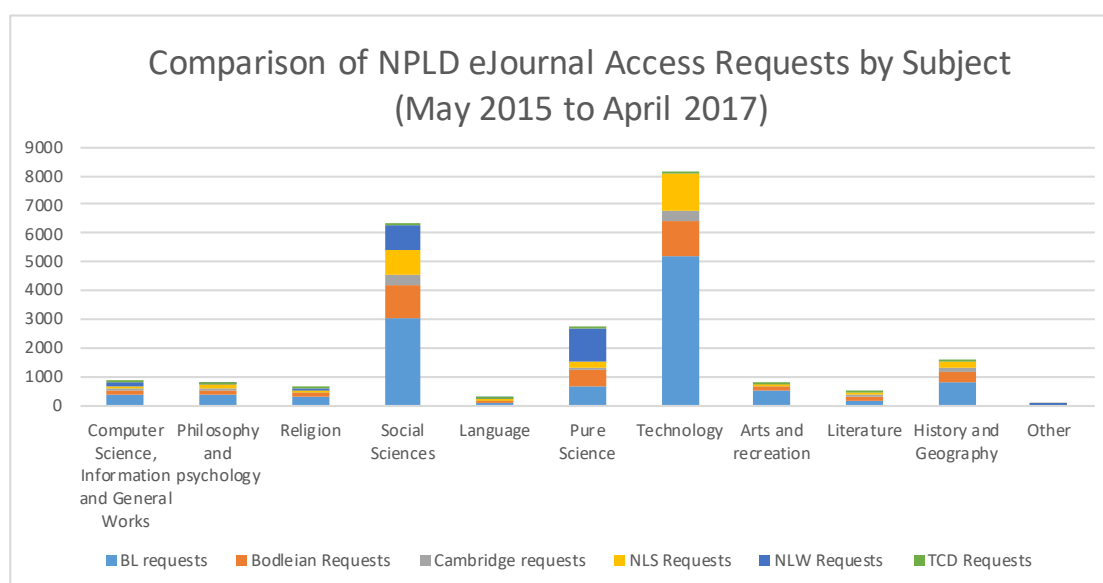**Figure 4: Comparison of NPLD Book Access Requests by DDC Subject**

Figure 5: Comparison of NPLD eJournal Access Requests by DDC Subject

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This finding reflects existing studies that researchers in the Arts and Humanities still see books as a vital source (Stone, 1982, p. 296; Palmer and Cragin, 2008, p. 171), whereas technology and science subjects tend to rely on faster access to new research and rely more heavily on journals (Talja and Maula, 2003). Users in the Social Sciences were more hybrid in their request patterns, using both eBooks and eJournals in large quantities. In addition, the presence of web archival materials in NPLD collections has not led to widespread uptake by researchers. Our survey respondents almost universally noted they were not using web archives. There is therefore a split between our interviewees' emphasis on the uniqueness and significance of the web archive, and the general research community's view of its immediate instrumental value. Many researchers see web archival materials as of marginal relevance, and even those currently working with web archives argued that there was limited understanding among scholars of their growing significance.

We can therefore conclude that the impact of NPLD upon researchers has been limited, due to a combination of access arrangements and limited awareness of NPLD as a concept. Furthermore, NPLD access is built upon a use case that, to a large extent, impedes online information seeking behaviours and scholarly primitives. However, from 2015 to 2017 there was steady growth in the usage of NPLD eJournals and eBooks across the six legal deposit libraries, a pattern reflected locally at the academic deposit libraries. There is a possibility that usage might increase over time, as either materials become available solely through NPLD, or recognition of the research value of emerging formats encourages researchers to overcome the limitations of the collections. Additionally, the relative youth of NPLD collections means that scholars are still adapting to the broader implications of emerging formats. Print and subscription materials offer far greater alignment with user expectations because they have been developed in response to feedback over many years. It is possible that changes to scholarly practices will be responsible for increasing the meaningfulness of unique NPLD collections, and so the limited impact of NPLD to date cannot be entirely explained by access restrictions. Currently, though, there is no compelling argument that the instrumental value of NPLD has been as fully realised as its intrinsic value, which means that NPLD collections have had limited impact upon users of academic deposit libraries.

4.3) How do data-driven innovations in academic research and government policy interact with, and challenge, the regulatory framework for legal deposit?

This question arose due to the increased importance ascribed to digital research methods in the academic literature, and broader regulatory changes to support data-driven approaches. Indeed, several of our staff interviewees noted that they had received some queries from researchers interested in doing text and data mining on NPLD collections. There is a "background of increased expectations" (Winters, 2017, p. 246), of open access to data, and the ability to download materials for text and data mining, while libraries are increasingly judged by the quality and breadth of services and tools that they provide on top of their collections (Brazier, 2016, p. 48). However, the NPLD access protocols restrict any actions that are not explicitly allowed in the regulations. As a result, text and data mining are largely impossible using NPLD collections, and this will continue indefinitely unless changes to the regulation are enacted.

However, our staff interviewees indicated that data-driven innovation may not have been intentionally ignored. The recommendations for the 2013 regulations were developed around ten years ago, around five years before the copyright exception was introduced for non-commercial text and data mining. Indeed, until relatively recently digitisation programs similarly failed to make

allowances for text and data mining. It simply was not a priority for users, funders, or institutions. As a result of the gradual acceptance of computational methods in various disciplines, the lack of planning for text and data mining is now a significant barrier for innovative research. Some of our interviewees noted there was still no huge demand for data mining. However, they also recognised that restrictions ensured that access to NPLD collections would increasingly define what research was possible. One interviewee noted that "for as long as we can't download a large data set derived from the legal deposit collection, only certain kinds of research will be possible using this material, and it will be small scale qualitative research." In effect, inflexible NPLD access protocols could determine the kinds of scholarship that will be possible not only in the short term, but for many years to come.

NPLD has been presented as media agnostic, in the sense that emerging formats will be covered by generic regulations. However, adopting print as a model for NPLD regulations to mirror does a disservice to the research community because it perpetuates material restrictions. Print media have their own material affordances and associated information behaviours, and non-print formats offer different possibilities. One interviewee said that digital media challenge existing approaches because they "stir the imagination of people" to redefine what is possible in research. It is dangerous to fall into the trap of assuming that the physical medium is a neutral carrier of content, precisely because format matters beyond its ability to transmit content. We should not be blind to the technological nature of print materials, nor the way that particular formats encode specific interpretations and use cases, because by doing so we risk determining future usage through promoting a false equivalency of all media forms.

4.4) What barriers to digital inclusion are created by the current form of NPLD?

Within the context of current access arrangements, there are positive provisions for readers with disabilities. The regulations make explicit arrangements for access to NPLD content for readers with visual impairments. However, as outlined in Section 1, the NPLD regulations are not aligned with the 2014 amendments to copyright law, which extended the right to accessible formats to all disabled people. As a result, our interviewees observed problems for disabled users of NPLD materials. First, they noted that it was difficult to provide high quality voice-activated software on fixed library terminals. Users of voice-activated software often rely on commercial packages that are trained to their voice and can find it challenging when they are unable to use their own device. Second, one interviewee stated that users who needed to take notes by cutting and pasting text were severely inconvenienced by NPLD access restrictions. Those with sight issues, memory issues and motor disabilities were among those affected: "writing often requires really fine motricity skills and lots of precise movements. So, we have researchers with Parkinson's: how do they operate?"

Interviewees also noted that complex materials such as digital maps were problematic, because adaptations to visual materials were not allowed without publisher permission: "changing some of the scale operations, or the key operations, for people who are partially sighted – you are changing the map, and you are rewriting the content of the publisher... we were very limited by those restrictions." Some interviewees stressed that NPLD represented a work in progress, and that current systems would be improved and replaced over time with improved functionality. Additionally, JCLD have negotiated a voluntary agreement that permits the libraries to use the wider definition of disability used in the Equality Act 2010. At the Bodleian Libraries, for instance, those registered with a local disability unit can receive a copy of NPLD material that can be used on their personal device.

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The acceptance of this practice reflects two things: first, where agreement between stakeholders occurs, there is huge potential for collaborative solutions to emerge to address specific problems; and second, that reasonable adaptations to NPLD provision are entirely reliant on regulatory changes that often take time to implement.

Our interviewees made it clear that both libraries and publishers were in agreement that the NPLD regulations did not go far enough to match existing disability and equality standards, and that "we should get the regulations to match so that we're practising best practice." Indeed, the PIR (2019) made a concrete recommendation to align accessibility arrangements with the Equality Act 2010. Our findings strongly support this concrete recommendation, because the otherwise admirable voluntary agreement is managed through disability services that are not necessarily accessible to external visitors to the academic deposit libraries.

One of our interviewees expanded on this final point, arguing that NPLD entrenches existing inequalities between information-rich institutions and others: "this is just making Cambridge and Oxford members have even more privilege, if they can get to these books and other people can't." Digital inclusion goes beyond accessibility to encompass the academic deposit libraries' missions to widen participation. Their mission picks up on the emergence of Open Access scholarly materials, which is supported by funder and government mandates. However, there was a feeling among interviewees that this changing publishing landscape had not been adequately addressed by NPLD. Staff interviewees felt that the regulations had been drafted to address the concerns of commercial publishers, causing one to comment that this had led to NPLD being "ridiculously behind the times." They compared NPLD provision to platforms such as the JSTOR Open Access Monograph platform, which they felt was a leading example of OA provision. By contrast, even though OA materials are collected under NPLD, it was felt that other arrangements were required to maintain access to certain open materials. Government materials, particularly Official Papers which are now published under the Open Government Licence (OGL)[4], were a particular concern. In practice, deposited papers under the OGL are openly available via the deposit libraries, whereas other OA resources are not. For example, the NPLD version of the peer reviewed OA journal *Le Foucauldien*, published by the Open Library of the Humanities, is nevertheless restricted to library premises[5].

While several problems for inclusion relating to disabled access were identified by our interviewees, we are reassured that this has been addressed in the Post-Implementation Review. There is a clear moral imperative to aligning the NPLD regulations with the Equality Act 2010, but the mechanisms put in place to deliver this at the deposit libraries should support external readers as well as locally affiliated readers. The question of Open Access is more complex, because it necessitates a re-evaluation of what constitutes a rights-holder's moral and intellectual rights, or 'legitimate interests', in NPLD materials. Publishers and libraries acknowledge problems of access for disabled users, but there is no similar acknowledgement for OA. The definition of a rights-holder is narrowly conceived, and implicitly taken to mean commercial publishers, and as a result NPLD infringes upon the rights of those creators who licence their material openly. It is therefore necessary to consider how NPLD can differentiate effectively between different licences.

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[4] See www.nationalarchives.gov.uk/doc/open-government-licence/version/3/ for the terms and conditions of Version 3 of the licence.
[5] The permalink to the Bodleian Library Catalogue confirms this situation: solo.bodleian.ox.ac.uk/primo-explore/fulldisplay?docid=oxfaleph021492177&context=L&vid=SOLO&search_scope=LSCOP_ONLINEDIG&tab=local&lang=en_US.

While the libraries' submission to the PIR focuses upon free material on the web, which includes commercial materials supported by advertising, this paper focuses instead upon that material which is definitively released under an OA licence. This could be achieved by broader representation of OA publishers on the JCLD, and by considering how OA materials could be differentiated and made accessible via NPLD.

4.5) How can we address the need for stronger methodological interventions into the impact of digital collections?

We found that user assessment of NPLD collections has been library-focused; in other words, it has gathered user feedback to evaluate the usability and effectiveness of NPLD systems, rather than to address the impact of NPLD upon those users. Our interviewees outlined significant problems with the culture of evaluation around NPLD materials. Some staff interviewees noted that users neither worked with NPLD regularly, nor were conscious that they were doing so, meaning that it was hard to gather feedback on services. The academic deposit libraries have robust evaluation strategies that encompass print and digital collections, library spaces, and library services. However, it was clear that the strategies did not encompass the NPLD collections. Interviewees reported that the key performance indicators that existed for NPLD related to collections management, and that very few targets were set for usage. Indeed, several interviewees expressed surprise at the existence of certain datasets to track usage. NPLD collections were not embedded into the culture of institutions in the same way as other resources: not only did librarians not feel they could recommend them but did not have the same robust knowledge base about NPLD collections as the rest of the services that fell under each library's remit. This reflects our previous observation that users were only considered late in the implementation process.

This lack of user-focused analysis leaves a gap in how we understand the value and impact of NPLD. Methods for assessing impact and value often address the extent to which library services fulfil certain strategic priorities in relation to identified user communities. The libraries lacked a strong sense of who these collections existed for, other than an indeterminate future research community. It is therefore unsurprising that our interviewees focused on the intrinsic value of NPLD. They felt less confident in expressing its instrumental value. A first step, then, is for the evaluation of NPLD collections to become part of the existing culture of assessment across the six collaborating legal deposit libraries.

This project draws upon those many writers who have posited service as a key value for librarianship to propose that service-driven values grounded in making collections usable and meaningful to users are suited to posterity-driven collections for which libraries have not yet established a defined user community (Shera, 1973; Finks, 1989; Lankes, 2014). They foreground a values-based approach that demonstrates value not solely through numeric indicators of usage and reach, but by understanding how libraries can serve the needs of their user community. Ranganathan (1931, p. 9), for instance, considered the library to be a "growing organism" comprising books, staff, and readers, with growth and change in any of these groups affecting the others. In this service-based tradition, the study of users can effect a change in how collections are developed and maintained, because modelling information seeking behaviour allows us to perceive how usage in one area influences aspects of change in other parts of the library ecosystem.

When devising our methodology, we found existing models for evaluating collections to be unsatisfactory for studying NPLD, because they address existing user communities. Our challenge

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was to develop a framework for understanding the future value of NPLD in relation to its
 contemporary impact, without clear indicators of what the collections were intended to achieve
beyond securing knowledge for future generations. This is where the user focus is key, because it
aligns our activities not with debates around technology, or publisher relationships, but with ensuring
that users can continually get the most of NPLD collections. This requires libraries to pay as much
attention to NPLD collections as they do to other contemporary services. The construction and
design of our study allowed us to combine methods to understand whether NPLD materials and
systems reflect the needs and information behaviour of contemporary users, and to identify the
impact upon collecting institutions. The resultant findings take us beyond a narrow argument about
access protocols in isolation and provide a bridge to identify where NPLD regulations and
implementation fail to adequately address emerging user needs in online library systems.
We therefore propose two key methodological interventions for research into collections with an
undefined future audience: first, a user-centric approach that seeks to meaningfully relate broader
information seeking behaviour and user needs to the resource in question; and second, a flexible
and potentially experimental approach to research methodology, in order to uncover these
relationships in innovative and relevant ways.

Statue of Thomas Bodley
Image by AdamThomp07

5 CONCLUDING REMARKS: TOWARDS A USER-CENTRIC LEGAL DEPOSIT

The **Digital Library Futures** project set out to investigate the impact of NPLD upon UK academic deposit libraries and their users. There is a strong belief across stakeholder communities in the intrinsic value of NPLD. Our interviewees were almost unanimous in agreeing that Non-Print Legal Deposit has played an important role in empowering libraries to capture the UK's published digital heritage. Interviewees believed that NPLD contributed to the strategic priorities of their institutions. Materials such as digital maps and the UK web space have been secured at unprecedented scale, while librarians were generally delighted at the increased range and depth of collections available to users of NPLD materials. Legal deposit regulations remain essential to ensure a comprehensive national collection, and the legal deposit libraries believe this collection will provide a vital resource for scholars in years to come. Indeed, by the standard of the government's own objective to preserve "the UK's non-print publications for future generations" (Department for Digital, Culture, Media & Sport, 2019), NPLD has been very successful.

Despite this enthusiasm, we believe that the instrumental value of NPLD has not been fully realised to date. There was little indication of a strategy for developing NPLD as a service to users. This lack of strategic direction has led to several problems from the user perspective and limited the short-term value of NPLD as a research collection. In Section 1, we noted that the existing literature focuses on four primary aspects of NPLD: collection development, including selection and metadata; long-term digital preservation of NPLD materials; technical aspects, including systems, capture, ingest, and standards; and regulatory aspects including observations on the development of NPLD regulations. Studies that focus upon users of NPLD collections are notable by their absence. In particular, there has been far too little work to understand how regulatory environments, and resultant service implementation, influence and interact with changing models of user behaviour in the digital age. We therefore propose that users should be understood as a fifth primary aspect upon which to develop effective NPLD strategy.

Studies into other digital resources have uncovered a changing form of information seeking behaviour based on remote access, use of personal devices and specialist software, and a gradual acceptance of data-driven methods across the academic disciplines. This emerging behaviour has been addressed in relation to Unsworth's "scholarly primitives", which outline those tasks which are considered to be common to all scholarly activity. The NPLD access protocols map poorly onto these scholarly primitives in ways that will discourage future reuse of NPLD collections. It would be naïve to assume that information behaviour and user needs will not continue to change, and this comes with a commensurate risk that NPLD collections will become unfit for purpose. Within the timeframe of the development and implementation of NPLD, we can already identify Open Access, disabled access and text and data mining as areas which legal deposit libraries are unable to fully support due to regulatory restrictions. The lack of dynamic alignment to extant regulations means solutions that have been accepted into law are not applicable to NPLD and, as a result, the regulations fall increasingly behind broader trends attributable to the digital turn. The UK government has stated that access to NPLD materials was designed to mirror the level of access to printed materials, but this is demonstrably not the case because future prospects for reuse of NPLD materials are worse than for print materials. In this respect, the issue of 'perpetual copyright,' where the framing of the legislation ensures that NPLD materials are exempt from entering the public domain, threatens to unfairly disadvantage libraries and users in the future, while the lack of regulatory alignment risks long-term damage to data-led research with non-print materials.

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There is little doubt from our interviews that users and librarians would like to see changes to NPLD access protocols, with several wanting to see changes to make NPLD collections accessible on personal devices. However, there is equally little doubt that it seems unrealistic given the need to protect the interests of rights-holders. Indeed, access is not an end goal in itself, but a means to ensure that NPLD collections are meaningful, usable and relevant to users. This is best done through ongoing user evaluation. There are other issues with access that require further consideration. First, although we have focused on the impact of NPLD collections, it is worth noting that a poorly defined sense of the users of NPLD has implications for other aspects of library work, including digital preservation. The Digital Preservation Coalition report that the lack of an identifiable user community associated with NPLD collections, and the corresponding issue of low perceived usage, limit the feedback loop that ensures that collections are effectively monitored to ensure the success of digital preservation actions (Digital Preservation Coalition, 2017, p. 23). Second, the growth of OA publishing creates a moral and legal imperative to revisit the extent of protection for openly licenced non-print publications, and the scope of those rights-holders that are represented in strategic planning for NPLD. Third, the close alignment of NPLD to print media creates a significant tension in what actions are allowable. There is no clearly defined use case beyond e-reading within library reading rooms, which is increasingly separated from both the model of information seeking behaviour we have outlined, and the need for text and data mining solutions. It appears that problems relating to OA, text and data mining, and user requirements are unintended consequences of the rapid rate of change caused by widespread adoption of digital media formats. Problems with NPLD are to be expected: not only is it designed for posterity, but teething troubles are entirely normal for an initiative of this scale. However, even in cases of agreement, such as around provision for disabled users, the NPLD restrictions cause a delay of several years before action can be taken. This last point emphasises the continued assumptions that come as a result of print-centric solutions that are presented as media-agnosticism.

The fact that NPLD regulations were formulated in reference to print materials shows a misunderstanding of the changing requirements for collecting, preserving, and making accessible UK contemporary digital library collections. It is not desirable to adopt a media-centric form of legal deposit that fixates upon format. However, neither should we mistake the current print-centrism as media-agnosticism. Print materials have different affordances, preservation requirements, and use cases from digital objects; resultantly, it is misguided to assume that print media constitute a default format on which to base policies of access and reuse. We therefore conclude that it is necessary to develop an ongoing user-focused framework to influence Non-Print Legal Deposit planning and evaluation. This framework should take into account the long-term goal of making NPLD collections accessible and meaningful for researchers, informed by longitudinal data collection and analysis with the aim of ensuring that it is possible to adapt the direction of travel in response to emerging formats and user behaviours. We propose that the framework should be built upon five key tenets:

1. The long-term beneficiaries of NPLD are users, not publishers or libraries. It is therefore necessary to evaluate NPLD in comparison to broader user needs, even if those needs are not immediately addressed through short-term changes to access arrangements.

2. The diversity of digital media reflect a major change in information sharing, society, libraries, and research communities, which necessitates re-evaluation of the assumption that print media remain the most useful reference point for defining access protocols.

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3. Publishers are entitled to protect their commercial and legitimate interests, and this remains a reason not to liberalise access without appropriate consultation. However, the significance of Open Access, and resulting shifts in Intellectual Property rights, cannot be ignored without infringing upon authors' intentions to facilitate wider access.

4. Libraries must be empowered to take actions to respond to emerging information behaviours, including those actions linked to large-scale digital preservation. These actions should be based on evidenced trends in user behaviour and needs, and focus upon making collections accessible, usable, and meaningful to users in the long term.

5. The first four tenets require continued collaboration between libraries, publishers and user groups. In particular, libraries and researchers should work closely together to promote and understand the uniqueness and value of NPLD collections, and to increase awareness of changing scholarly practices.

There are a variety of practical steps that can be taken to address these points, including: the development of a user forum to encourage and amplify the NPLD user voice in the design of the service; a working group to address the challenges posed by new models of publishing and licencing, particularly Open Access; increased transparency through the sharing of statistics, log records and information about usage of NPLD across the legal deposit libraries, which can also be accessible by researchers, publishers and other interested parties; the development of networks to consider new methodological interventions into the analysis of digital collections that have no defined contemporary audience, incorporating digital scholars, digital scholarship librarians and publishers to develop a longitudinal picture of user needs in this changing environment; and the routine gathering and analysis of evidence regarding user behaviour, which can inform future resource allocation. We acknowledge that these steps will require resourcing and approval from relevant stakeholders, and therefore consider these as practical proposals for future work rather than formal recommendations. The most important point is that any, or all, of these could contribute to an ongoing user-focused evaluation framework to inform planning and implementation of NPLD, with increased transparency and openness.

In conclusion, what does a culture of user-centric evaluation of NPLD look like? First, it should encompass ongoing assessment of information seeking behaviour among the designated communities using NPLD materials. This would allow the establishment of likely use cases that libraries could respond to through collection, preservation and, where appropriate, new forms of access. It would also draw on the large body of impact evaluation already in existence, but with a clear focus on exploratory work that addresses how to respond to emerging user needs rather than demonstrate immediate value. Second, it should involve significant collaboration between researchers and libraries, to promote and understand the uniqueness and value of NPLD collections, and to increase awareness of new forms of research materials including web archives and online mapping. Finally, it would provide an evidence base upon which to base strategic decisions on the future of NPLD collections. Importantly, it would help librarians to move beyond a focus on access to NPLD collections and allow them to address more complex issues of usage that would not necessarily be felt in the short term, but would provide rewards to researchers, society, and the nation for years to come.

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BIBLIOGRAPHY

Alexandrov, G. (2018) 'Transformation of Digital Legal Deposit in Terms of Legislation and Public Access', *Knygotyra*, 70, pp. 136–153.

Beagrie, N. (2001) 'Preserving UK Digital Library Collections', *Program*, 35(3), pp. 215–226. Bodleian Libraries (2013) 'Mission Statement'.

Bodleian Libraries (2019) *e-Legal Deposit*. Available at: www.bodleian.ox.ac.uk/finding-resources/legal-deposit#electronicLD.

Brazier, C. (2016) 'Great Libraries? Good Libraries? Digital Collection Development and What it Means for Our Great Research Collections', in Baker, D. and Evans, W. (eds) *Digital Information Strategies: From Applications and Content to Libraries and People*. Waltham, MA: Chandos Publishing, pp. 41–56.

British Library (1998) *Report of the Working Party on Legal Deposit*. Available at: www.bl.uk/aboutus/stratpolprog/legaldep/report/index.html.

British Library (2013) *Security for Electronic Publications*. Available at: www.bl.uk/aboutus/legaldeposit/websites/security.

Cambridge University Library (2014) *About the Library*. Available at: www.lib.cam.ac.uk/about-library.

Cambridge University Library (2018) *Electronic Legal Deposit: Access*. Available at: libguides.cam.ac.uk/c.php?g=661364&p=4672518.

Copyright, Designs and Patents Act 1988 (1988). Available at: www.legislation.gov.uk/ukpga/1988/48/section/29.

Copyright (Visually Impaired Persons) Act 2002 c.33 (2002). Available at: www.legislation.gov.uk/ukpga/2002/33/contents (Accessed: 12 April 2019).

Crossick, G. and Kaszynska, P. (2016) *Understanding the Value of Arts & Culture: The AHRC Cultural Value Project*. Arts and Humanities Research Council. Available at: ahrc.ukri.org/documents/publications/cultural-value-project-final-report.

De Beer, M. et al. (2016) 'Legal Deposit of Electronic Books - A Review of Challenges Faced by National Libraries', *Library Hi Tech*, 34(1), pp. 87–103.

Deegan, M. (2017) *Academic Book of the Future Project Report: A Report to the AHRC and the British Library. London*. Available at: academicbookfuture.files.wordpress.com/2017/06/ project-report_academic-book-of-the-future_deegan3.pdf.

BIBLIOGRAPHY

Degerstedt, S. and Philipson, J. (2016) 'Lessons Learned from the First Year of E-Legal Deposit in Sweden: Ensuring Metadata Quality in an Ever-Changing Environment', *Cataloging & Classification Quarterly*, 54(7), pp. 468–482.

Department for Digital, Culture, Media & Sport (2017) *UK Digital Strategy 2017*. Available at: www.gov.uk/government/publications/uk-digital-strategy/uk-digital-strategy#data---unlocking-the-power-of-data-in-the-uk-economy-and-improving-public-confidence-in-its-use.

Department for Digital, Culture, Media & Sport (2018) *Culture is Digital*. London. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/687519/TT_v4.pdf.

Department for Digital, Culture, Media & Sport (2019) *Post-Implementation Review of the Legal Deposit Libraries (Non-Print Works) Regulations 2013*. Department for Digital, Culture, Media & Sport. Available at: www.gov.uk/government/publications/post-implementation-review-of-the-legal-deposit-libraries-non-print-works-regulations-2013.

Derrot, S. and Koskas, M. (2016) 'My Fair Metadata: Cataloging Legal Deposit Ebooks at the National Library of France', *Cataloging & Classification Quarterly*, 54(8), pp. 583–592. doi: 10.1080/01639374.2016.1240130.

Digital Preservation Coalition (2017) *Non-Print Legal Deposit Digital Preservation Review: Final Report*. Digital Preservation Coalition. Available at: www.bl.uk/britishlibrary/~/media/bl/global/digital%20preservation/non-print-lega-deposit-digital-preservation-review.pdf.

Finks, L. W. (1989) 'What Do We Stand For? Values without Shame', *American Libraries*, 20(4), pp. 352–354.

Gibby, R. and Brazier, C. (2012) 'Observations on the Development of Non-Print Legal Deposit in the UK', *Library Review*, 61(5), pp. 362–377.

Gooding, P. (2014) *Search All About It: A Mixed Methods Study into the Impact of Large-Scale Newspaper Digitisation*. University College London. Available at: discovery.ucl.ac.uk/1458624.

Gooding, P. (2017) *Historic Newspapers in the Digital Age: 'Search All About It'*. Oxon: Routledge.

Green, A. (2012) 'Introducing Electronic Legal Deposit in the UK: A Homeric Tale', *Alexandria: The Journal of National and International Library and Information Issues*, 23(3), pp. 103–109.

HC Deb (1997) *Non-Print Publications (Legal Deposit)*. Vol. 290, Col. 15563. Available at: hansard.parliament.uk/Commons/1997-02-11/debates/609493dd-462b-4560-9110-3cf9f53c7aec/Non-PrintPublications(LegalDeposit)?highlight=%22legal%20deposit%22#contribution-29c1ed93-bf71-4c27-81e7-066affed5975.

HL Deb (2013). Available at: hansard.parliament.uk/Lords/2013-03-06/debates/13030683000250/LegalDepositLibraries(Non-PrintWorks)Regulations2013?highlight=%22legal%20deposit%22#contribution-13030683000082.

BIBLIOGRAPHY

Hockx-Yu, H. (2014) 'Access and Scholarly Use of Web Archives', *Alexandria*, 25(1/2), pp. 113–127.

Hughes, L. M. (ed.) (2012) Evaluating and Measuring the Value, Use and Impact of Digital Collections. London: Facet Publishing.

Lankes, R. D. (2011) *The Atlas of New Librarianship*. Cambridge Mass.: The MIT Press.

Lariviere, J. (2000) *Guidelines for Legal Deposit Legislation*. Paris: United Nations Educational, Scientific and Cultural Organization. Available at: unesdoc.unesco.org/images/0012/001214/121413eo.pdf.

Legal Deposit Libraries Act 2003 (no date). Available at: www.legislation.gov.uk/ukpga/2003/28/section/7.

LIBER (2017) *Research Libraries Powering Sustainable Knowledge in the Digital Age: LIBER Europe Strategy 2018-2022*. The Hague: LIBER Europe. Available at: libereurope.eu/strategy.

Meyer, E. T. *et al.* (2009) *Usage and Impact Study of JISC-Funded Phase 1 Digitisation Projects & the Toolkit for the Impact of Digitised Scholarly Resources (TIDSR)*. Oxford: Oxford Internet Institute, University of Oxford. Available at: http://repository.jisc.ac.uk/6997/1/TIDSR_FinalReport_20July2009.pdf.

OCLC Research (2015) *Making Archival and Special Collections More Accessible*. Dublin, Ohio: OCLC Research.

Palmer, C. L. and Cragin, M. H. (2008) 'Scholarship and Disciplinary Practices', *Annual Review of Information Science and Technology*, 42(1), pp. 163–212.

Plan S (2019) *What is cOALition S?, Plan S: Making Full and Immediate Open Access a Priority*. Available at: www.coalition-s.org/about.

Ranganathan, S. R. (1931) *The Five Laws of Library Science. Bombay*: Asia Publishing House. RCUK (2018) 'RCUK Policy on Open Access and Supporting Guidance'. Available at: www.ukri.org/funding/information-for-award-holders/open-access/open-access-policy (Accessed: 27 March 2019).

REF 2021 (2019) 'REF: Guidance on Submissions'. Available at: www.ref.ac.uk/media/1092/ref_guidance_on_submissions.pdf.

Shera, J. H. (1973) 'Toward a Theory of Librarianship and Information Science', *Ciência da Informação*, 2(2), pp. 87–97.

Spezi, V. (2016) 'Is Information-Seeking Behaviour of Doctoral Students Changing? A Review of the Literature (2010-2015)', *New Review of Academic Librarianship*, 22(1), pp. 78–106. doi: 10.1080/13614533.2015.1127831.

BIBLIOGRAPHY

Staff of the Global Legal Research Directorate (2017) *Mandatory Deposit Laws in Selected Jurisdictions (2017 Update)*. The Law Library of Congress. Available at: www.loc.gov/law/help/deposit-laws/mandatory-deposit-laws.pdf.

Stone, S. (1982) 'Humanities Scholars: Information Needs and Uses', *Journal of Documentation*, 38(4), pp. 292–313.

Talja, S. and Maula, H. (2003) 'Reasons for the use and non-use of electronic journals and databases: A domain analytic study in four scholarly disciplines', *Journal of Documentation*, 59(6), pp. 673–691.

Tanner, S. (2012) *Measuring the Impact of Digital Resources: The Balanced Value Impact Model*. London: King's College London. Available at: www.kdcs.kcl.ac.uk/fileadmin/documents/pubs/ BalancedValueImpactModel_SimonTanner_October2012.pdf.

The Legal Deposit Libraries (Non-Print Works) Regulations 2013 (2013). Available at: www.legislation.gov.uk/uksi/2013/777/contents/made.

Unsworth, J. (2000) 'Scholarly Primitives: What Methods do Humanities Researchers Have in Common, and How Might our Tools Reflect This?', in. *Humanities Computing: Formal Methods, Experimental Practice*, King's College London. Available at: people.brandeis.edu/~unsworth/Kings.5-00/primitives.html.

Warwick, C. et al. (2008) 'If You Build It Will They Come? The LAIRAH Study: Quantifying the Use of Online Resources in the Arts and Humanities', *Literary and Linguistic Computing*, 23(1), pp. 85–102.

Wellcome Trust (2019) Open Access Policy. Available at: wellcome.ac.uk/funding/guidance/open-access-policy.

Winters, J. (2017) 'Coda: Web Archives for Humanities Research - Some Reflections', in *the Web as History*. London: UCL Press, pp. 238–248.

Working Party on Legal Deposit (1998) *Report of the Working Party on Legal Deposit*. Department for Culture, Media and Sport. Available at: web.archive.org/web/20110607054218/http://www.bl.uk/aboutus/stratpolprog/legaldep/report.