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Within and Beyond: Enacting the archives through the practices of humanities researchers

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Thesis submitted in partial fulfilment of the requirements for the degree of

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at

City, University of London

Centre for Human-Computer Interaction Design

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March 2024

DECLARATION

I, Alexandra Leigh, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

ABSTRACT

Archives are rarely defined by the researcher. The main objectives of archives – preserving and providing access to records – have traditionally centred the archivist, enacting a boundary that places the researcher beyond the archives. In this thesis, through a relational, practice-oriented approach, I provide an alternative position that places the researcher within our understanding of the archives.

To meet this aim, this work addresses three research questions: RQ1) *How do the researcher's practices generate a meaning from the record and archives?* RQ2) *How do archival practices (i.e. those practices that sustain relations between records) shape the meaning that the researcher generates from the record?* and RQ3) *How might the practices of humanities researchers be understood as part of the archives?* To answer these questions I adopted a qualitative approach, conducting observations with a total of 22 humanities researchers across two studies. The first was carried out within the archives; the second in a personalised research environment, such as the researcher's home or office.

Seven activities are identified through which the archives are enacted both in situ and ex situ through the researcher's practices: scanning, in-depth reading, gathering, organising, storing, configuring and creating. This work goes beyond previous discussion of these as key activities in humanities research, to examine their specific relation to the archives: in particular, how such activities enact the archives for the researcher.

These findings challenge the traditional boundaries of the archives set at the limits of the physical or virtual repository. Rather than simply accessing the records from the archives, the researcher enacts the archives in unique ways both in situ and ex situ. This allows them to generate novel insights from the record that are nonetheless grounded in the relations maintained by the archives.

Furthermore, this work suggests that the archivist and the researcher ultimately produce different archives in practice. This moves beyond a relativist understanding that sees the record as holding many different meanings, to acknowledge the multiplicity of the archives as they are enacted through practice and provides a new way of seeing the archives that has important implications for archival theory, practice, and design.

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LIST OF ABBREVIATIONS

CDP	Collaborative Doctoral Partnership
HCI	Human-Computer Interaction
HII	Human-Information Interaction
IS	Information Science
TA	Thematic Analysis
TNA	The National Archives, UK
VA	Video Analysis

PUBLICATIONS ARISING FROM THIS THESIS

- Leigh, A., Makri, S., Taylor, A., Mulinder, A. and Hamdi, S. (2021). From Information to Knowledge Creation in the Archive: Observing Humanities Researchers' Information Activities. *84th Annual Meeting of the Association for Information Science & Technology, Oct. 29 – Nov. 3, 2021, Salt Lake City, UT.* pp.253-263. <https://doi.org/10.1002/pra2.453>.
- Leigh, A., Makri, S., Taylor, A., Mulinder, A., Hamdi, S. and Ranade, S. (2021) Preserving for People: Observing Humanities' Scholars Research Practices in a Hybrid Archive Environment. *17th International Conference on Digital Preservation, Oct. 19 – 22, 2021, Beijing, China.* [online]. Available at: <https://osf.io/ajhu9>. (Accessed 7 March 2024.)
- Leigh, A. (2021). Information Use and the Shaping of Archives: Understanding Human-Information Interaction in Physical and Digital Archival Systems and the Role it Plays in Information Use. *CHIIR '21: Proceedings of the 2021 Conference on Human Information Interaction and Retrieval, Mar. 14 – 19, 2021, Online.* pp.367-370. <https://doi.org/10.1145/3406522.3446010>.

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1 INTRODUCTION

1.1 OVERVIEW

Archives have historically focused their attention on the record. Traditionally through preservation and latterly through access, archives have been defined first and foremost by their collections. Further definitions spring from this: archives are also recognised as those institutions that preserve and manage those documents, defined through those processes of archivists and recordkeepers that structure information in particular ways that make it *archival*. Finally, archives can refer to those physical locations where these records may be housed and accessed. In truth, there are many ways to define an archives.

I begin this work from the position that archives are those *material-discursive practices* (Barad, 2007: 146, 148-149) that make the archives *happen*. Although archives have traditionally focused on the material and intellectual preservation of the record (Meehan, 2014: 63), it is nonetheless the relations between records that are held to preserve a notional meaning “of” the record (Meehan 2014: 65). In archival theory and practice, it is now largely accepted that this original meaning is performed through archival practices such as appraisal, arrangement, and description (Duff and Harris, 2002; Ketelaar, 2001; Nesmith, 2002; Yakel, 2003). Yet while the role of the archivist has been acknowledged, little is known about how end-users – including researchers – enact these relations in their own work.

Therefore, this research extends a relational understanding of the archives by considering those relations that lie beyond what is traditionally considered as part of the archives. I have undertaken this research by focusing on how the practices of the humanities researcher enact the archives as an *apparatus* (Barad, 2007) that determines what is made relevant and actionable in their work. In doing so, I consider how relations beyond those enacted through archival practice impact on our considerations of what the archives is. This allows for a more expansive view of the archives to be taken, that extends beyond its current boundaries.

I will address this contribution through three major objectives: improving our understanding of how humanities researchers generate a meaning from the record in practice; providing a basis on which to better integrate the researcher within conceptualisations of the archives; and challenging the notional boundaries of the archives. This is achieved by answering three major research questions: RQ1) How do the researcher’s practices generate a meaning from the record and archives? RQ2) How do archival practices (i.e. those practices that sustain relations between records) shape the meaning that the

researcher generates from the record? RQ3) How might the practices of humanities researchers be understood as part of the archives?

I investigate this through two empirical studies (Chapters 4-6) that focus on *practice* to understand what humanities researchers *do* and *how* they do it (Orlikowski, 2002: 271), when using archival records in their work. Combining a mixture of observational and interview methods, this work has been undertaken both *in situ* within the archival reading rooms, as well as *ex situ* in the researcher's home or other personalised research environment. In doing so, this work demonstrates how humanities researchers are integral to enacting the archives for themselves, both within and beyond the archives itself.

This chapter continues by addressing the major motivations of this research, before expanding on the research questions and objectives introduced above. It concludes with an overview of the remaining chapters in this thesis.

1.2 MOTIVATIONS

"At the heart of archival theory is the record..."

(Duff and Johnson, 2003: 79)

The traditional emphasis on the record in archival theory and practice means that archives do not have a long-standing tradition of user studies (Duff and Johnson, 2002: 473). While an "access" paradigm (Menne-Haritz, 2001) that recognised the need to improve understanding of archival users emerged in the late 1990s and 2000s, this led to an emphasis in research on information seeking (Rhee, 2015; Sundqvist, 2015) as well as interactions with information resources, such as finding aids or the archivist (e.g. Dalton and Charnigo, 2004; Duff, Craig, and Cherry, 2004; Freund and Toms, 2016; Johnson and Duff, 2005; Krause and Yakel, 2008; Meissner, 1997; Nimer and Daines, 2008; Prom, 2004; Tibbo, 2003; Yakel, 2002, 2004), rather than direct interactions between the user and the record itself.

Therefore, one motivation for this work is to address the lack of human-centred studies conducted in an archival setting. I address this by focusing on one particular group of archival users: humanities researchers. While historians have tended to be over-represented in studies of archival users (Rhee, 2015: 34), I take a more expansive view by understanding humanities researchers as those researchers applying humanistic methods or approaches, rather than taking a disciplinary or subject focus. Likewise, I take an inclusive view of research, not limiting this to academic or professional scholars.

Another motivation of this work is to develop an alternative position on the archives that is rooted in a relational epistemology. Due to the previous focus on developing tools and systems that would improve access to the archives, previous archival user studies have tended to adopt a mediational approach that separates the user from the archives. In recent years, there have been calls for more human-centred and relational approaches to archives that address the needs of “the *people* who create, keep, use, and are represented in records” (Douglas, Ballin, and Lapp, 2022: 5; original emphasis). Therefore, in this thesis I address this call by adopting an approach rooted in practice theories. In doing so, I take *practices* as the empirical focus of this work, as well as grounding my work in a perspective that sees the meaning of the record as enacted through its relations rather than inherent. While a practice-oriented perspective has been used to study both archivists (Ivanov, 2019) and records creators (Colwell, 2020), this has yet to be applied to end-users such as humanities researchers.

In focusing on practices, this work has followed humanities researchers beyond the physical location of the archives to establish how the archives is or is not enacted outside of the reading room. As most archival user studies have tended to focus on “what researchers do from the point at which they enter repositories until they pack up to leave” (Orbach, 1991: 29), this addresses another gap in existing research by creating a holistic understanding of how the archives is enacted in research practice both *in* and *ex situ* (Trace and Karadkar, 2017). By taking this focus, I challenge the notional boundaries of the archives, which have been set at the limits of the repository (e.g. Menne-Haritz, 2001). Instead, I consider how – when perceived from the user’s perspective – the archives extends far beyond this boundary and into other research environments.

Archives have consistently foregrounded the archivist’s position; in focusing on the practices of end-users such as humanities researchers, it is possible to provide a new perspective on the archives that invites further consideration of what tools and services it is appropriate for the archives to offer. To develop an in-depth understanding of archival research, it is necessary to look beyond seeking: the researcher’s interaction with archival records does not stop once they have located the item. Likewise, although a certain amount of archival research has always been conducted *ex situ*, the use of digital devices and the impact of the coronavirus pandemic has only increased this trend. Therefore, looking to what activities are carried out outside of the archival reading room is also essential to provide an in-depth understanding of humanities researcher’s interactions with archival materials.

To address the gaps that have been outlined here, in this thesis I seek to unite a number of interlinked objectives that aim to: improve our understanding of how humanities researchers generate a meaning from the record in practice; provide a basis on which to better integrate the researcher within

conceptualisations of the archives; and challenge the notional boundaries of the archives. I will expand now on each of these objectives in depth, before outlining the overarching research questions that have guided this work.

1.3 OBJECTIVES

Objective 1: To improve our understanding of how humanities researchers generate a meaning from the record in practice

The majority of user studies conducted within the archives date from the development of online access tools (e.g. Coats, 2004; Duff and Stoyanova, 1998; Meissner, 1997; Prom, 2004). Such studies have often focused on information behaviours and prioritised seeking over other types of interaction (Rhee, 2015; Sundqvist, 2015). For example, though several archival user studies purport to consider information use, these more often focus on the use of resources in information seeking over direct interaction with the archival records (Chassanoff, 2013; Dalton and Charnigo, 2004; Duff, Craig, and Cherry, 2004; Freund and Toms, 2016; Tibbo, 2003).

Though more recent work has focused on both the research practices of humanities researchers (Antonijević and Cahoy, 2018; Given and Willson, 2018; Sinn and Soares, 2014) and information interactions with primary sources (Korkeamäki and Kumpulainen, 2019) there has been little work that focuses specifically on how researchers generate meaning from the record. As the principal aim of archival research is to create novel insights from primary sources this is essential for understanding how humanities researchers enact the record and archives in their own work.

In this work, I adopt the terms *generate* and *enact* to “suggest that in the act, and only then and there, something *is*” (Mol, 2002: 33). Knowledge or meaning is positioned as something that is neither located ““out there” (incorporated in external objects, routines, or systems) or “in here” (inscribed in human brains, bodies, or communities)” (Orlikowski, 2002: 252) but as only produced during practice. Adopting such language allows me to move away from the mediational position taken by previous archival user studies, while developing our understanding of how humanities researchers use archival records in their research practice. This will expand the repertoire of practices that the archives should consider, in order to acknowledge the role of actors besides the archivist in making the archives happen.

Objective 2: To provide a basis on which to better integrate the researcher within conceptualisations of the archives

Despite the increased emphasis on the user that came with developing online access systems, the user remains poorly integrated within traditional conceptualisations of the archives. While archival theory

and practice have begun to address this omission through participatory (Shilton and Srinivasan, 2007) and postcustodial approaches (e.g. Kelleher, 2017), recent calls have been made for a more relational, human-centred approach to the archives to be developed (Douglas, Ballin, and Ahmadbeigi, 2021; Douglas, Ballin, and Lapp, 2022; Sexton, Shepherd, and Duff, 2023).

Therefore, the second objective for this work is to establish a basis on which the researcher – as an end-user – can be better integrated in conceptualisations of the archives from a relational perspective. Practice theories are proposed as a suitable framework that provides a link between the generation of meaning in practice and how research practice enacts the archives for the researcher. This relational approach reveals the agency of the researcher in making the archives work for themselves and thus how we might support different ways of knowing the archives, through theory, practice, or design.

Objective 3: To challenge the notional boundaries of the archives

The final objective of this work is to challenge the notional boundaries of the archives, both physical and conceptual. This is prompted by recent research that has reflected the extent of humanities research that takes place beyond physical repositories of primary material (Bulger et al., 2011; Given and Willson, 2018; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017). While digital access may mean that some researchers never set foot in the archives, others are treating archival visits as primarily data gathering exercises, collecting large amounts of material to process offsite (Rutner and Schonfeld, 2012: 8). This has led to the identification of an “ex situ” mode of archival research by Trace and Karadkar (2017), in contrast to a previously “in situ” research where interpretation was largely carried out onsite, in part due to restrictions on devices capable of copying large quantities of material (Cox and Archives Students, 2007; Milligan, 2020; Karadkar and Trace, 2013).

Therefore, in order to better integrate the humanities researcher as an end-user within conceptualisations of the archives (Objective 2) it also becomes necessary to follow the user beyond the archival repository itself, whether physical or digital. In viewing archival research practice as one continuous process that begins in the archives and continues beyond it, I suggest that the current boundaries of the archives are enacted through archival practice. By focusing on the boundaries of the archives through the practices of the researcher, what is considered within and beyond the archives becomes blurred and thus opens up further possibilities for the design of future archives.

1.4 RESEARCH QUESTIONS

Three overarching research questions guided the overall course of this thesis, reflecting the motivations and objectives of this research. These were further refined as the research progressed, to

address the specific aims of each study and in response to the findings of the previous study. The final research questions and related sub-questions were as follows:

- RQ1: How do the researcher's practices generate a meaning from the record and archives?
 - RQ1.1: What key activities, beyond information acquisition, do humanities' researchers engage in when conducting archival research?
 - RQ1.2: How does the researcher enact the archives through these activities as part of a wider practice?
 - RQ1.3: How do activities undertaken ex situ differ from those undertaken in situ?
- RQ2: How do archival practices (i.e. those practices that sustain relations between records) shape the meaning that the researcher generates from the record?
 - RQ2.1 In what ways do the researcher's practices extend, alter, or break with archival practices of representation, such as description and arrangement?
- RQ3: How might the practices of humanities researchers be understood as part of the archives?

1.5 POSITIONING OF THIS WORK

This work is positioned at the intersection of Archival Studies and Human-Computer Interaction (HCI), with particular reference to the subfield of Human-Information Interaction (HII). As Archival Studies does not have a long-standing tradition of user studies, previous work has often been undertaken from a position rooted in Information Science (e.g. Dalton and Charnigo, 2004; Daniels and Yakel, 2010; Duff, Craig, and Cherry, 2004; Duff and Johnson, 2002; Sinn and Soares, 2014). In a similar fashion, here I have taken an approach rooted in the interpretivist and qualitative tradition in HCI (Dourish, 2014) to study the archives. This has allowed me to move beyond a mediational position that narrowly treats archives as collections of information (TNA, 2015) to consider how through their material-discursive practices humanities researchers enact the archives for themselves.

As well as being influenced by the qualitative tradition in HCI – and in particular what Bødker captures as a critical scholarship in 4th Wave HCI (Bødker, 2006) – my position on the archives is informed by literature from a transdisciplinary feminist technoscience tradition, including scholars such as Lucy Suchman, Donna Haraway, Wanda Orlikowski, Silvia Gherardi, and Karen Barad. This has allowed me to think across both Archival Studies and HCI and adopt a relational position on the archives. While relational approaches have previously been considered in Archival Studies, these have veered away from the design and use of archival systems (e.g. Douglas, Ballin and Lapp, 2022). Nonetheless, the resonances between the research presented in this thesis and existing relational approaches to archives provide further opportunities to conduct research across Archival Studies and HCI.

My position in this work has also been informed by my own experiences, both due to previous study situated in humanities disciplines and professional experience working in archives. Having previously undertaken undergraduate and postgraduate degrees in humanities subjects – Classical Archaeology and Ancient History, and Digital Humanities, respectively – I have brought my own understanding of how humanities research is undertaken to this work. However I have sought to remain sensitive and curious about how other researchers conducted their work during this research, which was aided by the variety of disciplinary perspectives represented by participants, from Anthropology to Digital Humanities to History. Although I have never received any formal archival training, through professional experience gained working in archives I have received some informal induction into archival practice. This has undoubtedly influenced my perspective on this work: for example, this can be seen in the ways in which I attend to how researchers enact the record in relation to the arrangement of materials by the archives.

Finally, being situated as a Collaborative Doctoral Partnership (CDP) student (UKRI, 2023) at The National Archives (TNA) has also influenced this work. Working closely with a governmental archives, particularly through supervision, means that my position has been partly shaped by how individuals working at TNA view the archives. Nonetheless, my own background in humanities research as well as my focus on humanities researchers in this work has intersected with this perspective to enact a particular view of TNA as a cultural or historical archives more than a governmental one.

The position I take in this work is therefore shaped by a number of personal and disciplinary influences. It is rooted in Archival Studies and HCI, with influences from previous research undertaken in this area from an Information Science perspective. It has also been shaped by my own personal experiences: as a humanities researcher; an archival worker; and a CDP student situated at The National Archives.

1.6 A NOTE ON TERMINOLOGY

In adopting the term “the archives” in the plural rather than “the archive” in this thesis, I follow the distinction made by Archival Studies scholars between *the archive* as a metaphor – as it is often utilised in the humanities – and *archives* as discussed in archival theory and practice (Caswell, 2016). I define these archives as not only collections of material documents, but also as those processes of creation, selection, storage, representation, and use, that makes such documents *archival*. Therefore, I define the archives as those material-discursive practices – the *apparatus* (Barad, 2007: 146) – that make the archives happen.

Following this, the term *record(s)* is used throughout this thesis to refer a document or documents that have been subject to such processes and can thus be considered *archival*. Building on the

position established by archival scholars such as Eric Ketelaar (2012) and Tom Nesmith (2002) among others, I do not consider the record to carry objective information that is then imparted to an end-user, but to have the potential to speak to different meanings that are generated in the multiple, overlapping intra-actions (Barad, 2007: 139) that constitute archival research. As this work is focused on how the archives may be extended through relations that are beyond what has traditionally been considered “archival” I have focused on the record as defined through archival processes. However, I also acknowledge the rich discussion in Archival Studies and Information Science more broadly that questions what defines a record (see Caswell, 2016: n.p.).

1.7 OVERVIEW OF CHAPTERS

2. Literature Review

The second chapter of this thesis reviews relevant previous work, as well as developing an empirical and theoretical frame for my research. I begin by providing a brief overview of previous discussions of meaning-making in archives. I then move on to examining the mediational focus taken by many previous archival user studies, before setting out the theoretical and empirical grounding of a relational perspective through the application of practice theories. I then return to the archival user studies literature to review findings for research activities relevant to a practice-oriented perspective on the archives. As the archival user studies literature is limited and primarily focuses on information-seeking (Rhee, 2015; Sundqvist, 2015), I further develop this review through the inclusion of humanities research practice that focuses on interactions with primary source materials. This literature provides a basis for the activities I consider to form research practice as it is carried out both in situ, within the archives, and ex situ, in the researcher’s home or other personal research environment.

3. Methods

This chapter details the methodological approach taken to the collection and analysis of data in this research. Here, I detail the contextual interview method (Holtzblatt and Beyer, 2017) that was employed for gathering the research data, as well as explaining decisions I exercised over the recruitment of participants and the location of research. The process of qualitative coding and analysis that took place is also explained and discussed. Two studies were undertaken as part of this research: one in which data collection took place within the archives and one beyond it. Each of these are presented individually in the findings in Chapters 4 and 5, respectively. Data from the second study was later re-analysed and is presented separately as a video analysis in Chapter 6. The potential limitations of this work and efforts to mitigate these are also discussed in this chapter.

4. Within the Archives

In this chapter I present the findings from the first study conducted, which focused on humanities researchers interactions with records within the archives itself. These findings both provide evidence of activities that contribute to research practice within the archives, as well as those activities that are oriented towards work that the researcher undertakes beyond the archives. As such, this study provides findings that help us to understand how the archives is enacted by the researcher to generate meaning (RQ1), as well as providing a direction for the collection of data in the second study.

5. Beyond the Archives: Enacting the archives *ex situ*

This chapter presents findings from a qualitative analysis of the second study, conducted with humanities researchers working outside of the archival setting. Through the findings presented here I demonstrate how the archives is enacted *ex situ* (Trace and Karadkar, 2017) to generate meaning from the records (RQ1). These findings also provide insight into how the archival practice of arrangement is reproduced by researchers in their own practice (RQ2). Finally, in complementing the findings from the first study (Chapter 4) the findings discussed in this chapter begin to address how we might understand the researcher's practices as part of the archives (RQ3).

6. Beyond the Archives: Expanding the archival interface

Chapter 6 presents a re-assessment of data originally collected for the analysis presented in Chapter 5. After reviewing the limitations of the methods used for analysis of research practice beyond the archives, this data was re-analysed through the application of video analysis techniques, focusing on the interface. This final analysis complements the preceding chapters by introducing a classic subject of HCI research – the interface – into this discussion of humanities research practice in the archives. Nonetheless, rather than more traditional conceptions of the interface, my position draws on Suchman's definition of this as "a place in which to work" with its own particular conditions and materiality (Suchman, 2006: 279). This further blurs the line between *in situ* and *ex situ* work, thus challenging the boundaries of the archives.

7. Discussion

In the discussion, I consider how the findings from this research show how the archives is enacted as an apparatus through the researcher's practice. I then develop this to argue how this is related to a shift away from an *in situ* mode of research and towards an *ex situ* one. Following this, I unite these two discussions to explore the implications of considering research practice from a relational position that has been underexplored in current archival thinking and how this impacts our understanding of the archives.

8. Conclusion

In the conclusion of this thesis I return to the original objectives and answer the research questions posed by this work. I discuss the contributions of this work relating to three major areas: a relational view of the archives; an understanding of archival research practices beyond information discovery; and challenging the notional boundaries of the archives. Suggestions for any future work that may be possible based on this research are also discussed.

2 LITERATURE REVIEW

2.1 OVERVIEW

In this chapter I draw on literature from a variety of disciplines, including Archival Studies, as well as Information Science more broadly, and Digital Humanities, as well as transdisciplinary perspectives such as feminist technoscience and practice theories. In doing so I outline a practice-oriented approach to the archives that provides a relational understanding of the archives from the researcher's perspective as an end-user. Empirically, this allows me to move away from treating the researcher's interactions with the record as individual activities and unite these as part of a broader practice that enacts the archives in particular ways to generate meaning from the record. Theoretically, utilising a practice-orientation enables me to move beyond previous understandings of meaning-making in archives that reduces meaning to interpretation.

Instead, in this thesis I attend to how different meanings are made possible through active relations between human and nonhuman actors (e.g. Barad, 2007; Gherardi, 2019; Suchman, 2006). This position builds on previous approaches to meaning-making that have been utilised in the archives, such as postmodern critiques that have questioned the stability of meaning in documents and information sources (Derrida, 1982). Drawing on *knowing* as a continuous activity enacted through practice (Gherardi, 2009, 2019; Orlikowski, 2000, 2002) and grounding this in Karen Barad's (2007) notion of the *apparatus*, I provide a human-centred understanding of the archives while stressing the materiality of such practices.

The review of the literature is structured as follows: I begin by outlining previous approaches to meaning-making in the archives (2.2), as well as the mediational nature of previous research conducted on interactions between the researcher and the archives (2.3). I then turn to an alternative understanding of the archives rooted in a practice-orientation (2.4), firstly through the empirical and theoretical lens of practice theories and secondly through an understanding of the *apparatus* as material-discursive practices (Barad, 2007: 146). Finally, I turn to the literature on humanities research practice (2.5) to consider how those activities previously examined in the literature can provide a grounding for understanding the archives from a practice-oriented perspective.

2.2 ARCHIVES AND MEANING-MAKING

Most archival theorists and practitioners now accept the multiplicity of meaning in the archives (Williams, 2014: 2). Over the past three decades, archival theory and practice has moved away from the idea of an archives as a repository of objective information, to understanding the role of archives

in actively shaping the meaning of records. This move has been strongly influenced by postmodernist ideas about knowing and meaning-making from thinkers such as Barthes (1977a, 1977b), Derrida (1982), and Foucault (1984), as well as incorporating concepts from literary theory including reader-response theory and the instability of the text (e.g. Beard, 2008; Cook, 2001; Duff, Monks-Leeson and Galey, 2012; Nesmith, 2005). The introduction of such approaches to the archives have shifted our understanding of records and archives as fixed sources of information, towards an understanding that these are in a constant state of becoming.

Nonetheless, this literature has focused heavily on the role of the archivist in such processes. While other actors are recognised in Archival Studies as influencing the meaning generated from the record – including records creators, records subjects, and end-users (Rolan, 2017; Wick, 2017) – these have not received the same attention in the literature. In part, this may be due to a perception that the activities of end-users in particular lie beyond the remit of the archives (Menne-Haritz, 2001). As such, little attention has been paid in archives to *how* meaning is generated by end-users, including humanities researchers.

Other cultural institutions have undergone a similar paradigm shift in recent years, but have embraced end-users as an integral part of meaning-making activities. For example, museums – like archives – have moved from adopting a position of authority to one of multiplicity (Hooper-Greenhill, 2000: xi) and emphasised the multiplicity of meaning (Silverman, 1995). Yet museums have paid far more attention to understanding how their exhibits and artefacts are being interpreted by users. Such research has often emphasised personalised forms of meaning-making, highlighting themes such as identity, sociality, and leisure (e.g. Eklund, 2020; Silverman, 1995). Likewise, museums have paid greater attention to how to involve visitors in meaning-making processes, for example through design interventions (e.g. Ciolfi, Bannon and Fernström, 2008; Bailey-Ross et al., 2016). Nevertheless, despite the greater involvement of visitors in meaning-making this has often remained couched in traditional language that constrains interpretation to that suggested by the institution (Calcagno and Biscaro, 2012).

The divide between museums and archives, despite the similar epistemological shifts, might be due to the differing conceptions in purpose. Museums are now largely regarded as spaces for socialising and leisure (Eklund, 2020); and while archival research could certainly be considered “serious leisure” (Hartel, Cox, and Griffin, 2016) it may not be generally perceived as a place to socialise. Conversely, archives appear to have continued to see themselves as more closely aligned with libraries, emphasising the design of tools and systems that help the researcher to locate records rather than interpret them (e.g. Dalton and Charnigo, 2004; Duff, Craig, and Cherry, 2004; Freund and Toms, 2016;

Johnson and Duff, 2004; Meissner, 1997; Nimer and Daines, 2008; Prom, 2004; Tibbo, 2003; Yakel, 2004). I will now turn to an examination of how this emphasis on such tools has implicitly adopted a mediational view of the archives that continues to separate the researcher's ways of knowing from those of the archives.

2.3 A MEDIATIONAL VIEW OF THE ARCHIVES

Due to the relative lack of a user studies tradition in Archival Studies, many of these have been conducted from the disciplinary perspective of Information Science (IS). This is perhaps not surprising, given that Archival Studies has at times been considered to be a subset of IS (Caswell, 2016). Nonetheless, this has led to a mediational perspective that can be defined by its focus on "explor[ing] the various conditions relevant for connecting resources [...] with users" (Zins, 2007: 528).

This can be seen in the emphasis on information-seeking in archives (Rhee, 2015, Sundqvist, 2015), by which the majority of studies have focused on the use of resources to locate relevant materials in the archives, rather than direct interactions with the records themselves. For instance, particular attention has been given to finding aids – such as catalogues – and archivists within the literature. Furthermore, where user studies do move from locating to using records, these tend to frame this as an interpretation of material on the user's behalf (Duff and Johnson, 2002; Duff, Monks-Leeson and Galey, 2012), implying a subjective reading that is separate from the record itself.

Archivists and finding aids have been a frequent subject in the archival user studies literature (e.g. Daniels and Yakel, 2010; Duff, Craig, and Cherry, 2004; Duff and Stoyanova, 1998; Freund and Toms, 2016; Johnson and Duff, 2005; Krause and Yakel, 2008; Meissner, 1997; Nimer and Daines, 2008; Prom, 2004; Yakel, 2004). This can be linked to their role as mediators between the user and archives. Both archivists and finding aids have also been found to serve as an orientation tool for users (Duff and Johnson, 2002; Johnson and Duff, 2005, Yakel, 2004). Researchers recognise that archivists are able to identify relevant sources that they themselves might struggle to connect to their research topic (Duff and Johnson, 2002: 483), as archivists possess an intimate knowledge of the collections that they work with, as well as an understanding of the recordkeeping system itself (Johnson and Duff, 2005: 119).

These studies have often focused on the barriers that researchers face when searching for records in the archives: common difficulties reflected in the literature include an unfamiliarity with archival terminology and practice (Daniels and Yakel, 2010: 561; Duff and Stoyanova, 1998: 59-61; Yakel, 2002: 116-119; Yakel, 2004: 74) and struggles to connect terms used in archival descriptions to their own research topic (Daniels and Yakel, 2010: 561-562). While prior research has suggested that either

improved design of finding aids or user education (Yakel, 2002; Yakel and Torres, 2003) could be used to resolve such issues, this assumes that it is both achievable and desirable to create a single view of the archives that is satisfactory for both researchers and archivists.

For instance, a more generative view of this issue is apparent when examining the terminology used by archival users when searching for records. Descriptors such as names of people and places, and dates, are commonly employed in archival description. While archival researchers may not use the full range of descriptive terms that are available, several studies have found that although the names of people and places were commonly used, archival researchers also used dates, subjects, format, and occasionally events to define what they were looking for (Duff and Johnson, 2001; Elena et al., 2010). Looking more closely at such findings, we see that researchers such as genealogists are highly skilled in translating their needs for information: for example, changing a request for information on an individual to one for certain formats or on particular events (Duff and Johnson, 2003).

Likewise, finding aids have been found to help shape an understanding of the research topic for archival users, which suggests that the line between finding and using archival records is blurred. Duff, Monks-Leeson, and Galey's (2012) study of book history students focused on the shift between seeking and using finding aids and archival records. While they found that the finding aid provided a useful structure in shaping the archives for the user, they also noted that the user needed to arrive at the archives with a predetermined framework in order to make sense of the record (2012: 84-85). The user's background and domain knowledge also strongly affected the meanings that users drew from the archives, allowing the researcher to see meanings that others would not (ibid: 86).

Similar findings were also discussed in Duff's earlier work (Duff and Johnson, 2002; Johnson and Duff, 2005), whereby contextual knowledge plays a significant role in information seeking. There is a perceived need for researchers to have "done [their] homework" (Johnson and Duff, 2005: 124) before visiting the archives. Archives are predominantly arranged by creators of the record – whether an individual or organisation (Duff and Johnson, 2002: 485) – and so knowing relevant names of individuals, events, and places can be an important starting point in the archives (Duff and Johnson, 2002: 485; Elena et al., 2010). A wider understanding of historical events is also seen as an asset to seeking in the archives (Duff and Johnson, 2002, 2003). While these may be ascertained prior to working within the archives, working in the archives itself has been found to develop researcher's contextual knowledge further (Duff and Johnson, 2002: 488-489; Duff, Monks-Leeson, and Galey, 2012: 82). Thus, information seeking in the archives emerges as an iterative, reflexive process (Chassanoff, 2013: 461) that locates knowing in the relation between the researcher's knowledge and the information contained in the records held by the archives.

Nevertheless, framing such interactions as “contextual knowledge” implicitly creates a separation between the researcher’s knowledge and the archives. Although the researcher’s subjectivity does not necessarily hold negative associations of bias, it is nonetheless framed as a context that the user applies to the archives, allowing them to make connections and construct meanings of the record that others do not (Duff, Monks-Leeson and Galey, 2012: 86). By framing this process as one of interpretation, it implies a separation between object and subject that enacts a boundary between the meaning that the archives preserves and that which the researcher interprets.

The focus on mediating elements such as the archivist or finding aid within the archives is underpinned by treatment of the researcher’s understanding of the record as a subjective interpretation. Concepts such as contextual knowledge speak to a more generative process, whereby the researcher is involved in creating meaning through interaction. Nevertheless, in creating a distinction between information found in the record and the contextual knowledge needed to interpret this, it separates the researcher’s knowledge from the information in the record. Again, such a division serves to bar the user from being considered as part of the archives: the record is part of the archives, but the content that the user finds is their own interpretation and thus beyond the remit of the archives (Menne-Haritz, 2001: 61). This suggests that a more relational view of the archives is necessary to fully integrate the researcher as part of the archives itself.

2.4 A RELATIONAL VIEW OF THE ARCHIVES

Recent calls have been made for a relational, person-centred understanding of the archives (Douglas, Ballin, and Ahmadbeigi, 2021; Douglas, Ballin, and Lapp, 2022; Sexton, Shepherd, and Duff, 2023) that shifts the focus from records to “the *people* who create, keep, use, and are represented in records” (Douglas, Ballin, and Lapp, 2022: 5; original emphasis). Person-centred approaches to the archives are not new and can be seen in approaches that emphasise care (Agostinho, 2019), relationality (Christen and Anderson, 2017), and affect (Cifor, 2016). Whilst this work is not explicitly oriented towards a social justice framework that has informed much of this recent work in archives, I nevertheless seek to question *who* is at the centre of existing perspectives on the archives (Douglas, Ballin, and Lapp, 2022: 17-18). This creates an opportunity to consider how the archives is not only made and remade through the practices of records creators (Colwell, 2020) and archivists (Ivanov, 2019), but also through those of end-users such as humanities researchers.

Having established that previous studies of interactions between researcher and archives have been approached from a mediational viewpoint, here I shall explore the opportunities presented by the relational perspective that grounds this work. As well as drawing on a practice-oriented empirical approach that grounds the methods described in Chapter 3, I adopt an understanding of *knowing* as

articulated by practice theorists such as Wanda Orlikowski (2000, 2002) and Silvia Gherardi (2009; 2019). This is complemented by Karen Barad's notion of the apparatus (2007) to further highlight how the archives is enacted through practice as not only a social but also *material* phenomenon.

2.4.1 Practice as an empirical lens

An empirical focus on practice turns its attention to what actors do "in practice": practice here being understood in the commonplace sense of practical activity (Orlikowski, 2015: 33-34). Although it should be noted that there is no single "theory" of practice – rather, multiple practice theories united by common principles (Nicolini, 2012: 8-11) – at a fundamental level all practice theories adopt practice as the focus of analysis.

Practices as empirical phenomena are often understood to exist in configurations, as "textures" (e.g. Gherardi, 2019) or "networks" (Nicolini, 2012: 8). A common expression of this is as lower-level activities, although other groupings such as sayings and doings are also common (Nicolini and Monteiro, 2016: 7). This finds similar expression in the concept of information practices, through which the "practice turn" (Schatzki, Knorr-Cetina, Savigny, 2000) has been applied in Information Science. Nonetheless, practice theories go beyond uniting activities within a practice to explore the wider social implications of the practice (Feldman and Orlikowski, 2011: 2-3). This results in an empirical approach to studying practice that is reliant on either following connections radiating out from a particular practice (Gherardi, 2019: 7) or "zooming in" and "zooming out" (Nicolini, 2009, 2017) in order to constantly switch from understanding the activity, through to practice, to its wider social implications.

For a configuration of activities to be considered a practice they must also be consequential (Feldman and Orlikowski, 2011; Feldman and Worline, 2016). By this, it is meant that the practice itself contributes to its own development or maintenance; in other words, the practice cannot exist without being put into action. Research can be considered a practice as unless it is enacted by various actors there would be no "research". We can thus define research practice as a configuration of lower-level activities that requires enactment in order for the research to progress. For understanding researchers' practices, then, we may see this both as zooming in to the lower-levels of activity that comprise a practice as well zooming out to the wider implications of that practice for understanding how practice enacts the archives. Both moves are informed by theoretical principles from practice theory that provide the basis for connecting the activity to the practice to the archives.

The empirical work in this thesis has been guided by the practice-oriented approach outlined here. Such an approach provides a framework for going beyond traditional human-information interaction frameworks, such as human-information behaviours or task-based approaches, to understand

individual activities within a broader framework of research practice. Likewise, in “zooming out” further to the wider practice, it is capable of accommodating an examination of how the archives is enacted through practice for the researcher’s particular needs; and so inform a new understanding of the archives that more fully integrates the researcher’s point of view.

2.4.2 Practice as a theoretical lens

Practice as a theoretical lens retains its empirical focus on everyday practice, yet also seeks to provide a specific explanation for such activity (Feldman and Orlikowski, 2011: 2): examples include Pierre Bourdieu’s (1990/2008) concept of *habitus* or Anthony Giddens’ (1984) *structures*. It is important to note that practice theories are explicitly *relational*: phenomena are considered to always exist in relation to each other, produced by a process of mutual constitution (Feldman and Orlikowski, 2011).

While this thesis does not seek to make a contribution towards a theoretical explanation of practice, an orientation toward practice theory is nonetheless utilised and so explicated here. I largely draw this theoretical framing from organisational scholars Wanda Orlikowski and Silvia Gherardi, and their discussions of knowing in practice (Orlikowski, 2000, 2002; Gherardi, 2009, 2019). This is further developed by Karen Barad’s (2007) notion of the apparatus to further emphasise the materiality of such practice.

2.4.2.1 *Knowing, practices, and information practices*

The articulation of knowledge as a relational practice is especially relevant to understanding archival research through a practice-oriented lens. Within practice theories, knowledge is usually considered as constituted in and through practice (Huizing and Cavanagh, 2011: n.p.): it is not inherent to a thing but is found in its relations to other things (Orlikowski, 2002). This finds a natural parallel in archival practice, which sees it as essential to preserve a notionally original arrangement of records to maintain connections between documents and thus the meaning of the record (Meehan, 2014: 65-67).

Organisational scholars Silvia Gherardi (2009, 2019) and Wanda Orlikowski (2000, 2002) have both articulated understandings of “knowing-in-practice”, in which knowledge is continually enacted through those practices that give it a particular significance. For Gherardi, *knowing* is preferable “as an activity, as a collective and distributed “doing”” (2009: 353) rather than *knowledge*, as a thing which one can hold and possess. Likewise, Orlikowski rejects the dualism of “know-how” vs “know-what”, to describe how knowledge is

“...continually enacted through people’s everyday activity; it does not exist “out there” (incorporated in external objects, routines, or systems) or “in here” (inscribed in human brains, bodies, or communities). Rather, knowing is an ongoing social accomplishment, constituted and reconstituted in everyday practice. As such, knowing cannot be understood

as stable or enduring. Because it is enacted in the moment, its existence is virtual, its status provisional.”

(Orlikowski, 2002: 252-3)

Knowledge, as articulated in practice theories, then, can be seen as enacted through practice. Returning to Mol, I use enactment here to “suggest that in the act, and only then and there, something *is*” (2002: 33): in this instance, in the relation between the knower, *what* they know, and *how* they know it.

This is highly relevant to discussions of what it means to know the meaning of the record. While archival theory and practice have long accepted that the archives contain a multiplicity of meanings (Duff and Harris, 2002; Williams, 2014: 2), this has largely been viewed from a relativist perspective that distinguishes a meaning “of” the record, what it has been preserved for, from potential meanings generated “for” something or someone (Ketelaar, 2012: 22-23). Instead, I propose a relational understanding of the archives that sees meaning as enacted through material-discursive practices. This dissolves the distinction between a meaning “of” and meaning “for”, instead acknowledging how knowledge is always partial and situated (Haraway, 1988).

This articulation of knowing poses a challenge to concepts more familiar to Information Science – where most archival user studies have been situated disciplinarily – such as information practices. Whereas in practice theory the empirical emphasis is on *practice*, IS is naturally oriented towards *information*. Yet information, like knowledge, is a problematic term for practice theories. The preference for *knowing* stems from a rejection of an objective understanding of knowledge (Huizing and Cavanagh, 2011: n.p.). Information poses a similar difficulty for practice theories: in implying the existence of information as a stable, objective “thing” that can be transferred from one person to another, it ignores how information is enacted in practice. While recognising that not all branches of Information Science treat information as “thing” (Buckland, 1991), I consider information to be an unsuitable term for discussing knowing from a practice-oriented perspective. This research thus represents a subtle but important re-orientation from information to knowing: focusing on the archives not as a source of information but an apparatus that enables and constrains particular ways of knowing (Barad, 2007: 148). This allows me to move beyond the mediational perspective adopted in many previous archival user studies and towards a more relational position.

Practice theories are therefore suitable to provide a complementary framing of the archives to existing perspectives. As a relational epistemology, practice theories can account for the meaning of the record as it is enacted in practice not only by archivists but also humanities researchers. This allows us to

extend the currently implicit relationality of the archives to consider those relations that impact the archives but have traditionally been considered to lie outside of its notional boundaries.

While practice theories have emphasised knowing as a sociomaterial phenomenon, their focus has often been on the constitution of the social world through practice (cf. Feldman and Orlikowski, 2011: 2). As a perspective that focuses solely on the social would be to ignore the materiality of the record and archives (Sundqvist, 2021), in order to develop this argument in the following section I consider how Karen Barad's explication of the apparatus as material-discursive practices (2007: 146, 184) can further an understanding of how the archives is enacted.

2.4.2.2 Enacting the archives and record through the apparatus

If we are to understand how the archives is enacted through the practices of the humanities researcher, I believe that it is also important to recognise the archives as a material arrangement. Here, I turn to Karen Barad's (2007) notion of the apparatus as a means of understanding how the researcher enacts the archives in particular ways to generate meaning from the record.

Barad's understanding of the apparatus is rooted in the conceptualisation of quantum entanglements of conjectures proposed by physicist Niels Bohr. At the centre of Bohr's premise was the notion that any scientific apparatus does not merely observe the phenomenon under investigation but actively produces it, and can therefore be seen as part of the phenomenon itself (Barad, 2007: 142). The result of this premise is that any properties measured by the apparatus are not inherent to the object itself, but are produced as a phenomenon through the combination or intra-action¹ of the measuring instrument and object (ibid: 139). This finds a parallel in ideas of knowing from practice theories, that sees knowledge as constituted in the relations between objects.

However, Barad challenges the external boundaries of the apparatus as characterised by Bohr. Whereas Bohr appears to situate the subject or "knower" *outside* of the apparatus, portraying the human as a neutral observer, Barad recognises the necessity of intervention in experimentation to make the apparatus work (ibid: 144-145). Therefore, the apparatus is presented as a set of *material-discursive practices* – used by Barad to refer to the co-constitution of matter and meaning – that "enact what matters and what is excluded from mattering." (ibid: 148). In using Barad's language of material-discursive practice, I adopt their position that matter and meaning are continually entangled (Barad, 2007: ix): in other words, these do not act independently but are always in relation to one another.

¹ Barad specifically refers to "intra-actions", rather than the more common interaction, to point to how phenomena do not pre-exist this relation (2007: 33).

Here, an illustrative example of Barad's definition of the apparatus might provide a useful insight into how the researcher enacts both record and archives in practice. Marshall and Alberti (2014) use Barad to show how the osteological sexing of a bone is a result of such material-discursive practices:

"...the apparatus for sexing a bone is no longer limited to the physical conditions, in this instance the callipers, but includes all relevant 'material discursive practices' — the person measuring the skeletons, the environmental laboratory conditions, the economic and political practices that impinge on the lab, the norms encoded in the reference tables of measurements, and so on. All are parts of the 'apparatus of bodily production' which bring into determinacy a specific sexed bone and skeleton. The intra-action, or phenomenon, of measuring the bone makes determinate the properties and boundaries relevant to the determination of the concept of sex in that specific case, but these properties (male, female, indeterminate) do not belong to the bone but rather to the intra-action or phenomenon of bone and apparatus. They are not inherent in the bone itself."

(Marshall and Alberti, 2014: 27)

In considering the archives as an apparatus, then, I refer to the complex web of interconnected relations that constitute the archives. In doing so, I create a space in which we can understand the archives through different sets of practices. On the one hand, the archivist will constitute and reconstitute the archives in their own ways, suited to the physical and intellectual preservation of the records. On the other, the researcher employs a different set of material-discursive practices that produce and reproduce the archives in different ways. In this way, discursive practice can be seen as "specific material (re)configurings of the world through which the determination of boundaries, properties, and meanings is differentially enacted" (Barad, 2007: 148). Rather than claiming different "perspectives" (Mol, 2002: 35), this understanding shows how through such material-discursive practice, the researcher and archivist enact different archives.

Understanding the archives as an apparatus that "enact[s] what matters and what is excluded from mattering" (Barad, 2007: 148) finds a strong parallel in archival theory and practice over the past two decades. The post-structural turn in archival theory of the 1990s and 2000s acknowledged the power of the archivist to determine what meanings get to count in the archives (e.g. Duff and Harris, 2002; Mbembe, 2002; Nesmith, 2002). Likewise, more recent approaches to the archives rooted in social justice have questioned the power of the archives from both theoretical and practical perspectives, by adopting feminist (Cifor and Wood, 2017) and decolonial (Christen and Anderson, 2017) theories and participatory (Shilton and Srinivasan, 2007) and postcustodial (e.g. Kelleher, 2017) approaches to archiving. As in Barad's notion of the apparatus, this is an understanding of the archives that sees the human — in this case the archivist — as part of the apparatus and not outside of it.

Yet while archival theory and practice have gone some way towards addressing how the archivist is responsible for enacting the archives – if not in so many words – it has yet to consider how the researcher can be considered part of this apparatus. Just as the archivist carries out practices that determine what matters when maintaining particular meanings for the record, the researcher enacts the archives in particular, unique ways through their own research practice. In altering the apparatus by exchanging the archivist for the researcher as a knowing subject, then, the apparatus itself has been changed. Thus, we can consider the archives that is enacted by the material-discursive practices of the researcher to be different to that which is enacted by archival practice (cf. Mol, 2002: 35). This provides a basis on which we may consider the archives in different, complementary ways, and creates an opportunity to broaden consideration of what the archives is and might be for different users.

Adopting a relational view of the archives, then, means to understand the archives as primarily defined through its relations to other things. Traditionally, this has been understood through the relationship between records; more recently, archival theory and practice has recognised the relation between the archivist and the archives in shaping what matters and what gets to matter in the archives. Yet the archives is constituted just as much through the relation between the researcher and the archives. Considering the archives from this position means recognising how the archives is profoundly different when enacted through research practice as to when it is enacted through archival practice. This represents a fundamental change in the apparatus, both in terms of the *knower* (researcher) and the *practice* (research). Therefore, to understand what the archives *is* for the researcher, and how this affects what meanings are possible to draw from the records, requires an in-depth look at how the archives is enacted in their research activities and practice.

2.5 RESEARCH PRACTICES OF HUMANITIES RESEARCHERS

Following an empirical orientation to practice theory, I understand research practice as comprised of those activities of humanities researchers that make up the “texture” (Gherardi, 2009, 2019) of the wider practice. Likewise, in adopting a relational view of the archives through practice theories, I consider the archives to be enacted in and through the activities and practices of humanities researchers.

As such, I turn here to the wider literature on humanities research practice to examine how the archives is or may be enacted in different ways through these individual activities. This will draw on insights from various disciplines including Human-Information Interaction, Information Science (including Archival Studies) and Digital Humanities; although these are not always easily distinguished due to the overlapping interests of scholars within these fields.

I begin by providing an overview of some different models of humanities research practice to compare examples of how individual activities have been grouped as part of higher-level practices. I then move on to discussing these lower-level activities in broad thematic groupings of *Exploring the archives*; *Building a personal collection*; and *Working with primary sources*, to explore how these may contribute to a broader practice that allows the researcher to produce meaning from archival records both in situ and ex situ.

2.5.1 Modelling humanities research practice

Several previous attempts have been made either to model or create a comprehensive overview of humanities research practices, largely from the perspective of Information Science (e.g. Brockman et al., 2001; Ellis, 1993; Palmer, Teffeau, and Pirmann, 2009) as well as the Digital Humanities (Unsworth, 2000). These have often taken an approach that recognisably unites multiple activities as part of a wider practice, even if these terms are not explicitly used. As such, these models go part of the way towards fulfilling a practice-orientation to the archives. However, despite “zooming in” (Nicolini, 2009, 2017) from the practice to the activity, these models do not attempt to zoom out to the broader implications of the practice: for instance, how such practice enacts social structures or disciplinary boundaries. While I outline these models here, individual activities will be discussed in further detail under the respective thematic headings of *Exploring the archives*; *Building a personal collection*; and *Working with primary sources*.

As with the archival user studies literature, early models focused primarily on search. Ellis’ (1993) model of humanities researchers – specifically, English literature scholars – identified six main categories within information-seeking. These were *starting*, *surveying*, *chaining*, *selecting and sifting*, *monitoring*, and *assembly and dissemination* (Ellis, 1993: 483). Notably, Ellis studied not only humanities researchers but also scientists and physicists, creating separate models for each. However, he noted that although the terminology for the separate stages differed between humanities researchers, social scientists, and physicists, these nonetheless appeared to represent fundamentally the same activities across disciplines (ibid).

The notion that it is possible to represent a core set of activities relating to research practice is likewise a central premise of scholarly primitives: a term originally coined by John Unsworth “to refer to some basic functions common to scholarly activity across disciplines, over time, and independent of theoretical orientation” (2000). It has since become popular in the design of tools for Digital Humanities, where it has been mapped to functionalities of various digital interfaces (e.g. Anderson, Blanke and Dunn, 2010; Benardou et al., 2010; Benardou, Constantopoulos, and Dallas, 2013; Trace and Karadkar, 2017).

Similar activities do appear across a number of related studies of humanities research practice, although it is not clear whether this is simply due to the influence of prior research. Brockman et al. considered humanities research practices not only beyond search but also outside of scholarly activities, including teaching and keeping up to date (2001: 6). Nevertheless, they grouped their findings into four “types” of activities: *reading, networking, researching, and writing*. Although Palmer, Tefteau, and Pirmann (2009) present an inclusive study that encompasses not only humanities researchers but also sciences and social sciences, they too draw on Unsworth’s notion of scholarly primitives to present a number of major practices that are seen as essential to research. These are comprised of *searching, collecting, reading, writing, and collaborating*, each of which is made up of a number of lower-level activities. In addition to this, Palmer, Tefteau, and Pirmann also expand on a number of “cross-cutting primitives” such as *monitoring, note-taking, translating and data practices*.

Each of these models capture some commonalities in practice, as well as linking activities as part of a broader research practice and thus go some way towards a practice-oriented approach. Nonetheless, none represents an attempt to “zoom out” to the wider implications of the practice. Therefore, while the empirical framework I adopt in this work bears some resemblance to the literature on modelling research practice, in that it unites multiple activities within a broader practice, I go beyond this to consider the broader implications for the archives, namely how the archives is enacted in practice.

Similarly, while some of these models represent an attempt to create a comprehensive understanding of research practice, this is not the purpose of the work presented in this thesis. Rather, in discussing individual activities that comprise part of a wider practice, in identifying several activities through the empirical work presented in Chapters 4-6, I seek to demonstrate how the archives is enacted through the practices of humanities researchers to generate novel insights from archival records.

2.5.2 Exploring the archives

Archives have not been the focus of many studies in humanities research practice and as noted earlier, prior archival user studies have tended to focus on information seeking (Rhee, 2015; Sundqvist, 2015) over other activities. While such studies have largely been conducted from a perspective rooted in Information Science – and often Information Behaviour in particular – by reading across this available literature it is revealed how seeking can be characterised as an intra-action (Barad, 2007) between the researcher and archives that shapes the record as an object of study, as well as the researcher’s topic of research.

For instance, looking for records in the archives is often described in terms of serendipity (Duff and Johnson, 2002; Martin and Quan-Haase, 2017) or luck, e.g. as an archival “crapshoot” (Crean, 2011). Such accounts are indicative of a particular quality of archival research. Archives are arranged

hierarchically by collection, series, box, folder, and item (Meehan, 2014: 69-70): often, archives are not described to the level of individual items (TNA, 2024). This means that researchers are never quite sure what they will find when they go looking in the archives, resulting in strategies that prioritise non-directed seeking, such as browsing (e.g. Late and Kumpulainen, 2022: 113).

As it is not possible to plan research entirely before engaging with the archives, researchers must be responsive to what records are available (Duff and Johnson, 2003: 94; Late and Kumpulainen, 2022: 113). Duff and Johnson (2002) identify both orientation and building contextual knowledge as key activities for historians searching for information in the archives, alongside known-item searches and identifying relevant material. Orientation enables a researcher to come to know a new archives, finding aid, sources, or collection (Duff and Johnson, 2002: 480); while building contextual knowledge is an ongoing process by which the researcher gathers any information that might shed light on their research (ibid: 487). The particular significance of orientation and building contextual knowledge to archival research demonstrates how knowing is performed in the archives as a situated activity.

Although orientation is made easier if the researcher already possesses “archival intelligence”, i.e. an understanding of how archives in general are organised (Yakel and Torres, 2003), as each archives is slightly different and arranged in a unique manner it is not possible to apply this previous experience to all archives. Instead, orientation takes place whenever a researcher encounters a new collection (Duff and Johnson, 2002: 480). Thus in orientation we see a clear example of how the researcher’s knowing is enacted through the archives, as it is essential for the researcher to know how to “read” the archives as a structure before they are able to read the records in context.

In doing so, the researcher blurs the line between orientation and building contextual knowledge; although the latter also incorporates any information that may help the researcher to understand their topic (Duff and Johnson, 2002: 487). This extends beyond common tactics such as name collection (Case, 1991) and may include but is not limited to people, organisations, events, and general historical background (Duff and Johnson, 2001; Elena et al., 2010); as well as anything that may help them to understand the processes that led to the formation of the records (Duff and Johnson, 2002: 487).

Through their interactions with primary sources during search, then, the researcher comes to know the meaning of the records not only through *what* the record and archives document but *how* these are structured. As well as exposing the inherently relational nature of the archives, this also indicates how such relations must be enacted to generate a meaning from the record. Therefore, another way of framing this interaction through an understanding of knowing as a situated activity is to consider how the researcher actively brings different materials into contact with each other to enact different

meanings for the record. Although in archival practice this is seen to preserve a notionally archival meaning, in choosing what they attend to the researcher enacts this apparatus in novel ways that affect the meaning that they generate even within the archives itself.

This can be seen in the ways in which researchers bring their prior experience to bear on how they enact the archives during search. As noted by Duff, Monks-Leeson, and Galey (2012) “archival *finding* depends very much on archival *looking*.” (2012: 86; original emphasis). Several studies have pointed to the need for researchers to begin their search with a framework that helps them to give meaning to the information found within the collection (Duff, Monks-Leeson, and Galey, 2012: 80; Late and Kumpulainen, 2022: 113-114). Examining the interpretive activities of book history students, Duff, Monks-Leeson and Galey (2012: 80) found that having a pre-existing framework helped researchers to make connections of relevancy between the records viewed and allowed the researcher to determine the meaning of the record for themselves. Likewise, earlier work by Duff and Johnson (2002: 495) stresses the deliberate tactics exercised by historians when looking for information; while Martin and Quan-Haase (2017) point to the active language used by researchers to describe their serendipitous encounters. It has also been noted that in building a personal collection, researchers will often begin creating an organisational structure in advance of or concurrent to gathering research materials (Antonijević and Cahoy, 2018: n.p.): again, this suggest a predetermined framework that researchers bring to their understanding of the record and archives.

Nonetheless, while researchers need a framework to locate and understand relevant information within the archives, this more closely resembles a “discursive resource” that is produced and used during interaction rather than a fixed plan that the researcher closely follows (Suchman, 2003, 2006). As noted already, researchers build their contextual knowledge over time, adjusting their searches and reframing their queries (Duff and Johnson, 2003: 94; Late and Kumpulainen, 2022: 113) to accommodate new information. Therefore, not only is the meaning of the record neither static nor fixed but how the researcher knows their research topic is also adjusted through interacting with the archives. It is thus the intra-action between the researcher and the archives that determines the topic of their research. Neither research topic nor meaning of the record pre-exist this interaction, but are co-constituted by the enactment of the archives through material-discursive practice.

These studies stress how the meaning that is enacted from archival records during search is not static, but evolves as the researcher progresses through their work. Until the researcher engages directly with the records, their knowledge is provisional (Orlikowski, 2002: 252-253): it is only through practice that a particular meaning of the record is enacted in the researcher’s work. While the literature here provides evidence for this relational understanding for generating meaning during search, there

remains little evidence of how this occurs beyond information-seeking. As such, the empirical work presented in Chapters 4-6 of this thesis primarily focus on activities beyond discovery; and for the remainder of this chapter I now turn to the broader literature from across Information Science, Digital Humanities, and Human-Information Interaction on humanities research practice to establish what other activities may be useful for understanding the archives from the position of the researcher.

2.5.3 Building a personal collection

Collecting is barely mentioned as an important activity within the archival user studies literature: while hinted at, it has never quite been brought into focus (e.g. Elena et al., 2010: 31; Sinn and Soares, 2014: 1801). Yet the wider literature on humanities research practice suggests that personal collections play an important role in this work (Antonijević and Cahoy, 2018; Kamposiori, Warwick, and Mahoney, 2018; Palmer, Teffeau, and Pirmann, 2009; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017). If we are to understand the archives from the researcher's perspective, it is necessary to consider how the growing use of personal collections is blurring the boundary between those activities undertaken in situ, within the reading rooms, and those ex situ, beyond the physical archival location. Likewise, as personal collections will inevitably enact the archives in new ways, whether through different tools and software or by bringing records into contact with other sources, understanding the use of personal collections is essential to understanding how the archives is enacted in practice.

The growing interest in how humanities researchers build and use personal collections reflects their increasing capacity to do so. Many archives now permit digital cameras and other devices in the reading rooms (Cox and Archives Students, 2007; Trace and Karadkar, 2013) and online digital repositories provide easy access to digitised materials. Likewise, the decreasing costs of digital storage mean that it is possible for researchers to amass large amounts of high-quality digital image files (Milligan, 2020: 614-615) even if they never use them.

Such conditions have already changed how researchers engage with primary source materials, leading Rutner and Schonfeld (2012: 11) to claim that, "The widespread use of digital cameras and other scanning equipment to capture source materials is perhaps the single most significant shift in research practices among historians" (2012: 11). Likewise, Ian Milligan points out that digital media, technologies, and methods now underpin almost all historical research: in particular, digital archival photography (2020: 603). While the majority of studies refer to this impact specifically for historians, Trace and Karadkar (2017) have identified an emerging distinction between "ex situ" and "in situ" modes of research in the humanities in general. They define ex situ research as focused on collecting as much information as possible from the archives before processing this offsite; while the traditional "in situ" mode focuses on creating a set of partly interpreted notes before leaving the archival building

(2017: 500). It is important to note here that the scholars interviewed by Trace and Karadkar did not adhere to one model or the other, but generally adopted one or both as their needs dictated.

Equally as interesting as the shift to gathering large amounts of records is how these are organised to enable researchers to process these offsite. Archival repository was one means by which Trace and Karadkar's participants organised their collected records, with one noting that they tended to reproduce the structure of the archival repository because "I go at things by understanding where they fit in the archival sources." (Trace and Karadkar, 2017: 501). Similar findings were observed by Antonijević and Cahoy (2018: n.p.), who noted that researchers replicated the archival arrangement when organising materials that they had gathered from the archives. Interestingly, this did not seem to apply to records collected from online repositories, with researchers expressing a sense that these records had not been subject to the same research process as when they visited the archives in person (*ibid*). Thus, the *ex situ* mode of research appears to represent an extension of the archival apparatus beyond the traditional boundaries of the repository, as researchers attempt to recreate the experience of researching in the archives within their personal collection.

Despite the name, an *ex situ* mode of research is as reliant on those activities carried out within the archives as those beyond it: therefore, it is necessary to consider these as one continuous process. Antonijević and Cahoy (2018) found that even within their small sample of eight researchers a range of approaches to collecting were exhibited. While there were those who sought to compile vast quantities of archival materials to be processed offsite, reflecting the wider literature on this topic (Milligan, 2020; Rutner and Schonfeld, 2012), they also found others who were sensitive to the issues that this approach would pose to rediscovery. These participants chose instead to assess materials in the archives and photograph only those critical to their work; as such, their research could be characterised as somewhere between *in situ* and *ex situ* and thus complicates these two modes of research.

Building a personal collection is often carried out with the aim of reusing materials later on. Palmer, Tefteau, and Pirmann claim that re-reading is one of the primary reasons that researchers build personal collections (2009: 21). Similarly, studies of the use of visual sources suggest that researchers will revisit these materials multiple times. Kamposiori, Warwick, and Mahoney (2018) noted that art historians will search through their own collections in order to refine their research ideas during writing, which suggests that those using visual archives may also undertake a process of re-viewing primary sources; while Chassanoff's finding that in historians' use of photographic archives they may store interesting images at an early stage as they were not sure which ones would "stick out" (2018: 143) later on implies that images will be viewed multiple times during the course of research.

Yet as suggested in some of the literature on gathering (e.g. Antonijević and Cahoy, 2018), researchers may work selectively when collecting primary sources: only capturing those records that are relevant to their work. The relational nature of archives means that in doing so, the apparatus has been altered and the potential meanings that can be generated from the record have changed. Therefore, in order to understand how the researcher enacts the archives in their practice it is essential to examine these activities as they occur both in situ and ex situ.

Building a collection of primary sources has been significantly altered by the availability of both digital devices in the reading rooms and online access to digitised sources. The literature suggests that a nominally ex situ approach to research has emerged, whereby large amounts of materials are gathered onsite or downloaded online and later reviewed for relevance. While this initially appears to shift analytical activities beyond the physical archives, it seems more likely that novel means of collecting materials are affecting researchers interactions with archival materials both in situ and ex situ, blurring the boundaries of what takes place where. However, no studies have previously been conducted that treat this process holistically: the empirical work presented in this thesis (Chapters 4-6) will therefore address this by carrying out studies both in the archives and elsewhere, in the researcher's home or other personal research environment.

2.5.4 Working with primary sources

While searching for records and building personal collections of primary sources are both material-discursive practices that shape how humanities research is conducted, the core of analysis lies in reading, writing, and other similar activities. Yet due to the mediational focus of previous research, reading and writing have received relatively little attention in relation to working with primary sources.

Here, I examine the activities involved in working with primary sources. I group discussion of such activities into two types: consumptive and productive activities. Murray and Wiercinski (2014) use the term "consumptive activities" to refer to those activities that require the intake of information through engaging with certain media. In contrast to this, I name other activities such as writing that produce resources for further action (Nicolini, 2012: 2) as "productive" activities.

2.5.4.1 Reading, and other consumptive activities

Reading is central to analysis in humanities research, though its role is often taken for granted. It is often where we "know" the meaning of the sources we read, as a complex process not just of reading words on the page but constantly linking these to other sources as well as their own research (e.g. Brockman et al., 2001: 7-8; Duff and Johnson, 2002: 489; Palmer and Neumann, 2002: 99).

The various ways in which knowing is performed through reading can be seen in the different types of reading that have been described in the literature. Palmer and Neumann (2002) identified three types of reading particular to humanities research: scanning, re-reading, and reading for writing. Likewise, Palmer, Teffeu, and Pirmann (2009) discuss scanning and re-reading, as well as the additional activity of assessing. The spread of these activities throughout the research process is indicative of the integral nature of reading to analysis, as well as the iterative and processual nature of generating meaning from primary sources. While I consider scanning, assessing, and re-reading below, reading for writing overlaps with note-taking (Palmer and Neumann, 2002: 100) and is thus discussed in the following section.

Scanning and assessing are two types of reading strongly related both to each other and to the task of looking for research materials. Palmer, Teffeu, and Pirmann discuss scanning as an activity that takes place prior to more thorough reading; it is intrinsically related to assessing, which takes place during scanning to determine the relevance of items (2009: 20). This combination of activities is also reflected in Late and Kumpulainen's notion of *content-browsing*, which describes the combination of two distinct forms of search – locating information and going through the content – exhibited by researchers when interacting with a digitised newspaper archives (2022: 121).

As noted above in 2.5.2 *Exploring the archives*, during search researchers are constantly building their contextual knowledge (Duff and Johnson, 2002) and using primary sources to determine their direction of study (Late and Kumpulainen, 2022: 113). Nonetheless, they also come to the archives with a predetermined framework that helps them to navigate the archives (Duff, Monks-Leeson, and Galey, 2012). Through such styles of reading as scanning and assessing, we can see how the researcher and archives are brought together during practice to generate the researchers' understanding of the record. To borrow Orlikowski's phrasing (2002: 252-253), "meaning" exists prior to the interaction neither "in here" in the researcher's head nor "out there" in the archives. It is during activities such as reading that meaning is generated.

Re-reading has also been described as a significant activity for interpretation and analysis, and often takes place over an extended period of time (Palmer and Neumann, 2002: 99). As such, re-reading is also intrinsically linked to the use of personal collections (Palmer, Teffeu, and Pirmann, 2009: 21). The findings of Kamposiori, Warwick, and Mahoney (2018) and Chassanoff (2018) discussed above (2.5.3 *Building a personal collection*) similarly suggests that the re-viewing of primary sources also plays a significant role in analysing these once the researcher has gathered them in their personal collections. Furthermore, as also noted above researchers are not usually comprehensive when collecting primary sources: often, they take only those sources that they perceive as relevant to their

work (Antonijević and Cahoy, 2018: n.p.). Since “The totality of the records provides information no individual record can” (Duff and Johnson, 2002: 487) it suggests that the researcher’s selectivity in gathering records inevitably impacts the meanings that can be generated when the records are later read *ex situ*.

Likewise, if we are to understand knowing as a situated practice, it is pertinent to consider how remote access to primary sources is affecting analytic activities such as reading, as this similarly represents a change in the researcher’s practice and thus the apparatus. An increase in the use of e-texts has long been noted (Given and Willson, 2018; Sukovic, 2008; Talja and Maula, 2003; Toms and O’Brien, 2008), though it is less clear whether these findings apply to primary research materials. Gooding’s (2015) research, analysing webometric logs from the Welsh Newspapers Online collection highlights that user behaviours in digital libraries and related systems are often more representative of search practices in both physical and digital environments than a change in reading behaviour.

Sukovic’s (2008) work on e-texts raises the interesting question of whether we treat digitised records as images or text. She suggests that the boundaries here are blurred, as in the digital environment it is difficult to distinguish image and text: even items with text are always presented within another type of media (Sukovic, 2008: 272-273). Conway (2010) makes a similar observation in relation to visual primary sources. He found that researchers adopted three different “modes of seeing” in digital photographic archives, variously treating the digitised photograph as an image, photograph, or archives. Such findings suggest that not only are reading and viewing highly situated practices that rely heavily on how they are accessed to determine how they are treated, but also point to how the changing materiality of archival records may impact how they are known in practice.

As methods of analysis such as data visualisation and distant reading become increasingly common in the humanities, other ways of knowing are emerging that may affect how meaning is generated from archival records. Though such methods have received little attention in the literature on humanities research practice so far, it appears likely that “traditional” methods of scholarly activity are still most common, with the continued prevalence of close reading (Decker et al., 2022; Kumpulainen et al., 2020) as well as the tendency of researchers to adopt tools where they will support existing practice (Antonijević and Cahoy, 2018: n.p.; Palmer and Neumann, 2002: 110; Trace and Karadkar 2017: 497). However, it remains to be seen if traditional methods remain popular in archival research as born-digital archives become more widely available. Currently, born-digital archives are difficult both for archivists to represent and for researchers to access due to privacy and copyright concerns or technical issues (Decker et al., 2022; Jaillant, 2022). This limits our ability to predict how these primary sources may be used in future.

If we understand knowing to be situated within practice and therefore enacted through activities such as reading, then how such activities are conducted fundamentally changes what the practice is. While the different styles of reading presented here suggest how knowing is performed in different ways through reading, there remains a lack of insight into the material nature of such practices. Studies of digital methods of reading and other forms of analysis have begun to touch on this, as the juxtaposition of physical and digital environments makes such material differences more readily apparent. However, it remains to be seen how such changes in analysis affect research from archival materials as the vast majority of archival records remain un-digitised and born-digital records continue to pose a variety of access issues.

2.5.4.2 Writing, and other productive activities

Writing is an important activity for humanities researchers that helps them to process their ideas and support their understanding of their subject (Bates, 1996: 698). This highlights the intertwining of knowing in activities such as writing in order to generate meaning from primary sources and how this cannot be separated from practice. Furthermore, writing is often intertwined with other activities such as reading, and is seen to “fix” the intellectual outcome of other activities for later reuse (Palmer and Neumann, 2002: 100). As such, it also plays an integral role in an iterative move away from interpreting primary sources to applying them within the researcher’s own work.

Like reading, writing occurs throughout much of the research process and can support various tasks, including assembling a text through note-taking (Palmer, Teffeau, and Pirmann, 2009: 22) or annotating research materials (Brockman et al., 2001: 7; Palmer and Neumann, 2002: 100). As with reading, the different applications of writing show how knowing is enacted through various activities. Here, I focus on those types of writing that involve direct interaction with primary sources: note-taking, assembling, annotation, and transcription.

Early in the research process, researchers may make notes when gathering materials. Case (1991: 74) suggests that for historians in particular, this may be a solution to situations where access to sources is limited, as in archives. However, as noted above in 2.5.3 *Building a personal collection*, though some researchers continue to work in situ and produce a set of notes from which to work within the archives, it is now perhaps more commonplace for researchers to focus on self-digitising records during an archival visit (Milligan, 2020; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017). Thus, the continued prevalence of note-taking among humanities researchers suggests that this is not just a pragmatic means of capturing information but a way of attending to the information in primary sources that matters to the researcher. The fact that it creates a material output means that such

notes then fix the knowing enacted through reading in future work, as captured in Palmer and Neumann's description of "reading for writing" (2002: 100).

This can be seen in how – beyond note-taking for practical purposes – note-taking often blurs into later writing processes through what Palmer, Tefteau and Pirmann (2009) describe as *assembling*. Though the authors describe note-taking as a separate "cross-cutting" primitive distinct from assembling, they likewise acknowledge that within assembling, "notetaking [sic] is an important part of the writing done in preliminary stages of constructing a text." (2009: 30). Borrowing this term from Ellis (1993: 483), for the authors assembling also occurs earlier in the research process during searching and reading (Palmer, Tefteau and Pirmann, 2009: 22). While the authors link assembling to writing, the growing importance of building personal collections may suggest that this, too, represents a broader process of assembling research materials. It may be pertinent to see assembling – including both note-taking and activities involved in building a personal collection, such as gathering and organising – as part of a continuous process that begins within the archives and continues beyond it, that allows the researcher to enact different meanings at various points in their research through complex material arrangements of collected sources – primary and secondary – as well as their own notes.

Annotation, as a specific type of note-taking, has been presented as an independent activity in its own right (Unsworth, 2000). In traditional print environments, annotation can be understood as the direct modification of a text to support interpretation, such as underlining text or adding notes in the margins. With original copies of primary sources, including archival records, this type of interaction is not possible; but with self-digitised copies of materials researchers have the freedom to modify these as it supports their research. Nonetheless, Antonijević and Cahoy (2018: n.p.) note that archival records are often digitised as JPEG files which do not easily support annotation. They found that instead, researchers would often create separate notes in a Word document. This is a clear indication of how research practice is enacted not only through discursive practices but also as material practices. The ways in which the researcher works and is able to know the record is thus shaped by readily available technologies and how materials have been digitised. It therefore also shows how – if self-digitised – researchers practices within the archives again affect those that are undertaken elsewhere.

Similarly, transcription also represents an example of where choices made within the archives may be affecting how the record is produced beyond it. Korkeamäki and Kumpulainen (2019) and Antonijević and Cahoy (2018) both mention transcription as an important "pre-analytic" task (Given and Willson, 2018: 812) for humanities researchers before they begin analysing material. However, such a framing

separates transcription from “proper” analysis rather than viewing this as another means by which researchers actively enact the record as an object in their research. There is very little information available on how researchers transcribe archival materials, although recent research into the use of Handwritten (HCR) and Optical Character Recognition (OCR) software suggests an assumption that records are always transcribed in full (e.g. Terras, 2022). However, this is often linked to digitisation efforts that require the complete archival collection to be provided: it remains to be seen how individual researchers transcribe records in the archives. If working selectively, it would mean that in transcribing the text researchers would be attending to particular details of the text and not others, thus reproducing the text in a way that is unique to their own purposes.

Other, additional activities may also now be necessary to facilitate analytical work with primary sources. Palmer, Tefteau and Pirmann identify “data practices” – the work of *generating, managing, and sharing* data – as a somewhat generic, cross-cutting primitive (2009: 32-33). Examples of data practices may be found in more recent literature that has identified tool development and data entry as additional “productive” activities that may be required to facilitate certain types of analyses (Given and Willson, 2018; Korkeamäki and Kumpulainen, 2019). Given and Willson (2018) found that activities involving textual sources had expanded far beyond reading to include OCR corrections, computational analyses, and metadata study. Likewise, two of the five historians interviewed by Korkeamäki and Kumpulainen (2019) manually built databases to assist in their work: one collected references in a spreadsheet, while the other used the programming language ‘R’ to automate this work (ibid: 39). This reflects wider findings that suggest while some humanities researchers utilise generic software to support interpretation others see tool development as integral to their research (Antonijević and Cahoy, 2018; Given and Willson, 2018).

It remains to be seen how such practices impact on the archives specifically. Inevitably, as humanities researchers incorporate new tools and methods into their research practice, it appears likely that researchers who use archival records in their work would apply these to the archives too. Recent studies have anticipated that new methods will be needed to conduct research on vast quantities of records available through born-digital archives (Decker et al., 2022; Jaillant, 2022). From the perspective of Digital Humanities, Hoekstra and Koolen (2019) propose that activities such as selection, modelling, normalisation, linking, and classification – including automated classification – will become increasingly important as digital historical methods become more common. While born-digital archives are not yet widely accessible (Decker et al., 2022; Jaillant, 2022) current research suggests that any new approaches will be complementary to existing ones: for instance, despite the increasing use of digital methods in the humanities, close reading has been found to remain an important method (Decker et al., 2022; Kumpulainen et al., 2022).

Productive activities such as writing, as well as newer data-related activities, reflect how knowing is created through practice. These are essential activities that show how the researcher reproduces primary sources in particular ways, through which the researcher makes these relevant in their work. The literature on these activities also highlights how changing methods and approaches to research are affecting how the researcher works with the archives: whether through an “ex situ” mode of research or new methods of analysis that produce the record in different ways. While there are limited studies to date on how such new methods are changing humanities research practice, in recognising these as a change to the archival apparatus, we can look to how this impacts how the archives is enacted through practice.

2.5.5 Summary: Humanities research practice

Several previous models of humanities research practice have been produced that provide a comprehensive overview of the activities that are considered to comprise research practice. Furthermore, the broader literature on humanities research practice has dealt with many activities individually, which I have presented here under three key areas of activity: *Exploring the archives*; *Building a personal collection*; and *Working with primary sources*. In doing so, I have identified several gaps in the literature that this thesis will seek to address.

Literature focusing on exploration and search provides the strongest basis for understanding archival research specifically: despite the mediational focus of previous work, this literature points to how knowing is enacted through archival relations between the researcher and the archives. In contrast, the comparative lack of literature beyond seeking provides one focus for this work: to examine interactions beyond information discovery.

There are also a number of studies focusing on the role of building personal collections in humanities research. This has identified the importance of the shift from analysis conducted *in situ*, in the reading rooms, to *ex situ*, outside of the repository itself. Nonetheless, the majority of this work has focused on activities such as gathering and organising that occur within the repository, rather than how these assembled materials are used elsewhere. As such, this research will seek to treat this practice holistically by carrying out empirical studies both within the archival reading rooms (Chapter 4) and in the researcher’s home or other personal research environment (Chapter 5-6).

Working with primary sources is perhaps the least well studied area of activity with regard to archival sources. While previous literature has identified different styles of reading and writing that suggest how meaning is generated in practice, these have rarely considered how these activities are material as well as social in nature. By attending to the archives through Karen Barad’s (2007) notion of the

apparatus as material-discursive practice, as well as positioning knowing as a sociomaterial practice (Orlikowski, 2006; Orlikowski and Scott, 2008; Scott and Orlikowski, 2014), this work will address the material-discursive nature of research practice. Furthermore, the previous treatment of humanities research activities – whether individually or part of a wider practice – has not sought to “zoom out” (Nicolini, 2009, 2017) to the broader implications of the practice. In this thesis, I will do so by zooming out from humanities research practice to consider how the archives is enacted in and through such practice.

2.6 SUMMARY OF LITERATURE

This literature review began by laying out the mediational position previously taken by the majority of archival user studies, which have primarily been conducted from an Information Science disciplinary perspective. In taking this approach, these studies have implicitly enacted a separation between the archives and the researcher that reduces the researcher’s knowing to a subjective interpretation.

Instead, I have proposed that the archives can be understood from a relational perspective, represented here by an empirical and theoretical orientation to practice theories. Taking practice as the primary focus of analysis, I seek to demonstrate how the archives can be understood through their relation to the researcher. In doing so, I understand the archives to be enacted in the material-discursive practices of the researcher that determine what matters and what is excluded from mattering (Barad, 2007: 148) when generating meaning from the record. This provides a framework through which we can understand the researcher’s activities as contributing to a broader practice, as well as the broader implications of that practice for the archives.

To provide further direction for this work, I have also reviewed the available literature on humanities research practice, focusing exclusively on previous work that has considered the use of primary sources. This literature has been drawn from across multiple disciplines: primarily Information Science, as well as Digital Humanities, and Human-Computer Interaction. In reviewing this previous research I have highlighted three major areas of activity: *Exploring the archives*; *Building a personal collection*; and *Working with primary sources*. The existing emphasis on search in general, and seeking in particular, means that I choose to focus the empirical work in this thesis beyond discovery. Likewise, although building personal collections has been discussed in the literature this has primarily been considered in relation to activities such as gathering that occur within the archival repository. Therefore, in the empirical work I have focused not only on activity undertaken in situ (Chapter 4, *Within the Archives*) but also how archival research is undertaken ex situ (Chapter 5, *Beyond the Archives: Enacting the archives ex situ* and Chapter 6, *Beyond the Archives, Expanding the archival*

interface). Finally, the literature on working with primary sources show that although new tools are changing how these activities are undertaken, there remains a focus on traditional scholarly activities such as reading and writing. As such, in this work I will attend to not only the discursive but also the material nature of such practices (Barad, 2007: 148-149) to identify the importance of how such activities are undertaken and identify any activities that may have previously been overlooked.

3 METHODS

3.1 OVERVIEW

The initial aim of this research was to understand how humanities researchers generate meaning from archival records (RO1). As this research developed, this focus was expanded to include the further objectives of better integrating the researcher within the archives (RO2), by considering how the archives is enacted through the researcher's practice; as well as how this position challenges the traditional boundaries of the archives (RO3).

Given the emphasis on *practice*, in the sense of practical activity (Orlikowski, 2015: 33-34) – in other words, what researchers actually *do* with archival records – I quickly identified observation as an appropriate research methodology. Unlike interviews or walkthroughs, observations provide an opportunity to witness the researcher's activities directly. Taking this approach likewise avoids relying on participant's recollections, which was important to a practice-oriented approach as participants have been found to miss out details that they consider to be irrelevant or unimportant to the practice (Nicolini and Monteiro, 2016: 11).

Furthermore, the aims of this research made it essential to undertake this in a naturalistic manner. This led me to adopt an approach that drew on Contextual Inquiry, namely the contextual interview method (Holtzblatt and Beyer, 2017: 70-75), as suitable for conducting the observations. During a contextual interview, the participant undertakes their own activities in a naturalistic setting, while the researcher enquires into what the participant is doing (ibid: 70). While the researcher's intervention may interrupt the participant's usual task (Boren and Ramey, 2000: 273), a method that allowed for greater researcher intervention was felt to be suitable to provide better insight into the motivation underlying participants' activities (Boren and Ramey, 2000; Makri, Blandford, and Cox, 2011). Likewise, this remains within the tradition of ethnographic techniques that frequently combine interview and observational methods (Riemer, 2012: 172).

Two studies were undertaken that utilised this approach: ultimately, these led to three separate analyses, which are presented in Chapters 4-6. The first study consisted of in-situ observations carried out at The National Archives, UK (TNA), after which a short follow-up interview was carried out. The second was conducted remotely, necessitated by restrictions put in place by the UK Government in response to the coronavirus pandemic. While I adapted the contextual interview method for remote observation, I also sought to account for any limitations occasioned by this adaptation through further contextualisation of observations with interviews, including discussion of submitted photographs of

the researcher's personal research environment as well as a virtual guided tour (Al-Omar and Cox, 2013; Bergman, 2013; Thomson, 2018) of their digital workspace.

Data collected for the first study was analysed independently of the second, with the findings of the former presented in Chapter 4, *Within the Archives*. This was undertaken using the qualitative analytical methods described below (3.2.3). The data collected from the second study was initially analysed using similar methods, as detailed in section 3.3.3.2: the findings of this are presented in Chapter 5, *Beyond the Archives: Enacting the archives ex situ*. However, I felt that this dataset was rich enough to be explored further using another method that provided a more in-depth insight into how the records and archives are specifically enacted by the researcher, in this case through the interface. As such, I carried out a third analysis on the data collected during the second study using video analysis (3.3.3.3). The findings of this analysis are presented separately in Chapter 6, *Beyond the Archives: Expanding the archival interface*.

The methods adopted for these three analyses are presented here as follows: the first study, conducted in-person at TNA, is presented in section 3.2 *Within the Archives*. This details the sampling, data collection, and data analysis methods followed for this study, including a discussion of the contextual interview method (3.2.2.1). The two analyses that arose from the second study are subsequently presented together in 3.3 *Beyond the Archives*: the shared sampling and data collection methods are presented first, followed by the data analysis methods for each of these two analyses. The ethical considerations arising from this work are discussed in 3.4. Finally, the potential limitations of the methods used to carry out this research are discussed in 3.5 *Limitations*.

3.2 WITHIN THE ARCHIVES (STUDY 1)

To identify and explore both activities and practices that are critical to the researcher in generating meaning from the record, I conducted eleven observations with humanities researchers at TNA. The study took place face-to-face over six weeks during October-December 2019.

I decided that the aims of this study would be best served by eliciting "snapshots" of research activities from a larger number of participants, rather than attempting to focus on the whole research process for just a few. In this way, data from a broader range of research activities could be generated and a wider range of participants observed. In part, I chose this approach to minimise disturbance to researchers, whose visits to the archives are often extremely time-sensitive. Designing the study with minimal disruption to researchers was important to ensure participation and represent a broad range of participants and research activities.

Participants were observed during the course of their routine research activities in accordance with the contextual interview method (Holzblatt and Beyer, 2017: 70-75), which I also refer to as observations here. These sought to provide an insightful and faithful understanding of humanities research practices when conducting research in archives. Tasks carried out by participants during the course of the contextual interviews included, but were not limited to, searching online databases accessible from TNA; creating links between existing research materials and new information found; and making personal copies of documents. These were participant-chosen, naturalistic tasks: as all but one participant was recruited in-person, on the day, these were unlikely to have been influenced by taking part in the study but represent participants' routine research tasks.

3.2.1 Sampling

As a collaborative PhD carried out in conjunction with TNA it was a natural choice to begin with researchers using their collections. TNA is the official government archives for the UK, as well as the official archives of England and Wales (TNA, 2022), and contains a wide variety of records across both physical and digital collections. This enabled a broad range of practices relevant to different kinds of archival records to be explored in this study. While TNA is a governmental archives, my focus on humanities researchers in this thesis effectively constructs TNA as a historical archives, and should be considered as such.

Participants were actively sampled on the basis of their research topic, to ensure that participation was limited to humanities researchers. I defined this by the research topic that participants were undertaking, though it did not necessarily follow that they came from a humanities' disciplinary background: for example, P07 defined themselves as a land economist, but had chosen a historical research method for at least part of their project. Due to the historical nature of the records at TNA, my decision to categorise participants in this way led to the framing of all secondary users of archival materials as potential humanities researchers. Participants were also approached according to whether they were working with physical or digital archival records, to ensure that findings were not limited to any particular materiality of the record. Of the eleven participants, six were observed working primarily with physical records and five with digital records, though this was limited to digitised records and did not include born-digital material.

Several methods of recruitment were planned, allowing for participants to sign-up in advance as well as using in-person, ad-hoc recruitment on the day. The study was advertised in TNA's "Discovery" newsletter as well as on TNA's blog, which was then circulated on Twitter. Posters were displayed at a number of prominent locations in TNA, including the café and several information points (Appendix 4). Recruitment on the day was the more successful approach, accounting for ten of the eleven

participants. This made it more difficult to monitor the breadth of participants' research topics, though ultimately a broad range of humanities' topics were still represented. I conducted data collection bi-weekly over 6 weeks, on days with longer opening hours to minimise disruption to researchers by enabling them to make up any lost time caused by participation. The principle of information power (Malterud, Siersma and Guassora, 2016) was applied to determine when to stop recruiting participants. This approach does not determine sample size in advance, but is based on the ability of the collected data to address the research questions. I decided that this would be a more appropriate concept than data saturation (Braun and Clarke, 2021) for this research, because the breadth of possible activities comprising research practice meant that this data was unlikely to become "saturated" even with a very large sample size. Information power was partially confirmed by using an iterative, reflective process, in which I transcribed the observations while data collection was ongoing. This closeness to the data also enabled me to pick up on activities repeated across a number of participants and thus provided a steer for later observations.

3.2.2 Data collection

Participants were informed that the total session, including introduction, observation, and follow-up questions would last roughly one hour and that they would be notified as the end of the session approached. After an hour, if the participant's research task had not yet concluded I offered them the opportunity to continue the session until they completed their current task. This flexible approach to observation length allowed for researchers to choose whether to extend the session or end it. The mean session length was fifty-two minutes and seven seconds; the standard deviation was eight minutes and two seconds.

I was careful to stress to participants that the study was interested in understanding the routine activities undertaken by researchers in archives and that they should carry out their research as they normally would. It should be noted that participants worked with archival material in rich and varied ways, with no two participants conducting research in exactly the same way. Five participants worked primarily with digital records and six with physical records. All participants utilised digital devices at some stage during their work, variously using a digital camera, smartphone, laptop, tablet, or desktop. Of these, all devices were brought to the archives by the participant, except for desktop computers which were readily available at TNA.

On conclusion of the contextual interview, I asked follow-up questions to expand on, clarify, or follow-up on any actions taking place in the contextual interview. Following this, participants were also asked to elaborate on their perceptions of how the research activities observed during the study fitted into their wider research process. This provided additional context for understanding how the participants'

activities within the archives were part of broader practices that extended beyond the boundaries of the archives. No fixed questions were asked, allowing me to follow-up on interesting or important comments or actions made by the participant.

Data was primarily collected by audio-recording interviews with participants, which I later transcribed in full and used as the basis for analytic coding: a sample transcript is available in Appendix 3. Participants were first asked to give a brief summary of their current research and the research task that they intended to carry out at the archives that day. They then carried out their routine research task, describing what they were doing to me as they did it. I also asked questions both in response to what the participant was describing and to what they were doing. This allowed for a dialogue to emerge between the participant and myself around the activities that they were carrying out, as well as reflecting on wider topics for consideration that touched on what the participant was doing in the archives. For example, a participant's comment on unfamiliar terminology encountered in the file might lead into a discussion around other types of information that they might target. This approach worked well for capturing rich and insightful data that responded to the participants' practices in action, though video data may have provided a useful complement to certain activities and enabled deeper probing of questions surrounding how the materiality of records and archives affects the archival research process.

Video-recording was not an option for data collection, due to privacy concerns associated with recording in the public reading rooms raised by staff at TNA. I decided when planning the study not to screen-record any computer-mediated work undertaken by participants. It was anticipated that participants might wish to utilise their own equipment during research and it was considered too invasive to ask participants to install screen-recording software on their own devices. Additionally, as laptops and other personal devices represent a personalised research environment, ensuring access to saved bookmarks, links, and pre-existing research materials was seen as central to the authenticity of participants' activities. As such, allowing participants to use their own laptops took priority over the potential loss of data represented by not screen-recording. To make up for this, at moments of particular interest I asked the participant to pause their research so that I could take a photograph. On each occasion, permission was sought before taking the photograph and the participant was able to opt out of appearing in the image. This process was utilised for both computer-mediated and non-computer mediated work.

This study used a cyclic process of data collection and analysis. As such, it was possible for me to steer later sessions using sensitising concepts that had emerged through discussion with earlier participants, while remaining sensitive to significant new areas of interest. Likewise, this provided an

opportunity to confirm that information power (Malterud, Siersma and Guassora, 2016) had been reached. No predefined schema was applied when collecting data, to allow for inductive analysis of both participants' activities and wider research practice. Nonetheless, an awareness of the previous literature on humanities research practices (e.g. Palmer, Tefteau, and Pirmann, 2009) is likely to have informed my attendance to particular activities when I observed researchers demonstrating these in the archives.

3.2.2.1 Contextual Interview

For the observations I chose to utilise a contextual interview method, rooted in Contextual Inquiry (Holtzblatt and Beyer, 2017) in order to elicit an in-depth understanding of humanities researcher's practices. The strength of the contextual interview method is that "the user does his or her own activities wherever they naturally occur, while the interviewer engages them in discussion of what they are doing and why" (2017: 70). The ability of contextual interviews to provide a direct insight into what participants do during research, rather than relying on their recollections, was an asset in developing a practice-oriented approach, as participants are known to gloss over details of practices that they might consider unimportant (Nicolini and Monteiro, 2016: 11).

In this sense the contextual interview method is broadly similar to think-aloud studies, which "show what the users are doing and why they are doing it while they are doing it in order to avoid later rationalizations" (Nielsen, 1993: 196). Contextual interviews were chosen over think-alouds due to the focus on interactions with systems and digital technology in the latter. Likewise, contextual interviews afforded more opportunity for researcher intervention, though it should be noted that think-alouds also vary in the degree of dialogue with the researcher (e.g. Makri, Blandford, and Cox, 2011). The contextual interview method also does not suffer from the issue that think-alouds face, namely that participants may struggle to articulate what they are doing and why during tasks that require cognitive processing (Branch, 2000). Other issues faced by think-alouds is that participants may need to be reminded during the study to actually think-aloud (Makri, Blandford, and Cox, 2011) thus disrupting the current activity being observed.

In adopting the contextual interview technique, I explicitly rejected the notion of the neutral bystander. Constructing the experience as a dialogue between researcher and participant seemed most honest to the process of data collection and analysis, as the data would inevitably reflect a combination of the participants' experiences and my own insights. Nonetheless, a balance was sought between the benefits of naturalistic observation and any interventions I chose to make. For one, siting the study at TNA allowed for data collection to take place in an authentic environment. Likewise, participants chose their own research tasks for the observation, undertaking tasks they had already

planned to carry out that day before choosing to take part in the study. Finally, my interventions as a researcher were generally limited to clarification of the researcher's practices within the archives or an elaboration of their wider practices, and how what they did within the archives fitted into the broader context of their work.

3.2.3 Data analysis

All audio-recordings were de-identified before transcription, with a combination of letters and numbers assigned to individual participants' files (e.g. P01). I began the analysis by first listening to the audio-recordings several times, before transcribing each in full. Transcription was initially assisted using Otter.ai, a GDPR-compliant, automated transcription tool. I did not grant permission for Otter.ai to use the uploaded, anonymised transcripts for machine-learning purposes: to ensure that this did not happen, once I had exported each transcript generated by Otter.ai, I deleted the files from their website permanently. Data analysis was supported using the qualitative software Nvivo, through which I conducted an initial, inductive total coding of activities.

The study had been planned in such a way that anticipated a Thematic Analysis (TA) (Braun and Clarke, 2013, 2022) would be carried out. This form of analysis was chosen due to its capacity to identify individual research activities and group these into themes pertinent to how research practice is carried out in the archives. As such, I proceeded with an initial total coding of the data in this manner and used this to identify individual research activities. Following this first round of coding, I initially grouped codes into relevant themes that I identified from the data, including 'Working at a Distance' and 'Competing Frames of Influence', the latter of which included two subthemes of 'Archival Influence' and 'Researcher Influence'. However, while analytic coding had proved useful in simplifying the complexity of the data, at this stage I found TA to be unsatisfactory and a poor fit for my Intended orientation to practice theories. Having separate themes that identified the influence of the archives and the researcher replicated the split between these that I was attempting to avoid. It hid the ways in which the researcher worked actively with the archival structure, enacting and shaping this to suit their own needs.

As such, the TA approach was revised to better suit the richness of the data that had been generated through the contextual interviews. To do so, I first cut across the subthemes of archival and researcher influence – a key area emerging from the data – to identify areas where the two intersected in practice. Activities identified through analytic coding were then brought together under the higher-level activities of scanning, in-depth reading, gathering, and organising through the hierarchical arrangement of codes (see Appendix 3). Similar activities have been described in previous research undertaken from both Information Science – including Archival Studies – and Digital Humanities'

perspectives, discussed in 2.5 *Research practices of humanities researchers*. While these were not explicitly used as a schema to aid coding, pre-existing definitions of these activities assisted in their identification; in particular, Palmer, Teffeau and Pirmann's (2009) analysis of scholarly primitives was referred to. This ultimately supported the development of a practice-oriented perspective by identifying a number of activities that formed part of a broader research practice (Nicolini, 2012: 10). Likewise, shifting the focus of analysis to activities, from themes, enabled a revisiting of the lower-level activities that I had already coded to see how these could be used to establish a more generative view of what users did with archival records. At this point, I stepped back from the coding and continue to explore these activities further through detailed examination of the excerpts from the transcripts identified in the coding, through reading and writing. Therefore, the resulting coding schema (Appendix 3) did not represent a final result but a stage within the wider analytical process.

3.3 BEYOND THE ARCHIVES (STUDY 2)

In the second empirical study that was conducted as part of this research, I revised the contextual interview method adopted in the first study (see 3.2.2.1) as part of combined interviews and observations carried out remotely with thirteen humanities researchers. Of these, two were excluded from the study because they were not working directly with archival materials during the observation: one used an online repository of secondary sources, while the other could only demonstrate a walkthrough of previous activity conducted due to a lack of archival material being made available. The final analysis is thus based on interviews and observations conducted with eleven humanities researchers.

The study took place entirely remotely, with participants interviewed using the video-calling platform Zoom, and observations conducted via screen-share. Interviews took place intermittently over a period of seven months, from February to August 2022. Due to the enduring and unpredictable nature of coronavirus restrictions in the UK, I devised the study to take place entirely online. The overall session took ninety minutes: this consisted of a forty-five minute interview and a forty-minute observation, with a five-minute break between these. The observation was conducted using the contextual interview method discussed above in 3.2.2.1: to distinguish this from the semi-structured interview conducted in the first half of the session I will refer to this as the observation from now on. In addition to the main session there was also a pre-session task, which asked participants to submit photographs of their research space via a secure, online platform for discussion during the interview. Participants were also asked to identify in advance a self-selected research task that they would undertake during the session, as well as any archival materials they would be using.

During the observation, five participants demonstrated or mentioned activities that I thought likely to yield rich data but that there was not time to fully explore during the session. Examples include transcribing hard-to-read records using voice-recording software (P04) or creating a comprehensive overview of their primary sources (P01). These participants were invited to take part in the observation a second time to further probe these and develop a richer understanding.

3.3.1 Sampling

I chose to actively sample participants across two dimensions: research topic, and whether or not they were working directly with archival materials. Firstly, they had to meet the criteria of being humanities researchers, as defined above (3.2.1). This meant that while participation was limited to those who could be defined as studying a humanities' research topic, it did not necessarily follow that they came from a humanities' disciplinary background. Researchers were broadly defined as conducting academic, professional, personal, or student research. While not sampled on this basis, this was monitored in order to ensure a roughly even spread across different types of humanistic research (Table 1).

Participant ID	Student/Academic/Professional/Personal Researcher
P01	Student
P02	Student
P03	Academic
P04	Academic/Personal
P05	Academic
P06	Professional/Academic
P07	Student
P08	Student
P09	Academic
P10	Academic/Professional
P11	Professional

Table 1 Participants in the second study categorised by type of researcher. Some researchers appear as more than one, for example Academic/Personal is used where someone may have had academic training but is conducting research in a personal capacity.

Participation was also limited to those working directly with archival materials. Potential participants were asked to confirm that they had already identified the archival material that they wished to use and, if relevant, that they had already collected the necessary records from the archival repository. This was intended to keep the focus of the study on interactions with archival records, as opposed to online catalogues or other finding aids. Nonetheless, participants were ultimately able to self-define whether their current research met these conditions. Most interpreted this to mean working with the records themselves – rather than their notes on the records – although all were working with paper or digital copies of the original records.

I also chose to exclude any participants who had previously undertaken formal archival training. This was because during the first study, a certain similarity between archivists' and humanities researchers' practices became apparent and in order to ensure that the research focused on how humanities research practice enacts the archives it was decided to effectively bar archivists from taking part in this second study. Though it cannot be ensured that no participant in the first study had undertaken archival training, removing archivists entirely from the second study ensured that participants were not bringing undue experience and knowledge about archival practice to the study.

As the study was to take place remotely due to ongoing coronavirus restrictions during the planning of the study, recruitment took place exclusively online. The study was initially advertised via a blog on the TNA's website (see Appendix 4), which was then shared through the TNA's "Discovery" newsletter and on Twitter, both through the TNA's research account and my own personal account. The blog post was also circulated on the internal Collaborative Doctoral Partnership (CDP) mail-list, of which I am a member. On this occasion, being able to recruit participants in advance made it easier to monitor the breadth of users' research topics. However, the means of recruitment ultimately made it difficult to ascertain where participants had heard about the study except in the case of the CDP students, who represented three of the final eleven participants.

The concept of "information power" (Malterud, Siersma and Guassora, 2016) was again used to confirm when a sufficient number of participants had been recruited. As with the first study, this was partially determined by using an iterative, reflective process, whereby emergent categories were used to direct data collection in later observations and interviews. The activities observed in the first study also gave an indication of the range of activities that might be witnessed, as did prior publications on humanities researchers' practices and activities (e.g. Given and Willson, 2018; Sinn and Soares, 2014; Palmer, Tefteau, and Pirmann, 2009).

3.3.2 Data collection

Data was primarily collected using the inbuilt screen, audio and video-recording functionality provided by Zoom, although I also took notes during the session. This allowed both video and audio data to be collected simultaneously; furthermore, it also enabled the participant's screen to be captured. The combination of these different feeds in one video ensured that the audio and multiple video streams all matched up when reviewing the data. At times, participants were also asked to join from another device to capture what they were doing in the physical space: this too, was captured as a single video recording by Zoom. All videos were recorded directly to a password-protected, encrypted device.

No pre-defined schema was applied when collecting data, which allowed for inductive analysis of the participants' actions. Nonetheless I remained sensitive to the activities that had either been directly observed or mentioned by participants during the first round of data collection. Likewise, an implicit awareness of literature on humanities research practice meant that I was sensitised to activities that had previously been discussed, such as scanning, note-taking, and organising (e.g. Palmer, Teffeu, and Pirmann, 2009). As with the first round of data collection, a cyclic process of data collection and analysis was undertaken. It was therefore possible to guide later observations and interviews with emergent categories from the data that had already been analysed.

At the beginning of the session, I reminded participants that the total session would last around 90-minutes, including a five-minute break after forty-five minutes. As we approached the forty-five minute mark I would inform participants that we were approaching the break, giving them the option to continue the conversation or conclude the interview portion of the session. Likewise, participants were notified as we approached the end of the forty-minute observation, at which point they would be given the option of concluding the session or extending it slightly to finish their current task. The mean session length was one hour, twenty-three minutes and forty seconds; the standard deviation was twelve minutes and fifteen seconds.

3.3.2.1 Pre-session Photography Task

Prior to the session, participants had completed a short, pre-session task independently, according to instructions that I provided via email (see Appendix 2). This asked participants to submit photographs of their personal research space. The photographs were submitted using a secure, online platform: participants only had access to their own folder. This permitted them to upload and remove images from the folder in advance of our session.

Participants were presented with a list of suggestions of things that they may wish to photograph, such as their desk space as it would normally look during research or digital devices used during their research. However, participants ultimately were able to choose what to photograph, based on what they believed was important to understand their personal research space. Participants submitted between one and nine photographs each. These were then used as the basis for an initial discussion of the participants' physical research space during the interview.

3.3.2.2 Interview

The first part of the 90-minute session consisted of a semi-structured interview about the participants' physical and virtual research space and general research practices. It began with a discussion of the photographs that participants had submitted in advance as part of the pre-session task about their physical research space, whether that was at home, in an office or elsewhere. Either I or the

participant would share these using Zoom's inbuilt functionality, to ensure that we were looking at the same image simultaneously. This discussion served both to elicit details about how the participant's physical workspace supported their research practices, as well as providing an important function in orienting myself to a previously unknown space when I could not be physically present.

After discussing these photographs, participants were asked to demonstrate the virtual organisation of their research materials while sharing their screen as a guided tour (Al-Omar and Cox, 2013; Bergman, 2013; Thomson, 2018). I asked participants to show me any folders or filing structures particularly pertinent to their research: if participants had a lot of files, they were asked to select a sample of the most relevant materials. Several chose to focus exclusively on archival materials, presumably due to the nature of this research study. A discussion of their organisation of research materials then followed, during which I let the participant guide me to what they thought was most relevant while asking probing questions to seek further details on the organisation of their research materials broadly.

The interview took up to forty-five minutes; following this, a five-minute break was taken, during which the recording was paused.

3.3.2.3 Observation

Prior to the session, participants were asked to select a routine research task to carry out during the observation. These ranged from data entry to visual description; note-taking to cross-referencing information. I again chose observations as the best means of gaining insight into participants' actual research practices, as they provided an opportunity to directly witness these rather than relying on recollections or projections of what participants thought they might do.

As in Study 1, the contextual interview method was adopted during the observation. It was stressed to participants that the study was interested in understanding the routine activities of users with archival materials and that they should carry out their research as they normally would. I also informed participants that I might ask questions while they carried out their research task.

The contextual interview method proved suitable for adaptation to a remote study (Kaplan, 2022). Using the inbuilt affordances of the video-calling platform, it was possible for participants to share their screens while retaining the video feed from the webcam that captured the participant's actions in the room. Although this did not provide a full visual of the room, it did allow me to probe participants about any interaction with their physical surroundings in addition to onscreen activity. Thus, the virtual set-up provided a means of capturing how the researcher's practices were shaped

both by their physical surroundings and the materiality of the digital environment, and the interaction across both these spaces.

Nonetheless, the limitations of the remote study were felt at times. On occasion, participants mentioned something during the session or referred to something that I could not see via the main camera. Whenever this happened, I would ask participants to take a photograph of this following the session and upload it to the same folder as before, so that this could be referenced when reviewing the recording.

Likewise, several participants noted that they would ordinarily use two screens, in order to open an original document on one screen and another document for note-taking on the other. In such scenarios, a decision had to be made on a case-by-case basis whether the participant would work across two screens, in which case only one of these would be captured, or to ask the participant to open both documents on a single screen, side-by-side. Each participant was asked which option they would prefer: each opted to use just one screen, either because they could open materials side-by-side or because they infrequently used the second screen in their work. This allowed for naturalistic behaviour to be observed in spite of the impact of the remote set-up on the researcher's practice.

Whereas during observations conducted within the archives, physical and digital archival material had been clearly delineated, these distinctions became blurred when participants conducted their work remotely. Most participants used digitised materials: digital copies of an original archival document with a physical form. These were variously digitised by themselves; digitised professionally by the repository for personal use; or digitised professionally for an online platform such as the British Newspaper Archive. One participant – P06 – was working with a private archives and had direct access to original materials. However, during their observed session they used digitised copies only and commented that they rarely referred to the original documents. No participants were observed using born-digital records, despite multiple, specific calls sent out aimed at recruiting humanities researchers who used these materials.

3.3.2.4 Second Observations

Five participants were invited to be observed again, three to four weeks after the first session. The intention of these second observations was to probe more deeply certain aspects of the participant's research practices that, through an iterative and reflective process of analysis, were thought to merit further attention.

Whereas for the first observation participants chose their own research task, for the second I asked participants to undertake a particular activity that had been identified from the first observation as

meriting further attention. It was stressed to participants again that this should be a routine research task, carried out in the course of their regular research activities and not a walkthrough or demonstration of previous activities. To ensure that participants would be carrying out this task in a naturalistic manner, I first confirmed whether or not they needed to undertake the activity I had identified as of interest to this research. Participants were given the option of choosing another task in the event that they would not be carrying out the requested one. No participants opted to carry out a different task; one participant declined to take part in a second observation as they would not be undertaking the requested activity for quite some time. Therefore, a total of four participants ultimately undertook a second round of observation.

3.3.3 Data analysis

From the data collected during the second study, two separate analyses were conducted. The first analysis comprised a qualitative analysis, incorporating transcription, coding, and analytic write-up that identified several activities unique to participants' ex situ research practice. This forms the findings discussed in Chapter 5, *Beyond the Archives: Enacting the archives ex situ*. The second analysis consisted of a video analysis (3.3.3.3), undertaken in response to the richness of the video data collected during the second study. I felt that the video footage provided an opportunity to provide a complementary analysis that allowed me to further capture a detailed understanding of how the archives is enacted through humanities researcher practice: in this instance, with specific reference to the interface as a space in which this work is carried out. The findings from this second analysis are presented in Chapter 6, *Beyond the Archives: Expanding the Archival Interface*.

3.3.3.1 Transcription

Video recordings were de-identified before transcription, with numbers assigned to individual participants' files. Each video was reviewed at least once before being transcribed, at which point I also produced a detailed summary of the session. Transcription was again aided by Otter.ai and as before, I did not grant permission for Otter.ai to use the transcripts for machine learning purposes.

Once a complete transcript of the interview and observation had been generated using Otter.ai I roughly tidied the transcript while watching the video-recording of the interview. This included confirming who was speaking when and removing any sections of the transcript that had captured where the session was being arranged, e.g. setting up the screenshare. At this stage, I focused on getting the transcript into a form where it could be read for sense but was not necessarily completely accurate. The transcript was then reviewed again for any irrelevant sections, including long passages where the participant discussed their research topic in-depth: for instance, where the researcher

answered a question by discussing what they “might” do, rather than drawing on previous experience or what they were currently doing. These sections were removed from the transcript and I noted how long the section that had been removed was and a brief description of the content of the removed transcript. Finally, I reviewed in-depth the remaining sections of the transcript alongside the video to confirm the accuracy of the transcript that would be used for analysis. At this stage I also added brief, time-stamped descriptions of any actions participants undertook during the session that were visible, both on-screen and on their front facing camera. A sample transcript used in this second study is available in Appendix 3.

3.3.3.2 Qualitative Coding

Following transcription, the transcripts formed the backbone of the analysis, though both the videos of sessions and photographs submitted by participants were referred to when necessary for accuracy and clarification. I followed the same initial process of total coding of each transcript as described in 3.2.3, although this time with the awareness this would not be contributing to a Thematic Analysis. However, I was inspired by the notion of “core codes” (Braun and Clarke, 2013: 225) during the analytic process, which I will discuss in further detail below.

During the total coding I included both speech and the brief descriptions of participants’ actions in the coding. This was supported by Qualitative Data Analysis (QDA) software Nvivo. Coding was carried out inductively and sought to capture any activities undertaken by the researcher as well as significant contextualising factors. Coding took part iteratively while data was still being collected: as such, as new codes became apparent during later sessions I reviewed transcripts that had been coded earlier to make sure that the coding was applied equally to all transcripts. Once all the data had been collected I compared the codes for similarity: some were merged and others split accordingly. Codes were then reviewed for similarity and grouped into three initial practices: ‘Possessing the Archive’; ‘Performing the Record’; and ‘Creating a New Context for Interpretation’.

It was at this point that I made the decision to cut across these initial practices to focus more narrowly on the researcher’s interaction with the record. On reviewing the codes again, I had found that there were some highly similar codes between the three practices. It became clear on closer examination that the interwoven relevance of these repeated codes centred around the researcher’s interactions with the record: how they produced the record in a way that supported their research and led to their own interpretation. As such, I chose to concentrate on this particular aspect of the findings in order to generate more focused results.

I initially focused on the central practice that had been created – Performing the Record – as this contained the majority of codes relating to this narrowed focus of interest. Rather than grouping these

codes into practices, this time I looked for core codes (Braun and Clarke, 2013: 225) around which these initial practices had been generated. These core codes were those that were central to the concept I was attempting to discuss, such as “creating a comprehensive, personalised resource” or “records stored according to archival arrangement.” Following this review of Performing the Record, I likewise reviewed Creating a New Context for Interpretation and Possessing the Archives for any codes that were related to these core codes, and thus focused on the interaction between the researcher and the record. In doing so, I also confirmed that there were no further core codes that may be at the centre of additional activities that had not been captured from Performing the Record. The coding schema following this re-organisation of codes is available in Appendix 3.

Following the identification of activities relating to these core codes, I reverted to examining these as activities that formed part of research practice rather than as practices in their own right. On this occasion, existing definitions of these activities from the literature were not used to support identification and analysis, as with the exception of storing these activities had not previously been discussed; and even storing had not been treated in any significant way in the literature in relation to its role in generating meaning. The analysis of these activities was then further developed through written exploration. I explored excerpts that captured the different activities in order to construct a narrative explaining what these activities involved, how they were carried out by participants, and how they helped us to understand the researcher’s use of the record beyond the archives. Through writing, the initial core codes that comprised particular activities changed subtly: this transformation is presented in Table 2.

Original activities, with core codes	Revised activities after writing, with core codes
Storing the Record: • Replicating the archival order • Categorisation of records according to need • Keeping collections of materials distinct	Storing the Record: • Storing records to reproduce the archival arrangement • Storing records to assemble research materials for analysis
Altering the Record: • Adding structure or increasing granularity • Reuniting the records (according to archival arrangement) • Creating ease when looking through the records	Configuring the Record Ex Situ: • Configuring the record as an individual item • Configuring the record as part of a temporary material arrangement
Creating New Artefacts: • Processing information from the record (activating) • Fixing the activation of the record	Creating New Documents from Archival Records: • Creating new documents to support knowledge creation • Creating new documents as a fixed point to work from

Table 2 Transformation of activities through analytic writing

3.3.3.3 Video Analysis

While the qualitative analysis was able to identify key activities that the researcher employed to work with the record and archives outside of the reading room, it was not able to capture the detailed interactions that led this to happen. Likewise, I felt that by relying on transcripts the qualitative coding and subsequent write-up had missed an opportunity to explore in-depth the richness of the video data that had been captured. As such, a second analysis of the data was conducted, which led to the findings presented in Chapter 6, *Beyond the Archives: Expanding the archival interface*.

Video analysis (VA) was identified as a suitable option for delving further into the data and providing a complement to the themes that had already been developed. While VA may refer to any work that incorporates the use of video data, here I drew on principles from Interaction Analysis (Jordan and Henderson, 1995). This work was also guided by exemplar texts from sociology, such as Charles and Majorie Goodwin's work (e.g. C. Goodwin, 1995; M. Goodwin, 2005). In doing so, I sought to capture detailed instances of how researchers undertake practices when engaging with the archives and record.

During the inductive qualitative coding I had made a note of any sections of the video-recordings that may be appropriate for VA. These were identified as particularly rich sections of the recordings

whereby it was possible to see the meaning generated from the record being shaped by the researcher's actions. I reviewed these sections first, before rewatching the observations from each interview in full. I also used the transcripts of each session to support this review process. While reviewing the videos I constantly took memos, making notes of potential segments. From this process I identified several further clips that could be used to support a video analysis.

To be considered appropriate for VA clips had to meet two main criteria. Firstly, that they could elaborate on the activities discussed in the inductive analysis. Secondly, as I intended to conduct VA that focused on participants uninterrupted interactions with the records I sought out clips that contained minimal interventions from myself.

Initially, I produced a longlist of fifty-three clips covering thirty-two minutes and fifty-one seconds of footage. The mean length of clips was one minute and forty-five seconds; the standard deviation was forty-seven seconds. I reviewed all the clips from the longlist again in order to produce a shortlist of clips for detailed analysis. This was supported by group work undertaken with supervisors across two sessions, each lasting two hours. During these sessions we reviewed the footage and discussed the potential significance of each clip and its relation to the main activities that had been generated through qualitative coding and analytic writing in the second study.

The final shortlist of clips was again based on the closeness of their match to the practices already identified. Ultimately, ten clips comprising a total of eleven minutes and fifty-four seconds were chosen for analysis, with a mean of one minute and five seconds and standard deviation of twenty-seven seconds. The final analysis consisted of reviewing each video again in-depth, alongside memoing and a further detailed transcription of each clip. A final selection of 5 clips was chosen from these to be written up, following the principles of "thick description" (Geertz, 2008). The transcriptions of all ten clips used are available in Appendix 3.

3.4 ETHICAL CONSIDERATIONS

As each of these studies involved human participants, I gave careful thought to several ethical considerations during recruitment, participation, and following each study. These considerations were made both at the general level – for instance, ensuring the safety and anonymity of participants – as well as in relation to specific considerations relevant to archival research.

Participation in each study was entirely voluntary. During the first study, participants were primarily approached in-person at TNA, although one participant was recruited in advance (see 3.2.1). Although this approach could have meant some participants felt compelled to take part, I was careful to stress

that participation was entirely optional. If participants expressed an interest in taking part, I gave them time to read through the information sheet and consent form in full and to ask any questions they might have before agreeing to take part.

For the second study, participants responded to my call for participants (Appendix 4, *Study 2: Recruitment Materials*) and so were less likely to feel pressured to take part. Nonetheless, I sent each participant the information sheet and consent form at least a week before their scheduled interview date and offered to answer any questions that they might have either in writing or via a short video-call. At the beginning of the interview and before beginning recording I also gave participants the opportunity to ask any questions that they might have and to confirm verbally that they were happy to take part in the study.

Before beginning any audio- or video-recording I confirmed with participants that they were ready for the recording to begin. In each study I also assured participants before taking part that they could ask to pause the recording at any time and for any reason. Participants were also informed that they could terminate the interview at any time, without giving a reason and without penalty; and that if they chose to do so, they could also choose whether to withdraw any data already collected from the study. At the end of each session participants were asked if they were happy for the recording to be used in the study and whether there were any sections of the session that they would like to remove.

Additional considerations were relevant to the second study, due to the fact that I would be video-recording participants and their screens, as well as the personalised environment in which they would be working. Participants were reminded prior to the session to remove any items from display that might be identifying, such as family photographs, as well as to close any tabs that might be open on their devices, e.g. online banking. Likewise, the importance of offering participants the opportunity to pause the recording at any time was further emphasised as participants were working in an environment where non-participants (e.g. family members) might be present.

To ensure the security of participants' data, all audio- and video-recordings were recorded directly to an encrypted, password-protected device. While participants in the second study submitted photographs via OneDrive, this was through a secure folder that only the participant and myself had access to. Otter.ai was chosen to aid in the transcription process due to its compliance with GDPR regulations; I chose to further ensure this by anonymising all transcriptions before uploading these to Otter.ai and by removing both any audio-recordings and transcripts from their servers as soon as transcription had been completed.

I also made several specific considerations in relation to the nature of archival research. Archival research has the potential to be emotionally distressing (Regehr et al., 2022); while this may be considered a routine part of archival research I also considered the specific circumstances of the interview in relation to this. As such, I considered that if any participant were to become distressed I would pause the recording and stay with them until they were no longer distressed. If such a situation had arisen, I would also have given participants the option to leave the interview – and whether or not to remove any data collected so far – as well as directing them to appropriate support services.

For participants with a familial connection to their research I also considered the potential for records to identify the participant. Therefore, in such circumstances I have made further efforts to remove references to family names in order to preserve the anonymity of participants.

Finally, I considered that in asking participants to share sample materials, such as annotated copies of archival records, the participant could have been in violation of agreements made with the archives when photographing materials. As such, this was done on an entirely voluntary basis and I confirmed with the participant that sharing this material would not violate any archival agreements before this was shared.

3.5 LIMITATIONS

As with any research, the methods of this study have some limitations, which any findings must be read in light of. I set these out here along with any efforts to mitigate the effects of these limitations undertaken during this research. The limitations broadly impact the applicability of these findings to non-academic users, users of born-digital records, and users of non-governmental archives; as well as the relation between physical and virtual research spaces. Furthermore, a number of limitations are addressed that discuss the impact of the coronavirus pandemic.

As a collaborative doctoral award undertaken in partnership with TNA, recruitment methods were oriented around their users. This suggests that we must be cautious when generalising these findings beyond governmental archives, although given the broad applicability of the findings – which are not government archives-specific – it is likely that these findings will be relevant beyond this context. This limitation is mostly applicable to the first study, carried out in situ at TNA. In the second study, participants taking part in the remote observations were far more likely to draw on other archives, either in addition to or instead of TNA's collections, which somewhat mitigates this potential bias. For instance, participants in the second study utilised records from museum archives, private archives, and civic archives held in Spain and Chile; as well as digital repositories such as the British Online Archives, Gale Cengage, and the British Newspaper Archive. This strengthens the likelihood that

findings from the first study will generalise beyond this context, although further research is needed in this area.

A more significant limitation caused by the approach to recruitment is the focus on academic researchers. Although an inclusive definition both of research and humanities was consciously adopted during recruitment (see Appendix 4), nevertheless the majority of participants were academics or had had some kind of formal academic training. This was more prevalent during recruitment for the remote study: this may have been influenced by the audiences subscribed to TNA's "Discovery" newsletter; recruitment from the CDP doctoral mailing list was capped at three to ensure the findings were applicable beyond students. Ultimately, interested participants self-selected by responding to the call for participants: this reflects that academics were more likely to see themselves as researchers. This impacts the findings of this work, as participants with formal training are more likely to possess "archival intelligence", i.e. "a researcher's knowledge of archival principles, practices, and institutions" (Yakel and Torres, 2003). As such, further research is needed to directly address the activities of non-academic researchers in future.

The remote methods necessitated by restrictions put in place by the UK Government in response to the coronavirus pandemic naturally had an impact on how this research was conducted. Although I had already identified the need to examine research practices outside of the archival reading rooms by this point, this meant that it would not be possible to conduct observations in-person. This had an impact on the line of enquiry that was possible: for instance, it was not possible to investigate the relation between the digital and physical organisation of personal research collections fully, nor to consider the impact of the physical space on the researcher's work.

Nonetheless, conducting this research remotely may also have had a positive effect on recruitment. By being less intrusive, as well as facilitating participation from any location, it was more likely that participants would take part and likely made recruitment easier. It also enabled the research to expand beyond the immediate geographic area: one participant in the second study took part from the USA, while others joined from across the UK, from Stirling to Cornwall. This likewise diversified the types of collections that researchers drew on in their work and made it less likely that these results were limited to those working with TNA's collections.

Another limitation of this work is the lack of participants using born-digital records. This was in spite of several attempts to address this by issuing calls for participation from users of born-digital records specifically. This was an unintended consequence of conducting this second phase of data collection remotely. Research published since this study was undertaken suggests that born-digital records remain difficult to access outside of repositories, due to privacy, copyright, or technical issues (Decker

et al., 2022; Jaillant, 2022). Ironically, this suggests that users of born-digital records may be more likely to represent an *in situ* method of research – leaving the repository with a collection of notes or partially processed dataset – than users of physical and digitised records. This suggests that any future research intending to investigate research practice with born-digital records will need to be undertaken *in situ*.

Nonetheless, while this may limit the applicability of these findings to born-digital collections, it is likely that physical and digitised records will continue to comprise a significant part of archival research. It is estimated that only 10% of physical archival collections in Europe have been digitised (Nauta, van den Heuvel, and Teunisse, 2017: 28): to conduct research on these materials researchers will have to visit the archives in person, either to work with them *in situ* or make their own copies. Likewise, current trends suggest that any new methods necessitated by born-digital records will be used alongside traditional approaches, such as in-depth reading (Decker et al., 2022; Kumpulainen et al., 2022).

3.6 SUMMARY OF METHODS

In this research I adopted a qualitative approach to identify and explore how the archives are enacted in humanities research practice. Participants were humanities researchers, defined as any archival researcher applying humanistic methods in their work. Inspired by Contextual Inquiry (Holzblatt and Beyer, 2017), I utilised a combination of interviews and observations for their ability to provide a naturalistic insight into what researchers do with archival records in practice.

I conducted two studies, *Within the Archives* (Study 1) and *Beyond the Archives* (Study 2), to provide a holistic view of humanities researchers interactions with both physical and digital archival records. Data was primarily collected using audio- (*Within the Archives*) and video-recording (*Beyond the Archives*), as well as being supported through the use of photographs. Analysis was conducted iteratively using qualitative coding and refined through further exploration of excerpts relating to each code.

These two studies led to three separate analyses. Each study was first analysed using qualitative coding, which was then refined through further exploration of excerpts relating to each code. The findings of these analyses are presented in Chapter 4, *Within the Archives* and Chapter 5, *Beyond the Archives: Enacting the archives ex situ*, respectively. I also conducted a third analysis using the data from the second study, which consisted of a video analysis inspired by Interaction Analysis principles. The results of this analysis are presented in Chapter 6, *Beyond the Archives: Expanding the archival interface*.

As well as discussing the methods used in this thesis, this chapter has also discussed ethical considerations, including both general considerations and those specific to archival research; as well as outlining potential limitations of this work, such as the applicability of these findings to different user groups; the ability of these findings to speak to the relation between physical and virtual research spaces; and further limitations arising from the impact of the coronavirus pandemic.

4 WITHIN THE ARCHIVES

4.1 OVERVIEW

Due to the relative lack of empirical work on humanities researchers' direct interactions with archival materials this initial study was designed to explore activities undertaken within the archives that formed part of humanities research practice. This aimed to address the first objective of this thesis: to improve our understanding of how humanities researchers generate a meaning from the record in practice. As such, this research primarily focused around RQ1, which was broken down into two further sub-questions to help refine the research focus:

- RQ1: How do the researcher's practices generate a meaning from the record and archives?
 - RQ1.1 What key activities, beyond information acquisition, do humanities' researchers engage in when conducting archival research?
 - RQ1.2 How does the researcher enact the archives through these activities as part of a wider practice?

Though this thesis seeks to treat archival research in a holistic manner, exploring practice both within and beyond the archives, I chose to focus the initial site of study in the archive's reading rooms. Situating my initial study here ultimately allowed for comparison between researchers' in situ and ex situ work, while acknowledging these as part of one extended process that could challenge the notional boundaries of the archives (RO3). Observations were conducted with eleven humanities researchers at The National Archives, UK, face-to-face over a period of six weeks during October-December 2019. The study adopted an approach to observation rooted in the contextual interview method (Holtzblatt and Beyer, 2017: 70-75), full details of which have been described in Chapter 3.

This research identified four activities – **scanning, in-depth reading, gathering, and organising** – that demonstrate how the archives is enacted through the material-discursive practices of the researcher (Table 3). While these are all activities that have previously been discussed in the Information Science and Digital Humanities literature on humanities research practice (e.g. Antonijević and Cahoy, 2018; Trace and Karadkar, 2017; Palmer, Tefteau, and Pirmann, 2009), these findings are unique in offering an understanding of these activities with particular reference to how these are conducted in the archives. In doing so, these findings illustrate a more detailed and holistic perspective on information interaction within the archives, providing empirical evidence for the role of the researcher in generating a meaning from the record. Though previous concepts such as "contextual knowledge" (Duff and Johnson, 2002) have acknowledged the central role that both researcher and archives play in shaping knowledge produced from archival records, such assertions continue to treat these entities

separately. Moving beyond this, the findings here suggest a more generative reading that proposes that the researcher and archives are entangled through a “knowing-in-practice” (Orlikowski, 2002) that enacts the archives and ultimately shapes the meaning of the record.

Scanning	Scanning both involved looking for cues relating to a project or area of interest (Palmer & Neumann, 2002, p.99) and constructing an initial, tentative meaning of the record by aligning this with the researcher’s own research interests.
In-depth reading	Going beyond scanning, in-depth reading involved generating a meaning from the records both in relation to the wider archival context and the researcher’s evolving knowledge base. It included both in-depth reading of a single document and working through a collection of records stored within a file to gain a holistic understanding.
Gathering	Gathering materials was primarily achieved through photography on a phone, tablet or digital camera, to allow the researcher to work on them elsewhere. This was often undertaken as other means of access were not possible; borrowing from archives is not permitted and the majority of archival materials remain undigitised (Nauta, van den Heuvel, and Teunisse, 2017: 10).
Organising	Organising described how the researcher (re)arranged materials in a purposeful order to generate meaning. Participants drew on the lower levels of the hierarchal structure of the archives (series→folder→item) to organise personal copies of archival material. Some indicated they would later break with this structure when moving to a further stage of analysis in their research.

Table 3 Description of activities by the researcher undertaken within the archives. Table adapted from Leigh et al. (2021: 257)

The four activities discussed here were selected for their significance in creating meaning for the user, as well as their ability to demonstrate the role of the researcher’s practice in enacting the archives. These findings focus on “what people do, and how they do it” (Orlikowski, 2002: 271) to answer RQ1.1 in revealing *what key activities, beyond information acquisition, do humanities’ researchers engage in when conducting archival research?* Exploration of how the user enacts the archives through the activities presented in these findings also addresses RQ1.2, *How does the researcher enact the archives through these activities as part of a wider practice?*

4.2 FINDINGS

4.2.1 Scanning

Due to the various pressures on researchers – such as time, distance travelled to the archives, and the cost incurred by the visit – researchers most often scanned material during their archival visit. This allowed them to maximise efficiency by allowing the researcher to cover as much material as possible and reduce the potential number of visits to the archives. While scanning records individually served to identify cues “that intersect[ed] with their line of inquiry” (Palmer and Neumann, 2002: 99) researchers also scanned through the archival folder as a whole to understand the wider context in which the records were situated.

Scanning served to align the record with participants' own research interests and to determine the significance of the document for themselves. All participants arrived at the archives with some level of existing knowledge on their topic, though this varied widely in formality from detailed research guides that determined "exactly what to be looking out for" (P05) to "a few different subject areas" (P06) to be explored. In scanning the record, the researcher brought this existing understanding of their topic to bear on the record while simultaneously allowing the information gained from the record to shape their research.

For example, P04 was at the archives in order to scope information on the topic of spies during WWII. Attempting to confirm their "growing hypothesis that a lot of these people who were bilingual acted as spies, as well" they scanned the record for any possible clues that might confirm this reading. P04 picked out "two clues", the first relating to the content of the record: "the person here is talking about what might happen, if she is questioned by the Russians, and... what she might say to them". The second clue is the context in which the record was produced, "I understand that the captain who is writing the letter is trying to report almost verbatim the conversation, so I would assume that this is what she herself said, her 'very special work' which would be an understatement of what it really was".

The details that P04 picks out fit the existing hypothesis that they had developed through reading secondary literature before visiting the archives. Chosen from the wider context of the document precisely because these details suit their framing, they shape the record according to their own particular interests. Other participants likewise saw this activity as a process of "hunting, searching for clues" (P02) or "matching information" (P01). Through this initial interaction, P04 defines the way in which the record is read and how it relates to their own interests. This act of comparison performs a particular meaning of the record that aligns the record to the users' own interests by defining the record in relation to those interests. It follows that this process is also selective, in that the user does not pick up on everything from the record: "It's basically you know, maybe someone might read it and not really see it and someone else might kind of notice it" (P11). Through this initial interaction, P04 defines the way in which the record is read and how it relates to their own interests.

Though scanning relies heavily on the researcher's own framing of the record, this should not be understood as a simple interpretation of the record according to their own purposes. As noted in the comment made by P11 above, it is by reading the record – even when scanning – that the meaning of the record is established through interaction between the record and the researcher. During this process, the record is brought into contact with the researcher's wider understanding of the topic, which then generates a particular meaning from the record.

In a similar interaction to that related by P04 above, P08 discussed how they would “open up files, and look through them. I expect words to jump out at me”, going on to describe that the words “trigger something” for them. For both P04 and P08, the relevant information is identified after interacting with the record, not before. Neither has a pre-set list of keywords that they are using to retrieve potentially relevant information. Rather, in reading around the rest of the text, skipping over sections and “picking up when it starts being interesting again” (P03) the researcher creates a meaning from the record particular to their interests and reliant on the practice of reading.

Furthermore, those few participants who were observed scanning through the archival folder as a whole found that the records spoke to a different meaning than might be understood from reading the records individually. For instance, P08 had initially approached the folders they were working with as a fact-finding task, to determine whether or not the individual they were researching had received a posthumous award. While the record did not provide the answer they had hoped for, scanning the folder as a whole suggested to them a relationship between the records contained within the folder. Instead of answering who was and was not awarded medals, the folder provided them with “a clearer idea of the decision-making process” and “evidence I hadn’t expected to find, and hadn’t even thought about.”

Utilising the archival arrangement in their interpretation of the records, P08 gained a very different understanding than had been suggested by their own expectations of what information the folder would hold. This holistic reading can be seen as an enactment of the record in relation to the archival apparatus, rather than P08’s own framing. Nonetheless, this remains particular to P08, as it combines their own interest in the folder with the practice of reading through the folder as a whole, in the manner suggested by the arrangement of the archives. In choosing to treat the folder as a whole instead of as individual pieces of information P08 activates the archives in a certain way that enables them to generate this particular meaning from the records.

Scanning as it is performed in the archives thus goes beyond placing the record in a particular context. Instead, the meaning of the record is generated through the interaction between the researcher, the archives, and the record. Certain words jump out at the researcher due to previous reading; others through gaining familiarity with the records themselves; and some meanings can only be accessed through a cumulative understanding gained by scanning through the whole archival folder. Nonetheless, all interpretations remain rooted in direct engagement with the folder and are responsive to the evidence presented by the records. In this sense, we can see the meaning of the record as a result of multiple, overlapping relations between the researcher’s own interests, the information in the record, and the activation of the archives as an apparatus unique to the researcher.

4.2.2 In-depth reading

Once a record had offered some key word or intriguing detail that suggested its relevance to the researcher, many participants paused to “read it through” (P08). This phrase and other similar wording was used several times by participants to denote a slowing down in order to understand the information that had jumped out at them from the record. This was often comparative, and involved the researcher relating the record to information encountered before they entered the archives; information from other records within the archives; and even sources from external collections. As such, I use *reading* here not in the sense of reading in general, but to signal a deeper involvement with the record that allowed participants to make further connections between the record and their own research topic or other sources.

When slowing down to read in depth, participants sometimes compared information in the record to that which they had come across before entering the archives, as in the case of P03. Provided with a newspaper announcement for “twenty-three substantial brick dwelling houses”, they linked this to their wider knowledge of the period, that,

P03: at this particular time, that area was going down so it's- they're obviously pointing this out because anybody reading the advertisement might assume because they were in that area, they weren't any good.

Such an assertion is rooted directly in the information provided by the record itself. Yet it gains a deeper significance for P03 when it is brought into contact with other information previously encountered by the researcher. The meaning of the record evidently does not sit solely within the record itself but is shaped by the user: through the act of reading, as well as scanning, the record is brought into contact with other records in the archives, as well as the user's own evolving and active understanding of the topic. This demonstrates how the researcher is an integral part of the meaning-making apparatus of the archives: without the researcher, a different apparatus would exist and a different meaning would be generated for the record.

Participants also frequently brought the record into comparison with other records that they had recently read in the same folder or archival series, either mentally recalling these or physically skipping back through the folder. P04 often referred to information read in previous documents, reflecting how they revised their understanding of the records as they progressed through the folder. When relating records from the same archival folder, the researcher draws on the material archival arrangement to generate a particular meaning from the record. Arrangement is especially significant to archival research, as in archives the knowledge that the archival folder can impart is often more than the sum of individual records (Duff and Johnson, 2002: 487). This is often presented as a “thing” that is

encountered by the researcher, when in fact the researcher plays an active part in activating this arrangement in the archives by attending to certain aspects and ignoring others.

Several participants hinted at extending this process upon leaving the archives by comparing the records with other sources that would deepen their understanding of the record. Unexpectedly, it was possible to observe this activity within the archives, as P03 was accessing digitised records from collections external to TNA in their work. P03 had chosen to work from TNA, despite conducting research on the Burney Collection, a database of newspaper cuttings maintained by the British Library. Being situated in TNA also gave P03 access to digitised records held there: these were free to access from the reading rooms and certain other institutions, but carried a charge to be accessed from home.

This meant that on encountering the death notice of someone they were researching in the Burney Collection, P03 was able to “go into the reading rooms... window and try and see if, whether his [...] will, exists here.” In opening multiple tabs on records from various collections, “just so I don’t have to keep going backwards and forwards, and so that I can open more than one to make comparison if I want to”, P03 was able to alter the archival apparatus to directly compare records from different collections. This resulted in an understanding of the records that lay outside of the meaning that would be possible to produce from either the Burney Collection or TNA’s records alone. While this presents a temporary break with the archival arrangement by disrupting the arrangement of a closed set of documents, it also represents an expansion of the archival apparatus by introducing materials from a wider context.

Within the archives, the prominence of the archival arrangement suggests the relations between records that are most meaningful. However, these findings show how these relations must still be attended to by the researcher through activities such as reading, which enact the record in particular ways; researchers can choose not to draw on these relations and instead bring the record into contact with other materials that present an altogether different reading of the records. This indicates the integral role of the researcher in the archival apparatus and shows how the record is made relevant in the researcher’s work, producing a meaning that is particular to their own interests.

4.2.3 Gathering

The existing literature on archival research practice suggests that amassing personal copies of primary sources is not new (Cox and Archives Students, 2007; Orbach, 1991). However, collecting records to work on elsewhere is becoming more prevalent over other forms of interaction in the archives (Bulger et al., 2011; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017). This was reflected in the findings of this study, with almost all participants gathering records to work on outside of the physical archives.

Most participants collected archival materials by photographing them on a smartphone or digital camera. Some were able to utilise digitised materials, either downloading these from an online repository to their personal computer or sending them to their email address. The various means of capture demonstrated by participants during the observation are shown in Table 4.

Participant	Means of capture observed
P01	None
P02	Note-taking (physical)
P03	Transcription (typewritten)
P04	Digital photography, with supplementary physical notes
P05	Digital photography, with supplementary digital notes
P06	Digital photography
P07	Digital photography
P08	None
P09	Digital photography
P10	Note-taking (physical)
P11	Digital download of pre-digitised records

Table 4 Means of gathering records used by participants during the first study.

Naturally, the method of capture affected the comprehensiveness of the material collected. For instance, P03 was more selective as they gathered records through partial transcription, copying down only those sections that were directly relevant to their work and skipping over irrelevant parts of the record. Conversely, those participants who photographed the archival records were more likely to gather something just in case “you might want to use them in the future” (P09).

Nonetheless, the variety in participants’ approaches to gathering materials also suggests that each held an individual conception of what was necessary or relevant to perform the same meaning of the record derived within the archives at a later date and in a different location. Most participants sought to include at some level “the context it’s found within” (P11). This might mean expanding the amount of records captured: personal letters were used as an example by P07 where it might be necessary to capture the wider correspondence rather than just the single paragraph they were interested in. Regardless of how much they chose to collect, what was captured was an active and involved decision for each participant. Such decisions and personal views on the archives will subtly shape the meaning rendered by the record by altering the context that it can be interpreted within.

Most participants were aware of this effect and sought to minimise its impact through various means. For instance, gathering was strongly associated with organising: how participants intended to organise their materials in storage affected how they chose to gather the records. Several participants were careful to preserve the hierarchical arrangement of records when collecting materials from the archives. P06 had chosen to browse the records in Discovery – TNA’s online catalogue – by reference rather than by hierarchy (Figure 1) so that when they requested records the folders would also arrive

in order of record number. This then allowed them to view records in this same order: this was essential for P06, who solely photographed records, as it meant that their camera roll retained the same order of records. This potentially preserves the ability to recreate a similar experience of reading through the folder as in the archives, though this will inevitably be shaped by the level of selectivity that P06 chose to apply. While P06 generally chose to photograph the majority of records that they viewed, not all were deemed relevant to their purposes: thus creating a narrower corpus of archival materials.

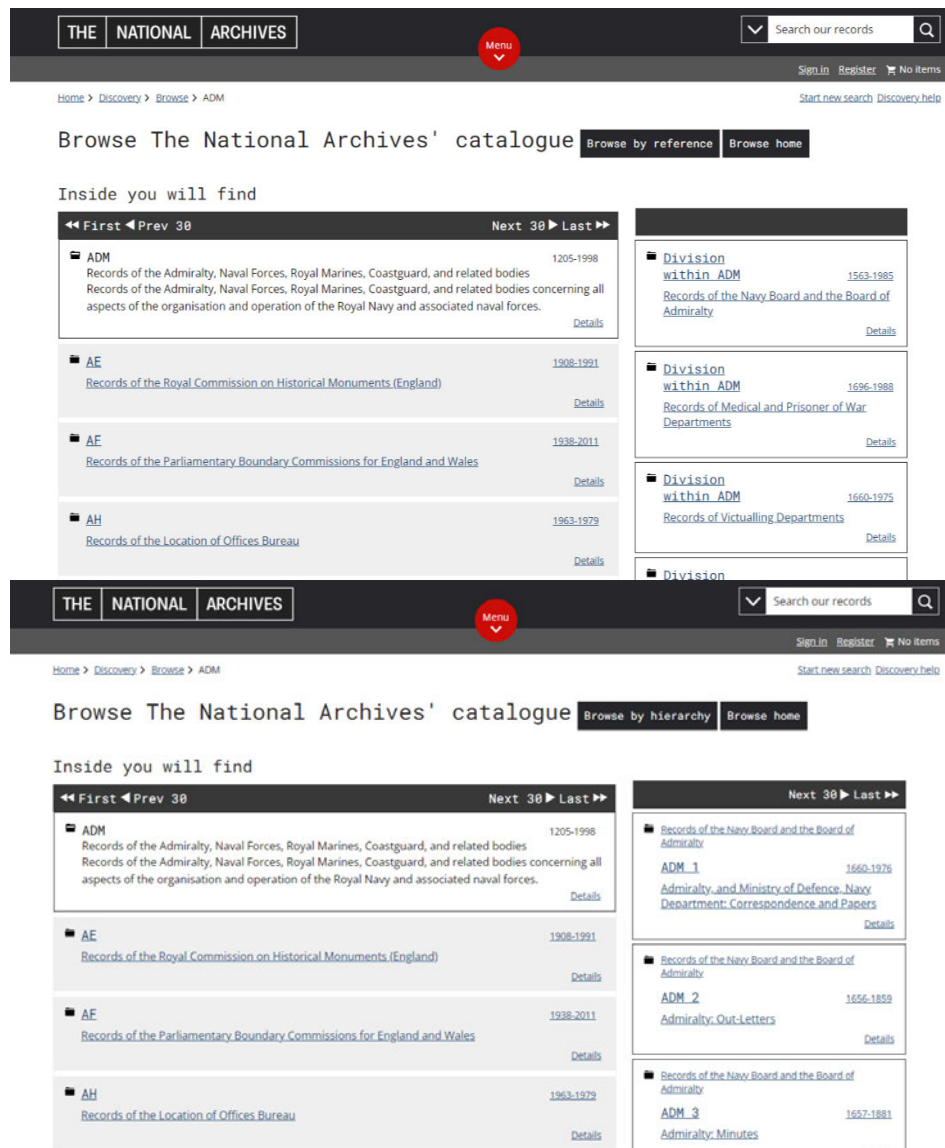


Figure 1 Two screenshots of TNA's online catalogue, "Discovery". On the top, records are ordered by hierarchy; on the bottom, by reference. The slight variation in how the records are presented can be seen on the right hand side of each image. This screenshot was not taken during the observation but subsequently recreated as an example.

Some participants attempted to address these subtle shifts in meaning further by supplementing their gathered records with additional notes. P05 used note-taking to support photography when collecting

archival materials and capture a more holistic, immediate impression from reading the complete folder in the archives. Deciding not to photograph every item, they also wrote “a brief description of what the folder as a whole, contained” which was stored in a digital spreadsheet. Motivated by a belief that it would be “good to get it read as much as possible. In one go” their written summary provided an immediate impression of the folder as a whole that was reliant on their presence in the archives. While this impression remains subject to the selectivity P05 exercised when reading, the textual summary enables them to preserve a point of reference for the whole collection, against which it would be possible to read individual records later on.

In amassing their own collections of archival materials, participants saw themselves as reproducing the archives for analysis later on. Some, like P05 saw themselves as gathering “everything that’s in the archive so we can access it all, offsite” and presented this as a means of recreating the archives elsewhere. Others, such as P07, saw records collected from the archives as “all relevant whether or not it makes it into my project would be- the sampling frame for that would be different I think.” Such comments represent a clear separation for these participants between gathering materials and analysing the record. Nonetheless, the activities described here show how a “cut” (Barad, 2007: 148) is already being enacted that determines not only how the records are being read in situ, but also how this will affect how they are read ex situ.

Gathering ultimately represents a disruption to the material arrangement of the archives as participants’ activities are shaped by their selective attendance to what matters in producing meaning from the records. Despite their awareness of how their actions within the archives would shape their understanding of the records elsewhere, some participants continued to see this activity as a reproduction of the archives that allowed them to conduct their analysis offsite. Yet in gathering records from the archives the researcher inevitably has already exercised decisions about what is necessary to produce meaning from the record and archives. As such, the archives that the researcher takes away represents a partial and personalised enactment of the archival arrangement, determined in relation to the researcher’s own work.

4.2.4 Organising

Archival arrangement constructs the meaning of the record in a particular context by placing associated materials close at hand. This is often defined by the principle of *respect des fonds*, which seeks to preserve a notionally “original” meaning of the record (Meehan, 2014: 65-68). While such an arrangement is seen to assist the reader in interpreting the record (Duff and Johnson, 2002: 487-488), it has also been suggested that it can act as a hindrance to users’ attempts to create new associations and connections with other materials (Duff, Monks-Leeson and Galey, 2012: 85).

Nonetheless, these findings show that it is also reliant on the researcher to perform the archives by attending to this arrangement and they can choose not to do so. Participants in this study were observed attempting to organise materials that they had gathered in the archives for later use, as well as attempting to rearrange materials within the archives using digital methods. In addition to this, participants also verbally elaborated on organisational practices carried out once they had left the archives.

Reflecting similar findings by Antonijević and Cahoy (2018: n.p.), many participants began their organisational practices within the archives. Participants often sought to preserve the archival arrangement, thus giving precedence to relations between archival records that were kept in the same folder. Record numbers were often used to achieve this, partly because the researcher would also need these to reference these materials if later used in their work. For instance, P06 ensured that they viewed and photographed materials in order of record number, while P05 used the record number to document folders in a spreadsheet, again preserving the arrangement of the records as they appeared in the archives.

Another means of preserving the archival arrangement was to group digitised records within files on the participant's own device, thus replicating the storage of individual records within archival folders. Though P11 was not observed setting up their organisational methods during the session, they too claimed that,

P11: my initial, let's say categorisation, is very much based on the categorisation I find them in, here, and actually, it's quite sensible because a lot of times it's easier to read things, how they've been categorised

The example P11 discusses here involves their attempts to uncover information on an architect involved in a number of colonial building projects. For them, the location of their subject's resumé within a governmental archives held particular significance as this was suggestive of security checks made on the individual. Conversely, it might be imagined that if this record were to be found among the subject's family archives or personal affects, it would not hold the same meaning. As such, we see how it becomes important to P11 to preserve this arrangement in order to be able to access this meaning of the record once they have left the archives.

Nonetheless, the same participants also referred to the barriers that archival arrangement could create: P07 claimed that it sometimes "messe[d] up the ideas in my head", while P11 noted that they "might've organised it differently because of my interests". As such, several participants described how they would later rearrange the records according to their own interests: it is worth noting that this process often took place once participants had established the meaning of the record as suggested

by the archival arrangement. For instance, P11 described how they began to rearrange the records “once I have all the documents, and I know what’s in each one”, having initially stored them in a manner very similar to the archival arrangement. Even though, as demonstrated already, the researcher brings their own interests to bear on the record, it seems that P05 and P11 still perceive the initial interpretation as originating largely from the record and the archival arrangement of documents. Using the document as part of their own broader argument is seen as a later stage of research and may be considered by researchers to be an additional transformation of the record.

Once the meaning of the record within the archival context had been understood, P11 described how they sought to reorganise any notes and images collected and “would copy paste into a separate folder that’s about [...] a specific part that I’m looking at”. Other participants hinted at a similar process: P03 initially stored their notes according to “different physical locations” where they had accessed records, before copying them into “whatever the topic is that I’m writing at that time”. This relocation of the record and other information further serves to highlight the importance of the context in which materials are stored. While initially reproducing the archival arrangement through their organisational practices, later rearrangement breaks with the archives in order to support the researcher in using the records within their own work. This practice is suggestive of a significant advantage of personal collections, in that they can be manipulated to emphasise different relations that the researcher wishes to draw on. Altering the material arrangement of records – moving them from one context and into another – changes the archival apparatus and thus allows the researcher to generate novel meanings from the records.

Notably, both P03 and P11 specified that they did not move records to a new file location but copied them. This action supports the development of meaning from the record by placing the record in a new arrangement that tangibly associates it with other materials on that theme. However, it also preserves a copy of the original archival arrangement that was used to support knowing “what’s in each one” (P11) i.e. the significance of each record. This allows the user to revert to the original interpretation of the document that was established according to the archival arrangement. As such, it appears that the partial preservation of this material arrangement – as enacted through the researcher’s practices – allows the researcher to create a somewhat stable point in which to anchor their work, and that they can return to.

Though most participants saw reorganising their collected archival materials as something that they would do after visiting the archives, some participants were able to introduce this activity within the archives by using digitised records. As described above in reading, P03 was able to access digitised records from multiple collections, thus disrupting the archival arrangement and allowing them to read

the records in a different context. In another example that demonstrates the varied ways in which participants performed these activities, P07 was able to use a tablet to digitise parts of a collection and bypass the archival arrangement. Working with a series of bound minutes and indexes, P07 found that due to TNA's reading room policy they could only bring one volume to the table at any one time. This meant that that they could not use the minutes and indexes together, as had been designed originally. Being otherwise unable to utilise the thematic reading that the indexes provided, P07 began working through the indexes first, photographing pages that captured themes of interest to them. This recreated the relevant sections of the index in a format that they could then bring to the table to use with the minutes. The subtle reorganisation of the physical records presented by this pragmatic workaround enabled P07 to work in a way that would not previously have been possible within the archives itself: in this instance, to perform relations that had been maintained by the archives but were not otherwise accessible.

Careful preservation of the archival arrangement by participants demonstrates an awareness of how meaning is produced through the relations between records that are maintained by this arrangement. As in the other activities presented in these findings, the researcher's selective attendance to the record means that the meaning the record is capable of generating is subtly altered, even when the researcher attempts to preserve it: again, demonstrating how the researcher must be viewed as part of the apparatus. Furthermore, the researcher's perception of this arrangement as "archival" – and the distinction of this from a later rearrangement of materials according to their own interests – demonstrates how through this apparatus a cut is enacted that sees some arrangements of materials as archival and others as not. This allows the researcher to progress from knowing the record in relation to the archives, to applying a particular meaning in their own work. However, as this interaction was not directly observed within the archives, this analysis necessitated further probing by examining the researcher's practices *ex situ* (Chapters 5-6).

4.2.5 Summary of findings

In examining these four activities I have shown how the researcher generates a meaning from the record when working with the archives *in situ*. When scanning, reading, gathering, and organising the record(s), the researcher enacts the record not only in relation to their own interests but also to the archival arrangement. This demonstrates the centrality of the archival arrangement to the meaning produced by the researcher, yet also reveals the key role of the researcher in activating this structure for themselves.

Furthermore, as these activities are clearly practiced with the intention of continuing interpretation beyond the archives they show how closely interwoven research practice is both within and beyond

the archival repository. Not only does this blur a distinction between “ex situ” and “in situ” approaches to archival interaction but the findings presented here highlight the importance of considering practices that are undertaken outside of the archives as well as within it. Therefore, a clear progression for this work was to observe research practice that take place ex situ in personal research environments, such as the home or office, to question what impact this has on the archives.

4.3 DISCUSSION

4.3.1 A relational, practice-oriented approach to the archives

These findings offer an alternative means of understanding the interaction between the researcher and the archives from a relational perspective, rather than a mediational one. Previous archival user studies have taken a mediational view that emphasises how archives communicate the meaning of the record to the researcher. Viewed from a relational perspective such as practice theory, meaning is no longer understood as something inherent to the record that the researcher reveals in the right interpretive context. Instead, each of the activities discussed here – scanning, reading, gathering, and organising – highlights how the knowing generated from archival materials is enacted through the practices of the researcher as part of an apparatus.

The meaning generated from the record is always situated in the activities of the knower – here, the researcher – and thus is always partial (Haraway, 1988). Nonetheless, it is grounded in the materiality of the archives. This is particularly apparent in researchers’ attendance to the archival arrangement. Researchers drew on this structure in each of the activities discussed here: in reading and scanning, it was used to generate a meaning from the record at the level of the archival folder as a whole; likewise, when gathering and organising materials researchers were careful to maintain the archival arrangement so that they could reproduce this meaning elsewhere. This suggests that researchers see the arrangement of records as fundamental to how they interpret meaning from the record.

While comments made by researchers suggested that some saw this meaning as “archival” in nature, and that applying records within their own work would be part of a different process, the meaning generated from the record is also entangled with the researcher’s own ways of knowing. Again, I refer to “entanglement” in the sense that neither the meaning of the record nor the researcher’s knowledge of it exist independently of this intra-action (cf. Barad, 2007: 33). This can be seen in the selective nature of participants’ activities as they engaged with the records. During scanning, the researcher sought to identify details that intersected with their own research interests, a process that largely reflected Palmer and Neumann’s description of this activity (2009: 99). Similarly, when reading the records in greater depth, researchers continuously related the record to other information that they

had previously encountered. Finally, when gathering and organising materials, despite adopting a primarily “ex situ” mode of research (Trace and Karadkar, 2017: 500) that involving copying large amounts of records, researchers continued to work selectively: both in only capturing those records judged to be relevant and reproducing the archival arrangement only at the level of the archival folder.

By seeking to understand the archives from the researcher’s perspective, and in taking a relational approach rooted in practice theories, it is possible to recognise the ways in which the researcher makes the record and archives actionable and relevant in their work. While the archives seeks to preserve a meaning of the record, this is only maintained so long as the researcher reproduces the archival practice. By selectively utilising the archival arrangement in practices such as scanning, reading, organising, and gathering, the researcher is intimately involved in enacting the archives for themselves and is therefore an intrinsic part of the archival apparatus.

4.3.2 Blurring the boundaries of the archives

If the archives are enacted through the material-discursive practices of the researcher, then any change to these practices impacts what the archives is. Therefore, the shift to an ex situ mode of research (Trace and Karadkar, 2017: 500) noted in previous research from across a variety of humanities and Information Science perspectives (Bulger et al., 2011; Rutner and Schonfeld, 2012; Milligan, 2020) and captured in these findings is worth examining further for its impact on the archives. In an ex situ mode, archival research is extended beyond the repository: and therefore has particular implications for how we might consider the boundaries of the archives to be enacted.

Trace and Karadkar have described an ex situ mode of research as focused on photographing large volumes of archival materials to work with once the researcher has left the archives (2017: 500). This resonates with similar findings from the literature: Rutner and Schonfeld (2012: 12) refer to how researchers are increasingly treating the archival visit as a data gathering exercise. More recently, Antonijević and Cahoy (2018), Given and Willson (2018), and Kamposiori, Warwick, and Mahoney (2018) have all discussed the importance of personal collections in humanities research; while Milligan (2020) reveals the extent of photography as a means of self-digitisation. The findings I have described in this study fit within this broader picture: while activities such as gathering and organising are clearly shaped by a desire to work with the records offsite, even the prevalence of scanning as a style of reading points to an “ex situ” mode of research.

Nonetheless, the findings presented here also complicate the categorisation of “in situ” and “ex situ” approaches to archival research. Instead, I suggest that the researcher’s practices indicate a blurring of the boundaries between research conducted onsite and that undertaken beyond the archives. This

indicates that we should see the researcher's practices as a continuous process that transgresses the physical boundary of the archives: to integrate the researcher within conceptualisations of the archives, this whole process must be considered.

Though participants sought to remove materials from the archives and work "*ex situ*", this frequently attempted to recreate the same arrangement that the researcher drew on *within* the archives. This challenges the notion of working entirely *ex situ*: while the researcher has physically left the archival building, they seek to continue the same ways of working as they did *in situ*. Although this is further complicated by participants' selectivity in practice, as discussed above any enactment of the archives is always partial as the researcher chooses to attend to some aspects over others.

Furthermore, the use of digital technologies facilitated new ways of knowing both records and archives "*in situ*", introducing activities to the archives that would traditionally have been performed *beyond* the archives. Digital technologies were used to provide access to external collections or circumvent reading room policies, thus allowing materials to be brought together for direct comparison and creating a new arrangement that generated meaning from the records in different ways. Although such practices did not appear as strongly as an *ex situ* approach, this again blurs the boundaries between work undertaken within the archives and that beyond.

The findings discussed here clearly point to the prevalence of an *ex situ* mode of research. The orientation of the researcher to work undertaken beyond the archives can be seen throughout the activities described in the findings, although this is particularly evident in the gathering and organising of large quantities of records for use elsewhere. More than this, in continuing to enact the archives through these and further activities identified during study of researchers practices beyond the archives (Chapter 5) the practices of the researcher blur the boundaries between being "*within*" and "*beyond*" the archives; which in turn, suggests a need to reconsider *where* and *what* the archives is.

4.4 CONCLUSION

This study has identified four activities – scanning, reading, organising, and gathering – that are carried out during archival research. Through these activities, the researcher enacts the archives in ways that make the record relevant and actionable in their work. Across all four activities the researcher sought not only to relate the record to their own work but also to use the archival arrangement to read the record in relation to the archives. This represents an entanglement of researcher and archives in generating a meaning from archival records through the material-discursive practices of the researcher.

Furthermore, each of these activities was also shaped by the researcher's need to continue working with archival materials once they had left the archives. This determined the depth of the interaction within the archives and suggests further interpretation of the record's meaning will be carried out beyond the archives. While this closely follows an "ex situ" mode of research as described by Trace and Karadkar (2017: 500), the complication of which activities are undertaken within and beyond the archives points to a blurring of the boundaries of the archives. As such, a natural progression is to examine how such activities are performed by the researcher beyond the archives, and how this might differ from those activities undertaken within. Therefore, in the second study presented in this thesis I turn to examine the activities of humanities researchers in a personalised research environment, such as the home or office.

5 BEYOND THE ARCHIVES: ENACTING THE ARCHIVES EX SITU

5.1 OVERVIEW

As well as demonstrating how meaning is generated through the activities of the researcher, the findings discussed in Chapter 4, *Within the Archives*, illustrate how archival research practice continues beyond the archival building. Therefore, it felt like a natural progression to focus the following study on how the archives is enacted through the practices of humanities researchers *ex situ*. This sought to address both the first and third objectives of this thesis: to improve our understanding of how humanities researchers generate a meaning from the record in practice and to challenge the notional boundaries of the archives, respectively. By grounding this work in an understanding of research practice both within and beyond the archives, I likewise address the second objective of this research: to better integrate the user within conceptualisations of the archives.

Therefore, this study sought to contribute towards discussion of all three overarching research questions. Of these, RQ1 and RQ2 were again broken down into additional sub-questions:

- RQ1: How do the researcher's practices generate a meaning from the record and archives?
 - RQ1.2 How does the researcher enact the archives through these activities as part of a wider practice?
 - RQ1.3 How does this differ from practices undertaken within the archives?
- RQ2: How do archival practices (i.e. those practices that sustain relations between records) shape the meaning that the researcher generates from the record?
 - RQ2.1 In what ways do the researcher's practices extend, alter, or break with archival practices of representation, such as description and arrangement?
- RQ3: How might the practices of humanities researchers be understood as part of the archives?

While RQ1.2 was identified prior to undertaking the first study, RQ1.3 and RQ2.1 were identified as a focus during data collection and analysis for the first study. These then provided a direction for this second study that focuses on research practices carried out *ex situ*. RQ1.1 is not addressed here, as this specifically focused on activities carried out within the archives.

The findings discussed in this chapter identify three major activities that researchers undertook when working with records beyond the physical archival setting: **Storing archival records; Configuring the record *ex situ*; and Creating new documents from archival records** (Table 5). These activities have received very little attention in previous literature, encompassing both archival user studies and empirical studies of humanities research practice more broadly. Yet such activities are essential to

understanding what it is that researchers *do* with archival records. Shifting attention from information-seeking to understanding interactions with records post-finding also supports a relational understanding of the archives; as *where* the archives is enacted affects *how* it is enacted, which ultimately determines what the archives *is* for researchers.

Storing archival records	Storing refers to the act of retaining records in either physical or digital storage. This allowed the researcher not only to provide continued access to these items but also to maintain relations between records through replication of the archival arrangement of items within folders. At higher levels this often reflected broader thematic or project groupings that aligned the record with the researcher's interests.
Configuring the record ex situ	In configuring records, researchers drew on technologies readily available to them to produce the records for themselves at home. Examples included but were not limited to: scrolling through a PDF document comprising multiple items, zooming in and out of records on screen, or printing out copies of records to physically change the order. Records were configured by researchers both as individual items and as part of temporary arrangements that may or may not draw on the archival structure.
Creating new documents from archival records	Researchers often created new documents or other artefacts in their work, i.e. ones that were not part of the original record. These documents might be valued for how they supported knowing or for fixing a particular interpretation of the record for later use. Excerpts as images or text from primary and secondary sources were often included, as were the researcher's reflections on these.

Table 5 Description of activities undertaken by the researcher beyond the archives.

Two important threads run through these findings. Firstly, the findings demonstrate how the researcher **enacts the archives** to generate a meaning from the records. This addresses both RQ2 and RQ2.1 by capturing how archival practices shape the meaning that the researcher generates from the record and to what extent the researcher extends the archival practice of representation.

The second thread concerns how the researcher **begins to extend the apparatus** by introducing relations beyond those sustained by the archives. Initially, participants closely reproduced a nominally archival meaning by replicating the relations between archival records in their own activities and practice. Yet when working *ex situ*, it is easier for researchers to introduce external relations to the record and so generate novel insights for their research. This addresses RQ1 by demonstrating how the researcher's practice generates the meaning of the record. It also addresses RQ1.2 by providing a comparison for the findings from the first study; this is further discussed in detail in Chapter 6.

I present the findings here according to each activity, beginning with 5.2.1 *Storing archival records*, before moving on to 5.2.2 *Configuring the record ex situ* and 5.2.3 *Creating new documents from archival records*. These are not considered to be either representative of a comprehensive research process, nor to be indicative of progressive stages of research. Instead, these should be seen as

activities that are representative of how the archives is enacted in and through practice to generate meaning from archival records *ex situ*.

5.2 FINDINGS

5.2.1 Storing archival records

Storing archival records was an essential activity for researchers to enact the archives *ex situ*: as such, it had a significant influence on how they generated meaning from the records. While organising research materials has been discussed in the existing literature from both Information Science and Digital Humanities on humanities researchers' personal information management practices (Antonijević and Cahoy, 2018; Given and Willson, 2018; Kamposiori, Warwick and Mahoney, 2018; Trace and Karadkar, 2017) it has not yet been considered how storing archival records contributes to how meaning is generated from the records.

The activity of storing archival records is here broken down into two main themes that were developed through analysis: **storing records to reproduce the archival arrangement** and **storing records to assemble research materials for analysis**. Archival *arrangement* is a significant activity within archival practice, which is held to preserve the meaning of the record by maintaining the contextual relationships between them (Meehan, 2014: 78). Therefore, if this practice is recreated even partially it is essential for understanding how researchers preserve and (re)create meaning from archival materials. While *assembling* has been discussed as a major activity for humanities and other researchers, this has primarily been in relation to constructing a text through writing (Palmer, Tefteau and Pirmann, 2009: 22). Here, assembling is considered in relation to how storing records in a material arrangement helps to "activate" (Ketelaar, 2001) a particular meaning of the record once it is configured.

5.2.1.1 *Storing records to reproduce the archival arrangement*

Most participants had collected records for their current project from the archives in person, although a few had downloaded primary sources from online digital repositories such as the British Newspaper Archive, British Online Archives, or Gale Cengage. For those collecting archival materials in person it was common to self-digitise records via digital photography, using either a camera or mobile phone to take photographs. Regardless of whether records had been self-digitised by participants or downloaded from online repositories, all followed a convention whereby one image represented a single or double-page spread from the archives. This produced a particular effect by which the hierarchical arrangement of the archives was flattened into a single stream of individual, digital images. While an image might represent one page of the archives, a record might comprise a single-

page or multi-page item and an archival folder might include multiple records. For the researcher working beyond the archives, it thus became impossible to tell where one record ended and another began.

Where participants had gathered records from the archives in-person, they often grouped these according to the archival arrangement, i.e. as they would be encountered within the archives. This usually consisted of a digital folder named after the reference code for the respective archival folder: this folder would then be used to store the researcher's images of records from that particular folder (Figure 2). Though this was not witnessed directly, several participants explicitly mentioned giving priority to this activity on returning from the archives (P04, P07, P10); with P04 describing how on returning from the archives, "the first thing is to get all the images sorted out and named in a decent way."

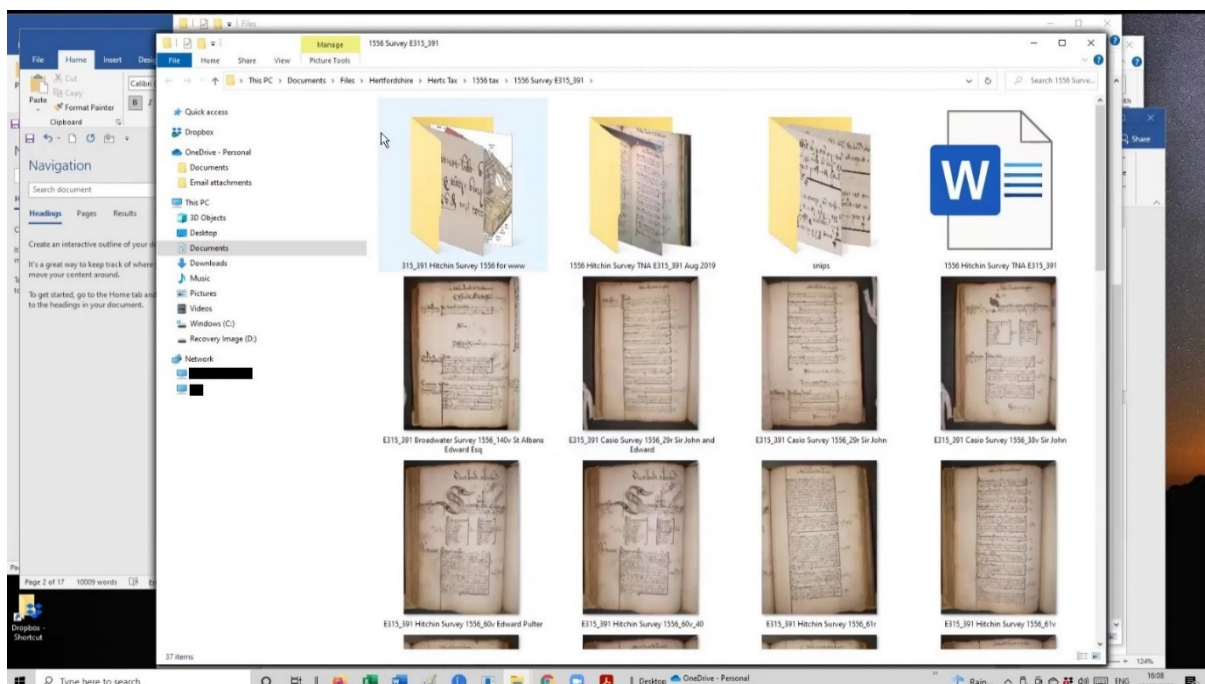


Figure 2 Screenshot of P04's screen, showing their digital files. Records are grouped within the recreated archival folder as well as three further subfolders.

Naming and arranging materials by archival folder reinstates the lowest level of the hierarchical archival arrangement. This may be intended primarily to facilitate referencing, which is essential for humanities research. P07 described how records did not always have reference codes at the item level i.e. written on the record itself. Due to this, they would first take a photograph of the front of the archival folder or the retrieval slip that carried the archival reference code before taking images of any relevant records stored within. As their device stored images in the order in which they were taken, the images on their camera roll were automatically sorted into these different folders, with the image of the front cover or retrieval slip acting as the demarcation between folders. When transferring the

records to their personal storage, P07 was then able to transfer the archival reference code to the folder name. Furthermore, as P07 had worked through the archival folder from front to back, the automatic arrangement of their images meant that the internal arrangement of the folder was also preserved.

In storing materials in this manner the archival arrangement is maintained and thus reproduces some of the logic that defines archives. Arrangement is a core archival practice that is intended to preserve evidence of the activity that led to the creation of the records (Millar, 2017: 215). Therefore, in reproducing this archival practice beyond the archives, participants also partially preserved a notionally archival meaning of the record. This would become significant later on in their research process, as how participants chose to store materials impacted how they would be able to configure the record.

Although participants partly reproduced an archival logic this was nevertheless entangled with their own interests. For instance, participants' ability to reproduce archival practice through the arrangement of their stored records was limited by their actions within the archives itself. Several participants mentioned that they had worked selectively when visiting the archives, only photographing relevant items. P10 – a research and development manager who had written their PhD thesis on American foreign policy in the Caribbean – was researching the history of British relations with Grenada. Some of the archival folders they were working with held hundred of pages of documents. They described how they would assess these while within the archives itself, judging what was relevant and what was not. Overall, they felt that, “there's probably more. whether I miss? ah maybe I do miss certain things but I'm figuring overall I've got a pretty good picture”.

For some researchers, like P10, it was important to be selective when gathering materials to reduce the number of irrelevant items and manage the amount of material that they had to go through once they left the archives. Yet this represents a break from the archival principle of *respect des fonds*: when appraising a collection archivists may work selectively but they largely do not discard records at the item level. This has historically been seen to compromise the integrity of the archive by breaking up the original ‘fonds’, as it impairs the record's ability to function as evidence of activity (Gilliland, 2014: 38).

In storing their archival materials participants thus partially reproduced the archival practice of arrangement. The naming and arrangement of records often followed archival principles, though participants' selectivity when choosing materials from the archives means that this does not represent a total continuation of archival practice. The end-result is that the meaning researchers generated

from their personal collection of records was inevitably the product of both archival practice and their own practice, both within and beyond the archives.

However, not all participants chose to reproduce the archival arrangement when storing materials. This was often when researchers had not collected large amounts of archival materials, as was the case for P01: an anthropology PhD student who was primarily working with museum collections. In describing their personal collection of archival materials – a mix of records gathered from the archives and those downloaded from the British Online Archives – they noted that, “because the archive materials I work on are small enough that I find my brain doesn't really have trouble with remembering where I got stuff from or anything” (P01).

This also was the case for P08, who was conducting a social history of sexually transmitted disease in Chile, with a particular focus on the military as a case study. They had gathered a number of primary sources both from online repositories, including those managed by the British Library, and from in-person visits to archives, such as the archives of the city council of Providencia, Chile. Within each folder they held a very select number of records. These were largely grouped according to where they had accessed the records, whether in-person or online, with only a few records gathered into smaller subgroupings (Figure 3). This suggests that for some researchers the archival arrangement provides an additional layer of organisation where particularly large numbers of records have been gathered from the archives.

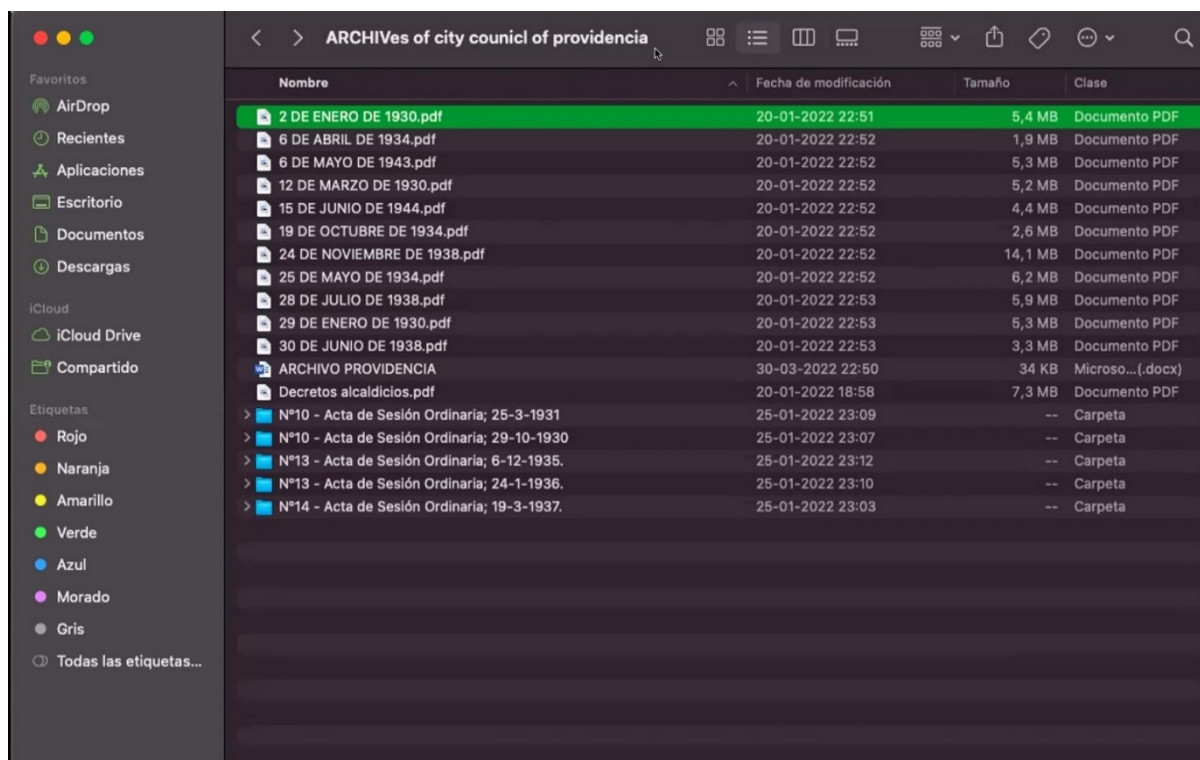


Figure 3 Screenshot of P08's screen, showing their digital files. The files are grouped within a folder reflecting the archives the materials were drawn from – only the items at the bottom represent archival folders with items inside. The remainder of the items are loose.

Another instance where participants *did not* draw on an archival arrangement was where primary sources had been gathered from online repositories (P01, P03, P08, P11). While these repositories may contain archival materials the degree to which they incorporate archival practice in their representation of collections can vary. Whereas those working with materials gathered from archives in person were able to draw on the archival arrangement this was not available for those working with online repositories. Therefore, participants had to create their own arrangement for these records.

P03 – a postdoc researcher – was using the British Newspaper Archive to research the history of South Asian communities in Glasgow. As per the conditions of the observation, P03 had already identified the materials that they wished to use during the session. These were all grouped into one folder named 'Scotland India', with the individual records given a brief title based on their contents (Figure 4). Other participants utilising online repositories also commonly grouped materials together by source (P08) or themes within their project (P01, P11). As is discussed further in the following section, 5.2.1.2 *Storing records to assemble research materials for analysis*, this bears some resemblance to how participants arranged research materials beyond the level of the archival folder.

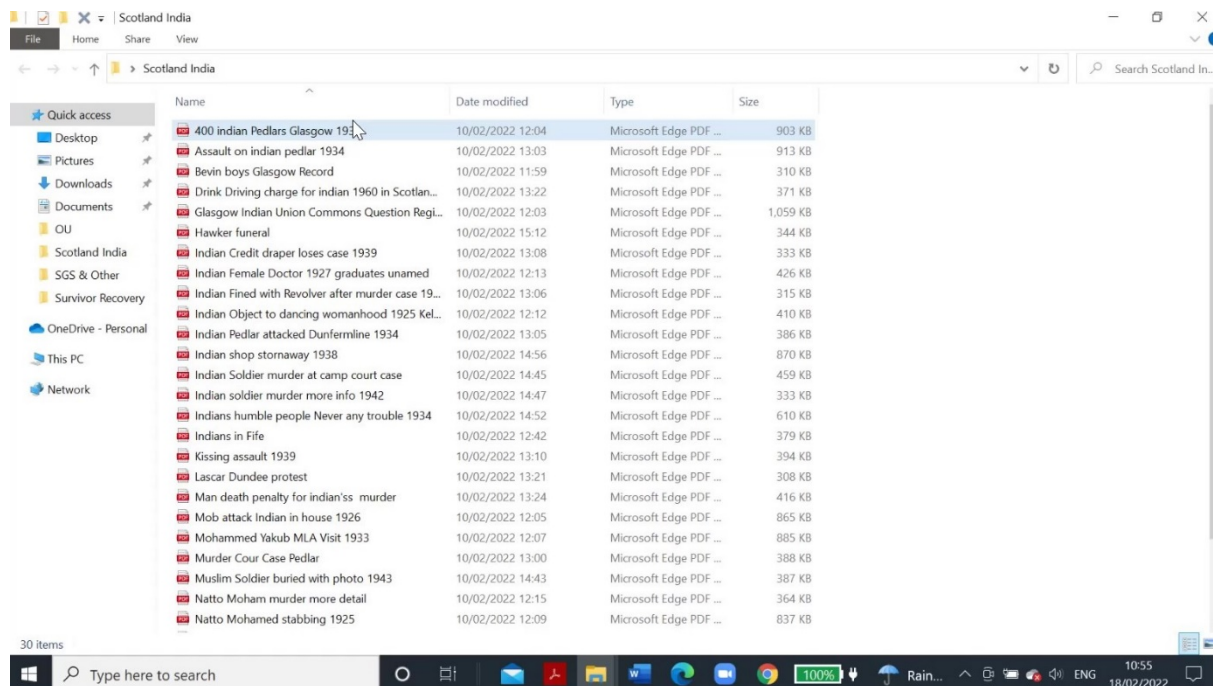


Figure 4 Screenshot of P03's screen, showing their digital folder. The navigation bar reveals the flat hierarchy of P03's digital filing, with multiple PDFs grouped into a single project folder.

Participants' approaches to storage when working with materials gathered from online repositories suggests that their actions were shaped by the methods of organisation they came into contact with. As online repositories are not generally subject to archival practices – or do not make them visible to researchers – it was not possible for the researcher to draw on such structures. Researchers thus had to innovate their own practices that related to their wider project aims. Conversely, where materials were gathered from the archives the researcher had to interact with the records as part of a folder in order to use them.

Overall, in storing archival records researchers reproduced the archival arrangement where it was both readily available and perceived as useful to their work. Within the archives, the arrangement of records is one of the most evident forms of representation as researchers must engage with this structure when collecting materials for later use. Where this structure is less evident or not available – as in online repositories – researchers are not able to utilise this. As the archival arrangement supported participants' ability to reference the records, this practice was maintained; whereas other archival practices, such as treating the folder as an integral unit, were not always sustained by participants. This is significant, as how participants choose to store materials affects the meaning of the record they are able to generate: this shall be explored in further detail in 5.2.2 *Configuring the record ex situ*.

5.2.1.2 *Storing records to assemble research materials for analysis*

Beyond the need to collect materials from the archives to work with elsewhere, participants also sought to use their storage to assemble their chosen research materials in one place. While *assembling* has been discussed as an activity that is related to writing (Palmer, Teffeu and Pirmann, 2009: 22) this does not consider the assembling of primary resources prior to analysis. Here, I extend Palmer, Teffeu and Pirmann's notion to suggest that assembling materials in the researcher's personal storage also allows the researcher to generate meaning from archival records.

Collected materials were arranged at a broad level according to whatever suited the researcher's needs or made most sense to them at the time. Common modes of arrangement included theme, person, or chronology. As P01 was working across museum and archival collections, they described "an eclectic categorisation" where it made more sense to them,

P01: to categorise these two people, as people rather than as themes, because they're kind of the key characters linked to the collection? but then these broader themes on kind of feather mentions, um er location mentions, and exhibition mentions, are the kind of three themes that I'll be talking about in the chapter I'm writing, so I kind of categorise them like that.

Here, it is evident how by assembling their materials in one place, P01 supports their intended analysis. While the two sets of materials centred on individuals reflect a common institutional focus on records creators (Millar, 2017: 46), the broader themes that P01 mentions combine multiple sources to cut across not only records series but also different archives and other collections of materials. This represents a break from the archival principle of *respect des fonds* and instead arranges them according to their intended use. Furthermore, by adapting their approach to categorisation to suit different topics, P01 is able to draw attention to different aspects of the records that are most salient to their research. These categories can thus be read as a reflection of what P01 perceives as their intended use of the record. Yet it also creates this association so that when P01 next engages with these materials they are read through this particular lens.

Mixing different types of categorisation, such as people, places, or themes as P01 did was not uncommon. Participants often underplayed the significance of this as simply "work[ing] out the most obvious way to categorise things really" (P04) and thereby facilitating retrieval by having things to hand. Nevertheless, underpinning the notion that these groupings facilitate retrieval is the idea that these sources are to be used in conjunction.

For instance, chronology was a popular means of categorising materials employed by several researchers (P06, P07, P09). P07 was researching the history of a major European art show. They had yet to choose their case studies – which would comprise certain years of the show – and they

described how “it's important for me to divide the documents per year, because each year identifies an edition of the [show].” As well as playing an organisational role, grouping the documents in this way supported their identification of different editions and helped to shape their understanding of which years might be representative of the show as a whole.

In assembling their selected research materials in their own personal storage, participants created the structure that would later support analytical activities such as reading or note-taking. Though this also supported pragmatic efforts to facilitate retrieval, this presumes that these materials are to be used in close conjunction. As discussed above in 5.2.1.1 *Storing the records to reproduce the archival arrangement*, participants' arrangement of research materials in their personal storage may incorporate aspects of archival arrangement. Nevertheless, at a broader level participants often chose not to enact the archival arrangement; choosing instead to cut across multiple archival collections according to key themes in their research.

Naturally, in choosing to group some collections of items together participants also acted to keep some materials separate. Although P01 worked across archival sources to produce their categories, they also noted that “the archival stuff is here and doesn't really talk to much else at the moment.” As well as keeping archival materials distinct from other sources, such as secondary literature or physical artefacts, almost all participants also described keeping materials distinct based on the archives that they had come from (P02, P04, P05, P06, P07, P08, P09, P10) or the type of material, such as newspaper clippings (P03, P08) or probate and census records (P09).

Keeping some archival materials separate also played a role in supporting participants' conceptual analysis of the records. For example, due to their research focus on the history of medicine P08 chose to separate out some documents within a folder titled “medical science”. Within their collection of sources P08 had initially distinguished four areas: the archives of the city council of Providencia; medical science; press and journals; and “salus” (health), which they subsequently rearranged under medical science. Medical science stands out here as a thematic interest among more pragmatic approaches to keeping materials from different sources separate, whether based on place or type. This is clearly tied closely to P08's research topic and would appear to signal that these documents merit closer attention.

As with choosing to group some materials together, by keeping some materials distinct participants also sought to support the generation of meaning. This usually relied on creating a narrower focus within which to interpret materials, whether that be due to the type of source (e.g. archival material vs secondary literature) or within particular themes. In storing records according to these themes, it

allowed participants to use this arrangement as a shorthand for their significance, enabling them to revisit the meaning generated by that particular arrangement at a later date.

Once they had assembled their archival materials participants reported that they generally would not reorganise these at a later date. This suggests that assembling materials in storage plays an important role in supporting knowing over an extended period. It also parallels archival practice, as the records and other sources collated by researchers are seen to preserve a particular meaning of the records. For example, P09 – an academic researcher and lecturer in legal history – was reusing archival records that they had previously collected for their postdoctoral work several years earlier. Having once used these records to research how female entrepreneurs were financing their businesses in the late Victorian and Edwardian eras, P09 was now conducting an in-depth study into the life of one of the individuals documented in these records.

During their previous project, P09 had created a separate folder containing all the relevant records on this individual. However, rather than cross-reference between projects or reorganise the original project file P09 had chosen to create a duplicate copy of the records within their new project file. In doing so, P09 preserves the original file as evidence of their work – as well as maintaining the archival arrangement of the records within a single folder – while enabling these previously collated materials to be put to a new purpose. This example demonstrates how an assemblage created by the participant within their personal files supports their research practice in the long term. Likewise, in reproducing the records in their current project folder, P09 creates a new context for these materials while avoiding disruption to the previous arrangement.

Assembling research materials provided participants with the opportunity to begin categorising the records according to their own research interests. Though this often worked in conjunction with the archival structure discussed above, assembling materials in storage more often spoke to the associations that the researcher was attempting to draw out from the records. This could be significant in the longer term, as by maintaining a material arrangement that generated a particular meaning, it created a point at which the researcher's knowing could be anchored and that they would be able to revisit in future.

5.2.1.3 Summary: Storing archival records

In their storage of archival records participants demonstrated a partial enactment of the archives, primarily by maintaining the archival practice of arrangement. Arrangement by archival folder and the internal ordering of records within folders were both maintained: as we shall see in 5.2.2 *Configuring the record ex situ*, this allows the researcher to understand the record through those relations maintained by the archives and thus generate a notionally archival meaning from the records.

However, in assembling their research materials participants also sought to establish an approach to organisation that supported their own research needs. While this could incorporate archival arrangement at the lower levels, at a broader level participants organised their archival folders by their own interests, such as theme or chronology. Furthermore, where participants did not collect large amounts of materials or downloaded items from an online repository they may not adopt an archival arrangement as these systems make these less apparent to the researcher.

Whether participants chose to enact the archives in their storage or not, participants' reluctance to rearrange their materials once organised in their personal storage points to these personal collections as a fixed point that anchors the knowing generated through previous activity. This could then be used to enact the record in particular ways through configuration, as described in the following section.

5.2.2 Configuring the record ex situ

All participants worked primarily with digitised records during their chosen task. These had to be configured and reconfigured on screen throughout their research to make the record usable within different activities. Configuring is defined here as the temporary arrangement of the record(s) and other artefacts on screen to support further activities. As the majority of participants were working with textual records, *reading* was the most common activity that configuring facilitated: other activities supported by configuration included *note-taking*, *comparing*, and *relating*. While these activities facilitated by configuring have all previously been identified as common to research practice (e.g. Anderson, Blanke, and Dunn, 2010; Brockman et al., 2001; Palmer, Teffeau, and Pirmann, 2009; Unsworth, 2000), the focus on configuring here emphasises how the researcher is actively involved in making both records and archives actionable in their work in ways that make meaning-making possible.

I consider configuring in relation to two subthemes: **configuring the record as an individual item** and **configuring the record as part of a temporary arrangement**. 5.2.2.1 *Configuring the record as an individual item* refers to the actions undertaken by the researcher to work with the record: for example, alternating between a view of the whole record and zooming in on individual sections. As this pertains to treating the record as an individual item, the discussion of findings focuses on how this facilitates the common activities of reading and note-taking. 5.2.2.2 *Configuring the record as part of a temporary arrangement* then turns to how participants enact the record in relation to other artefacts. While participants often chose to utilise the archival arrangement discussed in 5.2.1 *Storing archival records*, they also drew on other arrangements of materials in order to facilitate not only reading and note-taking, but further analytical activities such as comparing.

5.2.2.1 *Configuring the record as an individual item*

Digitisation – whether personal or professional – results in a series of individual images, each one representing a single or double-page spread from the archives. This convention preserves the integrity of the page as an artefact as well as a source of information (Bilson, 2020: 41). Yet when reproduced on screen the digitised text is often too small for the researcher to read. This required participants to perform further actions to configure the record and make it usable: such as navigating to different sections of text by scrolling or pulling the page around; or switching between a whole page view and zooming in on individual sections. Naturally, these activities are unique to a digital environment and thus indicate a significant alteration in how participants engage with digitised records.

When *reading*, most participants sought to strike a balance between seeing as much of the record as possible while also making the text readable. This allowed them to alternate frequently between scanning records to identify relevant information and reading the text in greater depth, without reorienting the page. For example, P09 was using bankruptcy records to trace the life of an Edwardian perfumier and businesswoman. These records comprised a multi-page item on each individual, represented in P09's archival materials as a series of individual image files gathered within a digital folder (Figure 5). Working through these images one-by-one, when opened each image would be sized to the width of the window: the window itself took up the full width of the screen P09 was working on. P09 would begin by scanning through the record from top to bottom, using the sidebar to reposition the page while reading it through. On reaching the bottom of the page P09 would then return to the top of the page and begin the process again, this time pausing to take notes on any sections of interest in the record. In their configuration of the record, P09 thus facilitates the coordination of both scanning and in-depth reading to help them interpret the record whilst also minimising the amount that they had to reconfigure the record to achieve these related tasks.

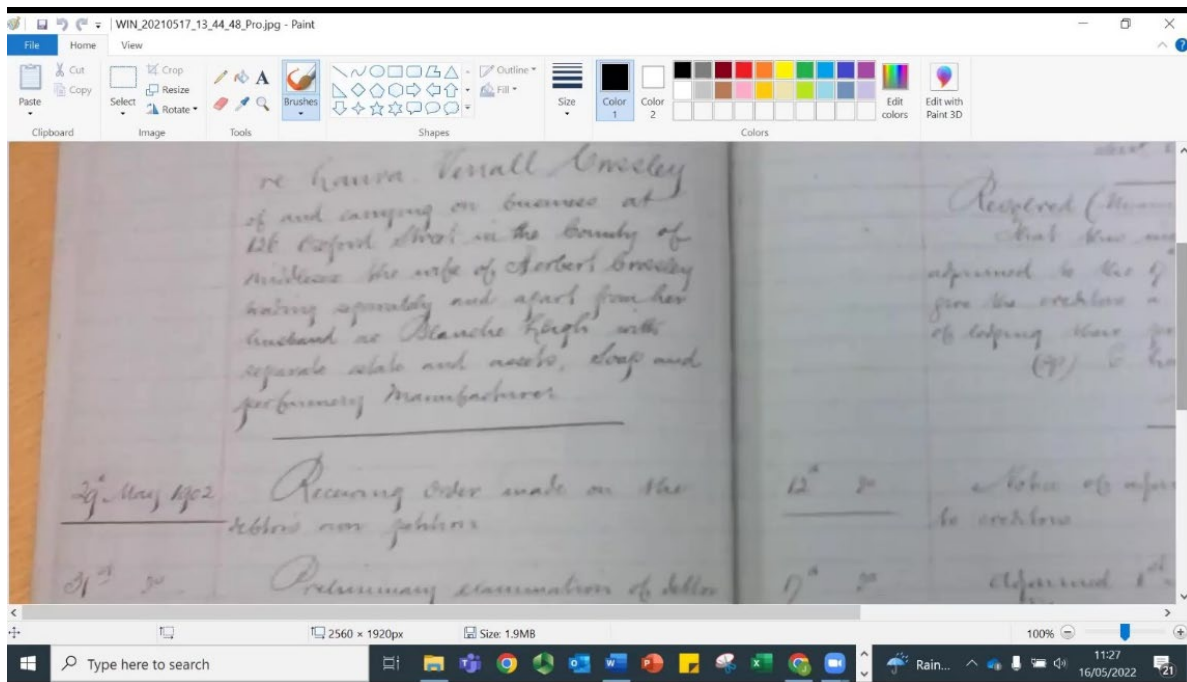


Figure 5 Screenshot of P09's screen, showing the record taking up the full screen. It is being viewed in Microsoft Paint.

Nonetheless, at times participants had to reconfigure the record to facilitate different styles of reading. During the observation P08 primarily used digitised newspaper pages that they had previously downloaded from an unspecified online repository. While they had chosen each page for its relevance to their research on the history of sexually transmitted diseases within the military, they also described how they would “not take it for granted that information is the only thing that I want to [...] see.” Therefore, as well as zooming in on specific sections of text to fill the screen and tracking through it as P09 did, P08 would also zoom well out of the record to review other information on the page.

In one instance, P08 opened a record that they had saved for an article it contained, titled, ‘The Military Hospital and its Organisation’ (Figure 6). Yet before reading the article they were interested in, they zoomed in and out of the page several times to review the wider context of the record:

P08: okay. and now I'm zooming out to see more perspective, ah okay. english, cocinas a gas- part of the modernisation of the everyday.

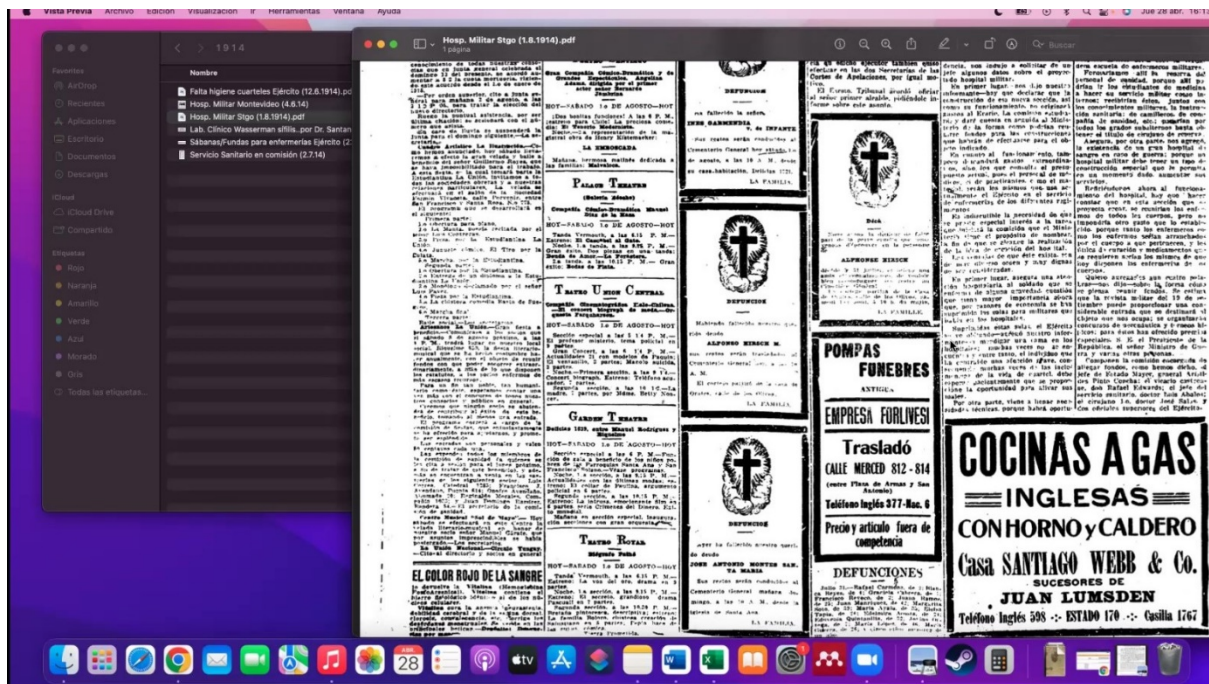


Figure 6 Screenshot of P08's screen, showing a digitised record. The open record includes an advert for English stoves and cookers (bottom right).

Here, P08 draws attention to an advertisement for English stoves and cookers. While this is not directly related either to a medical topic nor to the military, P08 found that this type of information helped them “to compare and situate the context of the information collected” (P08). Although this would not make it directly into their thesis it helped them to understand the article in the present moment as they interacted with it.

When configuring the record for reading, participants thus created the conditions that allowed them to shift between scanning and close-reading, as well as making wider connections by seeking to understanding the context in which the information they sought was presented. By balancing readability and comprehensiveness, participants switched between understanding the record in relation to their own project and through its relation to a wider historical context. Yet this necessitated continuous action on the part of the researcher – such as zooming in and zooming out, or scrolling down the page – to make the record amenable to their analysis.

Another major activity that participants facilitated through configuring the record was *note-taking* (cf. Palmer and Neuman, 2002: 100; Palmer, Tefteau, and Pirmann, 2009: 30-31). During note-taking participants primarily wrote their notes in another document distinct from the archival records that they were using. This was most often achieved by splitting the screen between the archival records and another application for note-taking (P01, P02, P06, P07), though it should be considered that some participants may have used a second screen were it not for the conditions of the observation. Some participants also used notebooks or loose paper to take notes, citing the lack of a second screen (P09, P10).

P02 had access to a very large screen at home, so usually worked by opening multiple windows on one screen (Figure 7). They described their discipline broadly as history of science and was researching the history of a scientific research station. While their research materials incorporated both interviews and archival materials, as well as secondary sources, the core materials for the task conducted during the observation were a series of base reports from the research station.

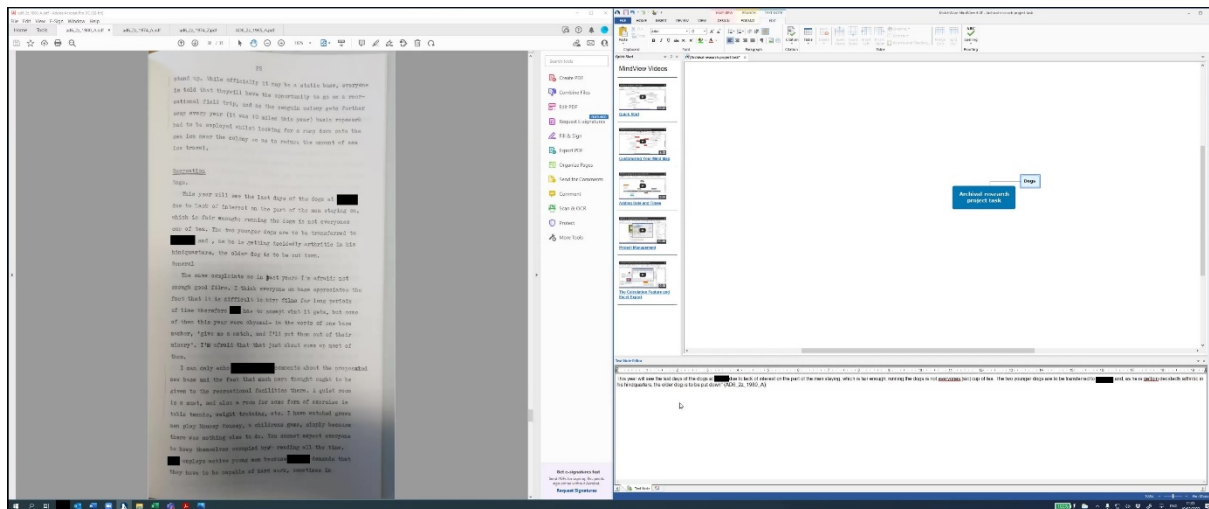


Figure 7 Screenshot of P02's screen, showing the record on the left and notes on the right. Redactions are my own.

The individual images P02 had taken in the archives had already been converted into a series of PDFs, with one PDF representing each base report. During the observation P02 would open the PDF on the left side of the screen, with mind-mapping software on the right, in which they would then take notes. By configuring the record and notes in this way, P02 was able to coordinate their activities across the two documents: both reading the record as described above, as well as creating a more focused interpretation of the record by writing their notes.

Despite having access to their own copies of records, no participants were observed annotating materials directly: a few reported occasionally highlighting sections of text, on physical print-outs (P06) and the digital record respectively (P07, P08). This may be due partly to the format of the digitised records: where stored as image files, OCR would not have been available and would have prevented participants from adding notes to the record itself. Nonetheless, several participants converted their records to a PDF format, which is usually capable of recognising printed text. Yet none of the participants who had access to records as a PDF (P01, P02, P03, P06, P10) added direct annotations to these records. This suggests an intentional decision to create their notes separately from the record.

While splitting the screen allows participants to facilitate different activities – here, reading and note-taking – it also functions to enact a distinction between the archival record and the participants' notes.

This allowed participants to coordinate the use of materials during the interaction but also to later separate these out for different functions in their research process. In retaining a “clean” copy of the record, free of annotations or mark-up, the researcher is able to generate multiple different meanings from their stored records. Conversely, the notes that the researcher uses can be utilised as a cumulation of different sources that point to a more specific meaning of the record that the researcher seeks to capture and apply in their own work. This later use of notes will be further discussed under 5.2.3 *Creating new documents from archival records*.

In their configuration of the record, participants actively worked to make the record amenable to analytical activities such as reading and note-taking. This was both made necessary and facilitated by the particular conditions of digital records that enabled the researcher to engage with the record in particular ways, such as zooming in and out of the image. Nonetheless, the researcher also adopted this functionality to enact a relation between the record and their own notes, while simultaneously working to maintain a separation between these. This supported the researcher’s meaning-making processes by preserving an “original” copy of the record that could be referred back to, while also producing a document that combined information from the record with their own reflections and other sources.

5.2.2.2 *Configuring the record as part of a temporary arrangement*

During the observation, participants rarely worked with records singly and instead worked with multiple records during one session. This effectively configured records as part of a temporary material arrangement, whether drawing on the archival arrangement or creating a new collection from which they could generate novel meanings from the record through its relations to other sources. This likewise led participants to undertake further activities which were recognisable from previous archival user studies and research into humanities research practices, such as *reading*, *note-taking*, *comparing* and *relating* (e.g. Brockman et al., 2001; Duff and Johnson, 2002; Palmer and Neumann, 2002; Palmer, Teffeu and Pirmann, 2009; Unsworth, 2000). While assembling as discussed earlier in relation to storage considered how these may reflect or support knowledge creation processes, here I consider temporary arrangements that reveal how the researcher generates meaning from the records during interaction.

Participants often sought to understand the record as part of an archival arrangement when working *ex situ*. The ways in which this was achieved were unique and varied: but in all instances participants sort to facilitate *reading*, both as close reading and scanning (Palmer, Teffeu, and Pirmann, 2009: 19-21). At its simplest, participants read through individual image files one by one (P09) or in small batches (P01) following the archival arrangement, supported by the storage practices described

above. For instance, P01 was working with pamphlets downloaded from the British Online Archives: due to the terms of P01's licence these had been downloaded as individual pages. While this meant that they could download only those pages with direct references to their themes, it also meant that they had to treat each multi-page pamphlet as a collection of individual pages. Thus when working with the records they would open a small group of files and work through these in order; once they had finished with these they would close the files and open a fresh batch.

Some participants had access to software that could enhance this process, such as photo viewing apps or PDF tools. Such software was commonly used by participants as it facilitated an uninterrupted reading process that allowed researchers to "just click- turn like almost turn the page?" (P09). For instance, P07 used a "highlighted view" on their laptop that enabled them to click through from one image to the next. Working through a file of correspondence discussing the loan of artworks for the European art show they were researching, this was particularly useful as many of the records extended over multiple pages. Using this highlighted view enabled P07 to read through the record page-by-page before exiting this highlighted view to make a note of the details they found most pertinent to their research.

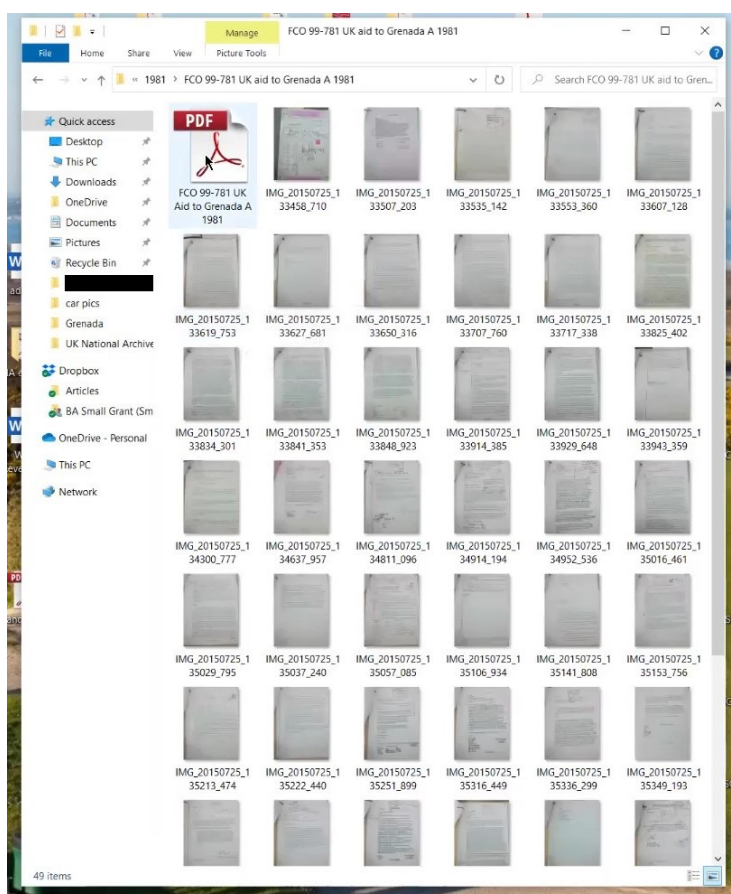


Figure 8 Screenshot of P10's screen, showing their folder of archival materials. At the top left the PDF of the file can be seen, alongside the individual images throughout the rest of the file.

An alternative method of recreating the archival arrangement of records saw some participants combine individual image files into a PDF (P01, P02, P06, P10): a PDF file could variously represent a multi-page record or an archival folder. P10 had converted a selection of individual image files from an archival folder on UK aid to Grenada into a single PDF file (Figure 8). Their decision to combine the images as a PDF was instigated by the unreliability of the photo-viewing software that was available to them. Specifically, they found that their experience of reading was interrupted when moving through the images as "from slide to slide sometimes it moves on

sometimes it doesn't" (P10). To overcome this, P10 combined the records into a PDF file that would allow them to scroll through the file from top-to-bottom as though reading through the archival folder from the front cover to the back.

Although this facilitated a smooth reading experience for P10 it did not exactly replicate their experience of reading in the archives. When working in the archives, P10 described how they would read the folder from back-to-front, which facilitated a chronological reading as the folders were arranged in reverse chronological order. Whereas with a physical folder P10 could easily adjust the order in which they read through the records this was not so easy to achieve in a digital environment.

Each of these approaches enabled participants to overcome the flattening effect produced by digitisation in order to read the record as part of the archival collection. For archives, it is particularly important that researchers are able to read through the file as a whole, because this often provides a greater understanding than reading records as individual information items (Duff and Johnson, 2002: 487; Leigh et al., 2021: 261). Nonetheless, it is worth noting that while the original order and arrangement were preserved, the selectivity exercised by participants when gathering records in the archives meant that this was not an exact replication of the archives.

At times, participants actively sought to disrupt the archival arrangement they had reproduced in order to configure the record as part of an alternative grouping and facilitate direct *comparison* between sources. P01 was analysing a photographic archives that related to some of the museum artefacts that formed the core of their research. During the observation, they kept several items open on the screen: a Word document that combined all the photographs from the collection; a 'master copy' of images of the museum artefacts that they were primarily interested in; and a PDF copy of a publication in which the photographs had been published (Figure 9). By having these items open at once and being able to switch easily between them, P01 was able to compare information from these different sources. This effectively created a new collection of artefacts – as opposed to the archival arrangement – and enabled P01 to draw connections between an entirely different group of items and thus further their understanding of the record in new ways.

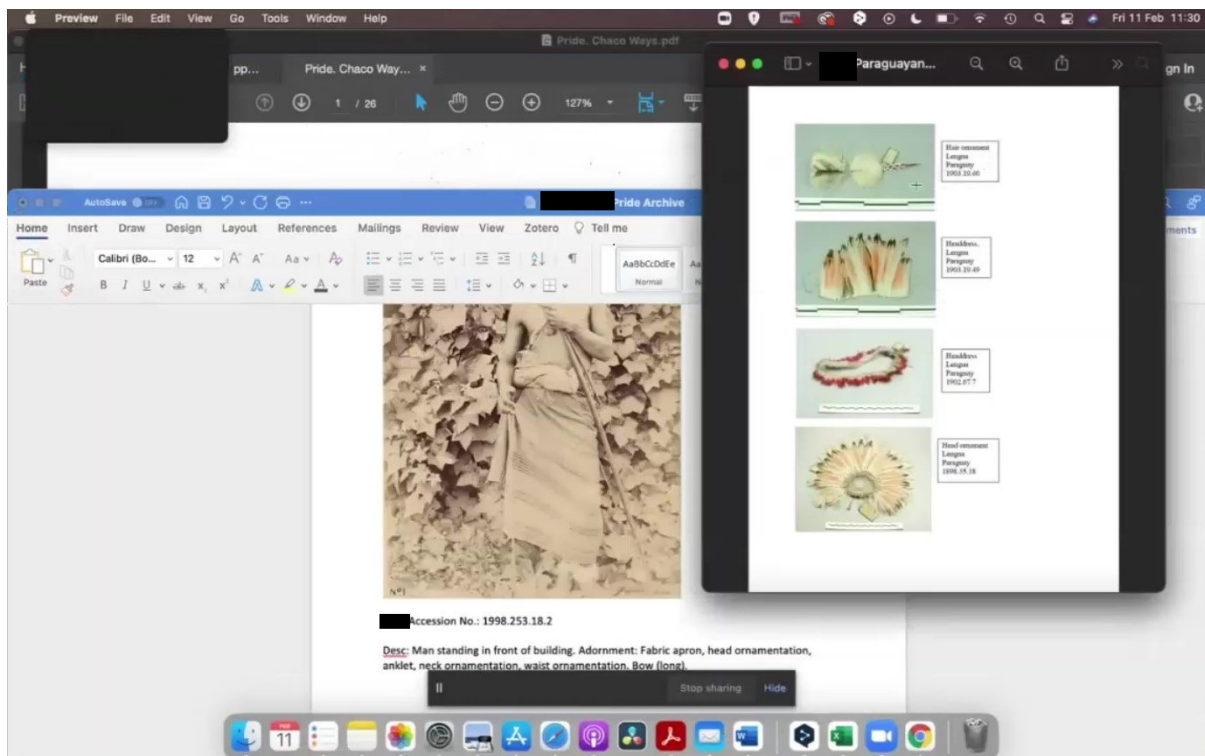


Figure 9 Screenshot of P01's screen, showing the layout of their screen during the observation. In the foreground their notes are visible with the photographic record inset. To the right is P01's 'master copy' of the artefacts they are interested in. At the back is a PDF of a publication contemporary to the collection. References to the museum P01 was working with have been redacted.

Nonetheless, a few participants found that there were limits to configuring the records in a virtual arrangement. For instance, both P06 and P09 printed out records to overcome the fixed organisation presented by their storage. P06 was attempting to map the progression of a political treaty over time using visualisation software. However, the records that formed the input for the visualisation came from multiple archival sources covering the same events, making it difficult to grasp the timeline without altering the arrangement of files in storage. At its most convoluted, P06 would print out the records in order to be able to interleave these physically. The records were then divided into two piles, according to their categorisation of "documents" and "meetings", adding to each of these in chronological order. In doing so, P06 was able to establish a timeline without disrupting the relationship between the records that were organised and stored in a more stable arrangement.

For P09, printing out the digital records on paper allowed them to overcome the limited space available to display the records on screen. They described how they felt that,

P09: I don't always see properly when I'm looking at my digital records. and so actually sometimes being able to be a bit like a police officer and have all this stuff spread out, you know, all your evidence spread out, and then you can start to see sometimes connections that [...] maybe [I] wouldn't have spotted?

Here, P09 links the ability to “see” with being able to directly compare multiple sources and thus *relate* the different sources to one another. Much as the archives communicates more than the sum of its parts (Duff and Johnson, 2002: 487) it is the connections made between sources that allow the researcher to generate new insights from these materials. As such it is vital for researchers to “see” these connections to be able to relate or link different sources together. Despite digital records taking up no physical space other than the device on which they are viewed, the limitations of the available screen space places a restriction on P09’s ability to directly compare records. Conversely, although physical space is also limited it allows P09 a much broader area across which they can spread out their research materials.

The examples of alternative arrangements discussed here – opening multiple sources on screen (P01) and rearranging physical records (P06, P09) – are notable for the fact that these are all temporary. Although participants sought to rearrange records to generate new insights they appeared reluctant to do so within their longer-term storage. While the capabilities of digital retrieval mean that “where you store them isn't so crucial” (P04) this suggests that storing records creates a point at which researchers can anchor a particular meaning through a particular arrangement. Conversely, temporarily reconfiguring the record helps the researcher to generate different meanings from the records.

In configuring records as part of a temporary arrangement, researchers could choose whether or not to enact archival relations preserved in their approaches to storing records. Often, researchers would draw on this configuration to help them understand the record within a notionally original context. As researchers had often arranged their stored records according to the archival arrangement, this was generally easy to facilitate using available software on their devices. Conversely, creating alternative arrangements during interaction often required further action. Though these materials may be stored together within broader project or group folders, as participants had often prioritised the archival arrangement the researcher had to actively retrieve each item separately in order to compare these. Though this could be seen as a limitation researchers face when reconfiguring materials beyond the archives, it is a capability afforded by the digital environment that would not be possible when working within the archives.

5.2.2.3 Summary: Configuring the record ex situ

To work with records beyond the archives, researchers had to actively configure the records to facilitate other activities such as reading, note-taking, comparing, and relating. Whether simply producing the record on screen or attempting to configure relations between records and/or other sources, researchers continuously made active decisions about how to configure the record. This

highlights the role of the interface as a space within which archival research – and humanities research more broadly – is now being conducted.

Although the researcher often drew on archival practices, particularly in reading the record as part of the archives, configuring the record also allowed them to begin to establish connections beyond the archival records as a self-contained collection. However, it is notable that most configurations of the record were temporary or otherwise enabled the researcher to revert back to an unaltered copy of the record. This suggests that participants perceive the records stored in their personal collections, arranged according to archival practices, as sustaining a notionally archival meaning; while temporary (re)arrangement of materials allow them to extend this apparatus beyond exclusively archival relations to generate new insights into the record.

5.2.3 Creating new documents from archival records

As well as configuring the records in particular ways to support their work, participants often created new documents as part of their research practice. These most commonly took the form of a digital document, such as a Word document or Excel file. New documents were most commonly created through *assembling* and *note-taking*, with other forms of writing such as *transcribing* and *annotating* also common. While assembling was discussed earlier in relation to storing, here it more closely resembles Palmer, Tefteau, and Pirmann's (2009) description of this activity as supporting the creation of a text. Note-taking, transcribing, and annotating have been variously described in the literature but what is common these definitions is the recognition of generating meaning through the act of writing (cf. Anderson, Blanke and Dunn, 2010; Palmer, Tefteau, and Pirmann, 2009).

The creation of new documents appeared to serve two primary functions: **to support knowledge creation** and to anchor a particular meaning from the record by creating **a fixed point to work from**. While some documents were intended only to be used short-term as a means of knowing the record through writing and other productive activities, they could also become a resource for the researcher longer-term to revisit a particular interpretation of the record. Whereas in previous sections I have focused on examples where records have been treated by-and-large within their archival context, here I focus on the creation of new documents from multiple sources. These sources might encompass both archival and non-archival material, as well as the researcher's own reflections and comments.

5.2.3.1 Creating new documents to support knowledge creation

Many participants created new documents through writing, both as a means of knowing the record and capturing it for future use. This usually took the form of *note-taking* and sought either to capture key details from the record that the researcher had identified as relevant or to provide short summaries at the level of either the record or archival folder. Interestingly, several participants

referred to these documents as temporary or fluid; while some explicitly stated the role that these had in helping them to understand the record. P01 described their notes as “a fluid document” that helped them in “getting as much information as I can about this object here, through the archival materials I have.” Here, I suggest that the creation of these documents during practice should be seen not only as a way of capturing the researcher’s understanding of the record but as a means of actively knowing the record through writing and other productive activities.

For example, P07 was taking notes on an archival folder that comprised correspondence regarding the loan of artworks for the European art show that they were researching. In the digital document they used for note-taking, they sought to capture the folder as a whole through the use of headings and distinguished information from individual records by summarising each point of interest as separate bullet points. As the folder largely contained correspondence, P07 was then able to follow this same formula for summarising each individual record: making a note of the date of the letter; who it was sent by and to whom; and if available, the archival reference number. They proceeded to summarise the main point of each letter as it was of interest to them. In taking these notes, P07 enacts the record in such a way as to draw attention to what matters to them and their own research. The formulaic manner of P07’s notes suggests that while their approach may be unique to them, it also follows an established routine that they are familiar with. Other aspects of P07’s routine – such as noting the date, key individuals, and archival reference number – were evident among other participants’ activities and are likely to reflect established practices of referencing among humanities disciplines.

At times, traces of more specialised practices were evident within participants’ work. Although most participants worked with textual records, P01 conducted a visual appraisal of photographic records during the first observation. A series of featherwork artefacts held in a museum collection formed the heart of their research, rather than the archival material. The photographic records they used during the observation were also held by the same museum as part of its archives and showed individuals wearing similar featherwork items to those P01 had chosen as their case studies.

For most of the observation, P01 worked within a Word document to which they had already added the individual photographic records “for the sake of kind of ease of looking through them”, alongside the accession numbers of the photographs themselves (see Figure 9). The visual appraisal they conducted comprised of a form of close-looking, examining the photographs in detail before adding their notes underneath the image in the Word document. These comments largely consisted of a short description of the photograph in question, to which P01 identified particular features from their own knowledge, including individual species of bird used within the featherwork as well as specific items

within the museum collection they were familiar with that bore a resemblance to the items in the photographs.

As with P07, these notes provided an opportunity for P01 to define the records according to their own interest in them. However, within P01's notes it is evident that they also drew upon conventions from a number of disciplines, including biological classification and museum documentation practices. For example, when identifying bird species P01 was careful to italicise the scientific names of the birds and capitalise the first word – the genus – in each name, at times going back over their notes to add this detail. Likewise, the inclusion of the photograph's accession number – and the accession number of the associated item – demonstrates conventions adopted from museum documentation practices. This resulted in an interpretation of the record captured in P01's notes, that stemmed not only from their own interests but was likewise shaped by the convergence of a number of different practices that P01 was familiar with.

Creating new documents through note-taking was therefore an important part of processing information from the record for both P01 and P07. In taking notes, it helped these researchers not only to highlight the information that was relevant to their own work but also allowed them to align it with their own personalised approaches to their research or disciplinary ways of working. This required the integration of a number of different activities: as well as note-taking, which has been highlighted here, reading, comparing, and other interpretive activities that were facilitated by the act of creating a new document.

For the majority of participants, reading formed the core of their analysis, which usually required little work beyond configuring the record on screen before they were able to use them. However, it was necessary for several participants to undertake “pre-analytic” tasks (Given and Willson, 2018): for example, through *transcribing* materials. Some participants used this to facilitate traditional methods such as reading (P04); while others had to transcribe the record in order to enable the use of digital tools for novel methods of analysis (P05, P06). Such transcription rarely created an exact copy of the record's text, but transformed the record into a new document capable of supporting the researcher's intended analysis.

An example of this can be seen in P05's work, which incorporated a subtle transformation of the record that prioritised some parts of the record over others. They were working with census records from Spain, in the form of individual census forms bound into a series of large folios. Due to the possibility that these records contained personal details of living individuals, P05 had not been permitted to photograph the records. Therefore, in order to be able to continue working with the

census information P05 had had to transcribe the data from the census records into a digital spreadsheet during their visit to the archives.

P05 described how they had attempted to enter as much of the data as possible into the spreadsheet, while noting that, “I didn’t try to recreate the visual order. I just tried to create the sequential order of the data.” Having the data from the census records in the form of a digital spreadsheet allowed P05 to sort the data according to what research questions interested them. For instance, P05 was particularly interested in questions of identity and migration: having the census records represented as a spreadsheet enabled them to focus on these features by reordering the data according to census questions around birthplace and nationality. The decisions taken by P05 during such activities are thus a key part of their research and should be seen as integral to the meaning generated from these records.

In creating a new artefact from the record, participants inevitably ended up with a version of the record uniquely enacted through their own ways of working. In researching the history of their family name P04 worked with various record formats, some of which were written in an extremely cursive hand. As such, P04 reported that they often sought to produce full, typewritten transcripts of the manuscripts they were working with because “it’s easier- it’s much quicker to read through typescript. because you can get a sense of the whole paragraph much more easily.” However, the resulting transcript was not an exact copy but included a slightly modernised version of the text to make it easier to read: for example, “sayeth” might be updated to “says”.

In addition to altering the text to suit their needs, P04 also *annotated* the transcript in various ways. One example of this was the use of angle brackets to denote where the text was split between separate photographs taken in the archives (Figure 10). The record P04 worked with during the observation was a multi-page deposition from chancery court cases held by The National Archives, UK. Following common practices of digitisation as mentioned above, P04 had taken photographs of each page of the record and named each image according to the archival reference code and the page number. The use of angle brackets thus provided a reference to their own images, as well as incorporating the structure of the record by reflecting the page breaks in the original document. In this sense, P04’s transcript of the record not only reproduced the structure of the original record but also their own practices in working with the record. It incorporated far more than the text alone and thus can be seen as actively generating the meaning of the record for the researcher.

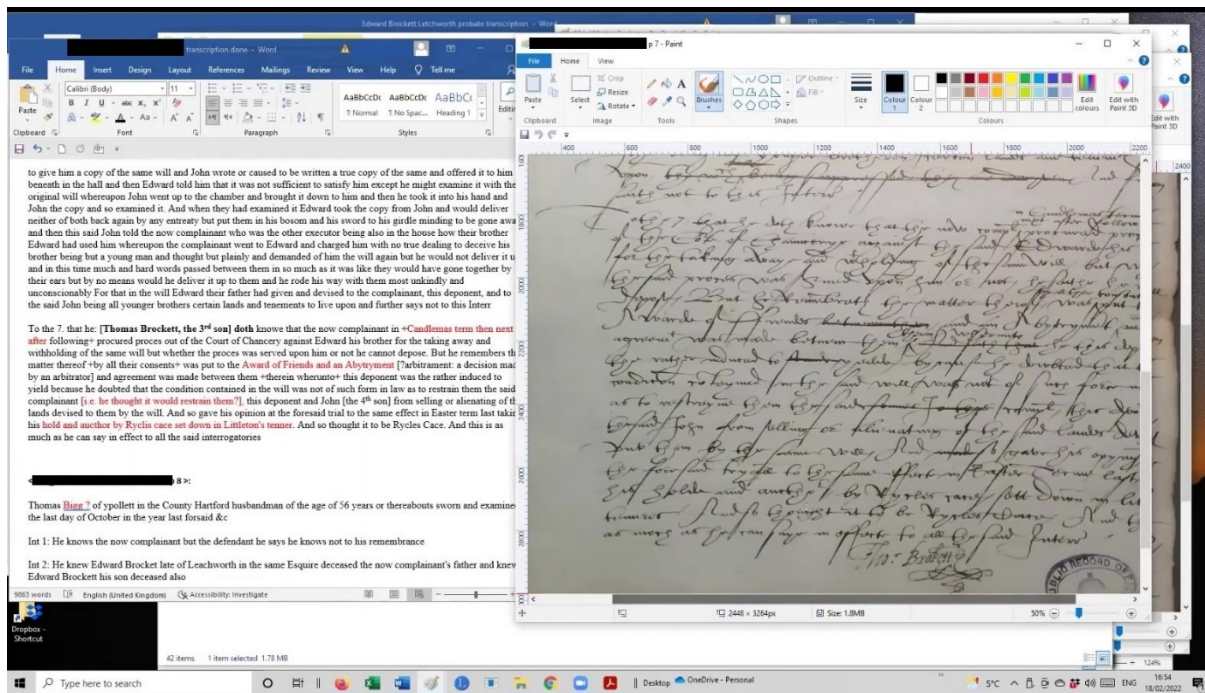


Figure 10 Screenshot of P04's screen, showing their transcript on the left and the record on the right. Note the break in page near the bottom of the left window, (record number redacted).

Though varied in their approaches, both P04 and P05 demonstrate how at times the researcher needed to undertake additional work to make the record actionable and relevant to their work. In creating new documents through transcription, each reproduced the record in a new format that would allow them to apply their intended analysis. During transcription, the researcher thus enacts a particular understanding of the record through practice that enables and constrains the meaning it is then possible to produce from the records.

Creating new documents supported participants' generation of meaning from the records by enabling the researcher to enact the record in relation to their own interests. Through note-taking, transcribing, and annotating, researchers picked out details from the record that aligned it with their own work, as well as transforming the record into a format that reflected their intended analysis. By capturing this in a fixed format through the creation of new documents, it also shapes any future meanings that it is possible to generate from the record. As such, this can be seen as a reshaping of the apparatus through which the record and archives are enacted: I shall explore the effects of this further in the next section.

5.2.3.2 Creating new documents as a fixed point to work from

Once researchers had created a set of notes or other documents from the original archival records, several participants commented that they would no longer refer back to their digitised copies of the records (P09, P11). Instead, they would work from their notes as a fixed point: either enhancing these notes through activities such as *annotating* or reusing these notes to create further documents or

other artefacts. The use of participants' notes in various later activities suggests that the creation of new documents fits the activity of *assembling* to support the construction of a text (Palmer, Teffeau, and Pirmann, 2009: 22). These resources – and thus, the researcher's interpretation of the record – may ultimately take the place of the record itself in the next iteration of practice, each time producing a narrower and more specialised instance of knowing gained through interacting with the archives in practice. However, as interactions with materials other than the record itself lay beyond the scope of this research, here I focus on how these new documents were created from the archival records with the intention of being used in future.

Sometimes participants created new documents by *assembling* multiple sources of information from archival records and other sources, thus producing an extensive resource to work from. In a second observation carried out with P01, they added references from another archival source – a series of magazine pages downloaded from the British Online Archives – to a master copy of references that they kept in an Excel file. This was an in-depth, comprehensive resource that gathered all of the relevant mentions of featherwork as quotations under several tabs, such as “Costume”, “Museum”, and “Feathers”. They described this resource as, “consolidating what the kind of textual record is, of birds and featherwork from this archive”.

While storing their chosen materials in one place created one such fixed point to work from, creating a new document to capture all the specific references allowed P01 to refine this scope further. This provided an overview of the available evidence, and thus enabled them to further progress their interpretation of this information. For instance, because P01 was able to order these references chronologically they could see how these changed over time:

P01: I try and keep it fairly ordered. [2s] just because as well there's a kind of over er. like overarching interest in terms of how the relationship between the indigenous peoples and the missionaries developed over time which is kind of quite interestingly tracked in the- like over the course of the magazine

The Excel file thus functioned as a complete record of all the evidence relevant to P01's project, as well as capturing the outcome of previous activity (i.e. reading through the records). This could later be used as a resource in P01's work (Nicolini, 2012: 2). Inevitably, this document cannot generate the same meaning as reading through the archives would: using the document rather than the archival record to generate meaning represents a change to the apparatus. Nonetheless, it captures the information that P01 believes is necessary to enact a particular meaning, which becomes anchored in this document. As such, research is shown to progress through these iterative moves: generating meaning during practice, capturing the outcome of this, before repeating this practice with the

researcher's notes, rather than the archival records themselves, to produce a narrower and more specialised meaning each time.

Other participants described how they would continue assembling information in the same documents that they had initially used to take notes, building these up into a comprehensive resource that could be used to support their writing (P02, P08). Many of these participants chose to enhance their original notes, combining these with other primary and secondary sources, as well as their own thoughts. These would all be linked together until the document became "a patchwork of sources" (P08). P02 described this process through their creation of mind-maps when they were working with archival information:

P02: so I'd kind of go through various documents, various scans and things like that. um and. as things jump out at me I'd stick them in under kind of a theme. um. and start to build- it's quite sort of inductive.

Working within the particular conditions of the mind-map, P02 was able to develop a continuous process of analysis whereby they could begin with the record before building out from this particular point. They began by noting down things that jumped out at them from the record and described how they would later build their ideas: starting with the record before adding further ideas and sources to the mind-map to develop these connections, and later generating writing around these. This was partly supported by the mind-mapping software, which allowed P02 to export directly into a Word document and eventually develop their notes into a fully-fledged chapter of their thesis. Such a continuous process of writing closely reflects that described by Palmer, Teffeau and Pirmann as assembling (2009: 22), which ultimately results in the construction of a text.

Likewise, P08 combined quotations, images, and text to create a series of documents that represented a comprehensive record of the sources that they intended to use (Figure 11). Each document captured a decade from their timeline; within the document itself their notes were also ordered chronologically. The final resource consisted of a series of bullet points broken down under headings for each year, each one a note on a particular record or other source. The notes on records comprised the title of the record, as well as a short summary of the record and occasionally direct quotations; the reference to each source was captured separately as a footnote.

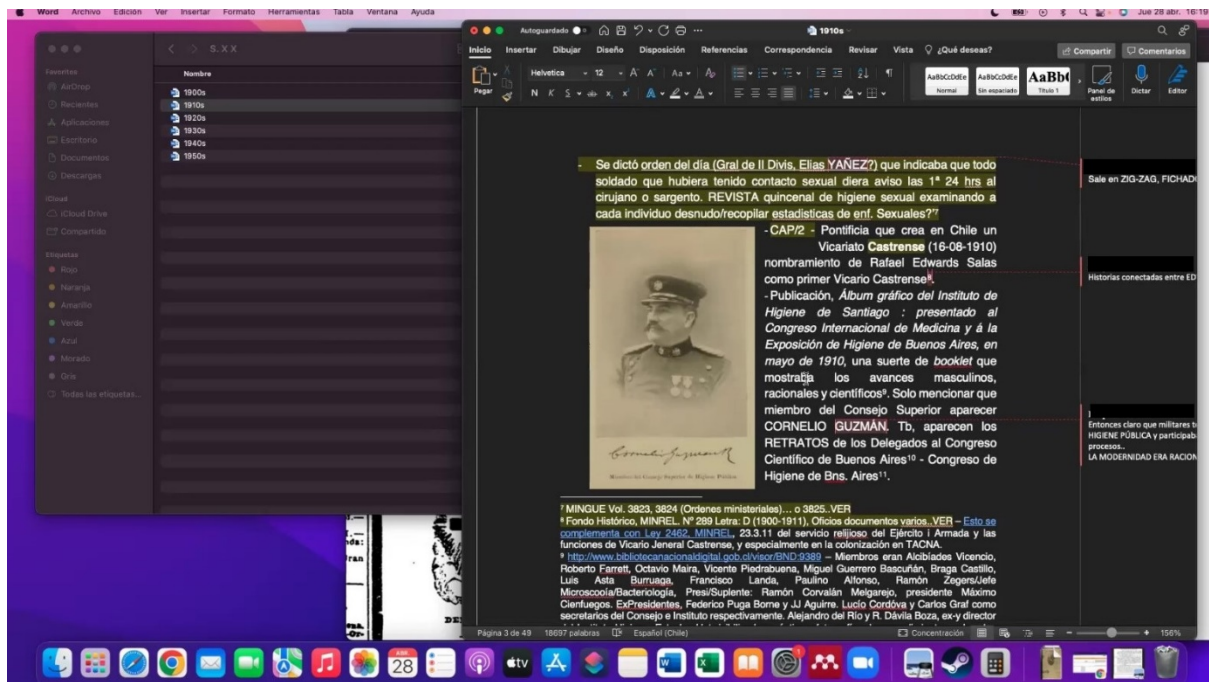


Figure 11 Screenshot of P08's screen, showing their notes. These comprise images, summaries and quotations from records, references and their own thoughts.

Though the summaries of each record formed the main body of P08's notes, additional *annotations* and revisions built this up into a more complex resource that reflected the cumulative nature of P08's research process. For example, P08 would highlight their record summaries in different colours that denoted different themes in their work, such as blue to indicate sources that referred to hospitals. Likewise, by making use of the comments function they were able to add their own reflections on the records while keeping this distinct from any text derived from the record itself.

Such documents as created by participants thus reflect the gradual development of the researcher's understanding of a topic. They provide an opportunity for the researcher to create a single overview of the topic – or subtopics – that comprise their research. Partly information, partly their own interpretation, this creates a narrower focus that can then be applied in further research activities. This provides an opportunity for the researcher to expand relations between the records beyond those maintained by the archives by facilitating easy comparison between the different research materials that they draw on.

Creating new documents, then, can also anchor a particular way of knowing the record that researchers can utilise in future research. Assembling all their sources into a single, comprehensive resource provides them with another view of the information that is tailored to their research. Likewise, being able to continuously work in their notes, revisiting them to add further sources, comments or reflections, expands the relations that the researcher is able to draw on to generate a meaning from the records while simultaneously narrowing this to fit the researcher's interests more

closely. Although working from such personalised documents cannot generate the same knowing that reading through the records does, by extending the relations of materials beyond those kept within the archives the researcher is able to shape the apparatus is used to generate meaning. This enables them to know the record in new ways and thus generate novel insights through their research.

5.2.3.3 Summary: Creating new documents from archival records

Creating new documents from archival records both represented a unique way of knowing the records during practice, as well as allowing participants to capture the outcomes of this practice for future use. New documents were most often created by writing, such as note-taking or transcription, or the assembly of multiple sources into a comprehensive resource for the researcher. Through the creation of these documents the researcher aligns the record with their own personal ways of working.

Nonetheless, the use of personal notes and other such documents cannot generate the same *knowing* as, for example, reading through the archival notes. Instead, it allows the researcher both to extend the relations through which they know the record beyond those captured by the archives as well as narrowing the meaning to one that more closely reflects the researcher's interests. Through this subtle change to the apparatus the researcher is able to develop new insights through the use of archival records in their work.

5.2.4 Summary of findings

The findings discussed here demonstrate three major activities that the researcher must undertake in order to produce the record and interpret its meaning beyond the archives. Through both **storing** and **configuring the record**, as well as **creating new documents from archival records**, the researcher undertakes an iterative and cumulative process by which they come to know the record. During this, the researcher actively generates the meaning of the record through these activities, producing the archives in such a way that they "enact what matters and what is excluded from mattering." (Barad, 2007: 148).

Read in conjunction with the findings from Chapter 4, *Within the Archives*, these activities demonstrate the different activities that are undertaken *ex situ* as opposed to *in situ*. In *situ*, the researcher enacts the archives in such a way that allows them to know the records in the archival context in order to identify and capture records in such a way that enables them to work with these later. *Ex situ*, the researcher both enacts the archival relations to understand the records through those relations preserved by the archives as well as drawing on relations beyond those maintained by the archives to generate meaning from the record in novel ways. Thus the apparatus is shown to be fluid, enacting the archives in different ways for various purposes, united by the researcher's actions that comprise a continuous research practice within and beyond the archives.

5.3 DISCUSSION

Through the findings presented here, I have demonstrated how researchers generate the meaning of the record in practice. I do so through discussion of three major activities: **storing, configuring, and creating**. Each of these intersects with activities previously discussed both in the wider literature on humanities research practice, including but not limited to *reading, note-taking, comparing, relating, annotating, and transcription* (Anderson, Blanke, and Dunn, 2010; Brockman et al., 2001; Palmer and Neumann, 2002; Palmer, Tefteau, and Pirmann, 2009; Unsworth, 2000); as well as those activities of *organising, reading, note-taking, and assembling* that have been discussed specifically in relation to the archives in Chapter 4, *Within the Archives*. Nonetheless, the three activities highlighted in this chapter have previously received relatively little attention for their role in how researchers come to know the record.

I begin this discussion by considering how the activities identified through these findings are particular to research undertaken beyond the physical boundaries of the archives. I then move on to examine how the archives are enacted through the activities of storing and configuring the records; before considering how through both these activities, as well as creating new documents, the researcher intervenes in an archival representation of the record to generate meanings that are relevant to their work.

5.3.1 Enacting the archives ex situ

The majority of researchers who took part in this study had self-digitised the records that they were working with during an in-person trip to the archives. This suggests that they meet Trace and Karadkar's definition of a *ex situ* mode of research (2017: 500), whereby researchers largely treat the archival visit as a data gathering exercise. Despite proposing this as a distinct style of research, Trace and Karadkar's work focuses on the design of a tool to support archival research and as such primarily discusses activities undertaken *within* the archives.

Therefore, these findings add to an understanding of an *ex situ* mode of research by focusing on those activities that the researcher undertakes to make the records relevant and actionable *beyond* the archives. Furthermore, this complements the findings from Chapter 4, *Within the Archives*, that suggested activities undertaken within the archives were oriented towards further work that would be carried out beyond the archives. As an *ex situ* mode of research becomes increasingly common (Milligan, 2020; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017) this suggests a need to broaden our focus when aiming to understand how people use archives, as much of their engagement may take place outside what were traditionally considered to be the boundaries of the archives.

Through activities such as **storing** and **configuring**, the researcher continues to enact the archives when working ex situ. Storing records according to their archival arrangement does not simply provide convenient access to the researcher's chosen materials, but allows them to maintain the potential for enacting these records as part of the archives. Likewise, through configuration the archival arrangement is enacted through the use of generic software such as PDF readers and photo viewers that allows for easy movement from one record to another. In both storing and configuring records, then, the researcher seeks to enact the relations between records that produce the record as part of the archives and thus generate a notionally archival meaning.

In doing so, the researcher seeks to replicate the archival arrangement to the extent that it allows them to engage with the records as they would "in situ". This suggestion is supported by the finding that researchers only replicated the archival arrangement at the lowest level and not further up the archival hierarchy as a broader series or collection. While similar findings have been reported in previous studies (Antonijević and Cahoy, 2018: n.p.; Trace and Karadkar, 2017: 501) the findings I have presented here extend this to understand how such storage is utilised by the researcher in practice: for example, by undertaking actions such as configuring records in a PDF file or using a photo viewer that allows them to click through from one page to the next. My position here is supported by similar findings by Antonijević and Cahoy (2018), one of whose participants commented that they would only maintain an archival arrangement for those records collected in situ as opposed to those downloaded from an online repository, as the latter had not been subject to the same research process. This suggests that in enacting the archives ex situ, the researcher seeks to reproduce the archives to the extent that it can activate a similar meaning as was produced in situ.

Nonetheless, in enacting the archives ex situ the researcher does not replicate the archives exactly. As such, this represents a situated and partial form of knowing (Haraway, 1988) that can only be understood if we accept the researcher as part of the archival apparatus. As described in Chapter 4, most researchers that participated in this first study had acted selectively when gathering records from the archives. Although the ways in which researchers attended to the record *within* the archives meant that this knowing was likewise partial, in the archives the researcher has the potential to access all records within a folder to develop an understanding of the relations between them. Conversely, when enacting the archives ex situ the researcher has already narrowed the selection of materials that they can draw on to generate a meaning from the records.

Thus, the researcher's attendance to "what matters" (Barad, 2007: 148) both within and beyond the archives can also be considered an integral part of the archival apparatus. This apparatus then enacts a cut that selectively reproduces the archives whilst also enacting the record in relation to their own

work. In this sense, the apparatus *ex situ* is altered from that *in situ*; and thus by working *ex situ* researcher's ways of knowing are changed and the potential meanings that can be produced from the record narrowed. As research is increasingly conducted *ex situ*, it is important to understand how the researcher enacts the archives for themselves as this will have broad implications for the types of services and tools that are provided to help researchers in their work.

5.3.2 Moving beyond the archives?

When working with records beyond the archives, researchers also introduced new sources into their work as part of temporary configurations that disrupted the archival arrangement. In doing so, they expanded the apparatus beyond those relations preserved by the archives in order to enact a different meaning from the records. While such relations lie beyond the traditional boundaries of the archives, they can nevertheless be seen to form part of the researcher's apparatus for knowing the archives.

For instance, in **storing** records, researchers did not replicate the archival arrangement beyond the lowest level of the hierarchy: i.e. grouping records into folders (Meehan, 2014: 70). Instead, researchers applied common categories such as people, themes, and chronology, which are reflected in the wider literature as common intellectual access points for archival materials (Kumpulainen et al., 2020; Elena et al., 2010). Likewise, at the highest levels of storage participants often organised materials by project, reflecting common categories found to organise records in previous research (Antonijević and Cahoy, 2018: n.p.; Trace and Karadkar, 2017: 501). This provides some indication of how researchers see the records as part of a broader network of relations that extends far beyond the archives.

How researchers chose to store records facilitated further action through **configuring** the record, during which participants enacted the record through its relations to both archival and non-archival sources. As well as enacting the archival arrangement, split-screening was a common approach to allow for researchers to *intervene* in the record (Hacking, 1983). This could be used coordinate other activities reflected previous literature from both Information Science and Digital Humanities, such as direct comparison with other sources (Unsworth, 2000) or note-taking (Brockman et al., 2001: 7; Palmer and Neumann, 2002: 99-100; Palmer, Teffeu, and Pirmann, 2009: 30-31). While the importance of such activities has been previously discussed in this literature, the focus on configuring I have presented here foregrounds the material nature of such activities. Configuring the records as material arrangements is thus essential to facilitating further action on the record; it is through the intertwined nature of multiple activities in practice that the researcher is thus able to enact the record through both archival and non-archival relations.

Such interactions often resulted in the researcher **creating** new documents, both as a form of knowing and to capture their thoughts for future use. This was commonly achieved through activities such as writing – namely note-taking – as well as assembling multiple sources into a text. Palmer, Tefteau, and Pirmann have previously discussed the importance of activities such as assembling (2009: 22) through which the researcher moves away from their (textual) sources and towards the creation of a text. However, these findings showed how researchers were just as likely to use images of both photographic and textual records as well as their own notes in this process. While this partly reflects the blurred distinction between image and text when using digitised sources (Sukovic, 2008: 272-273) it also suggests that these documents produced by the researcher should be seen as material arrangements that are essential to *knowing* in practice. Just as reading enacts a particular meaning from the record, the combined process of reading and viewing their notes allows the researcher to enact relations between both sources and their own research that were essential to how they understood the record(s).

Creating new documents not only supports knowing in practice but also creates a new resource for the researcher to use in future practice (Nicolini, 2012: 2). As when researchers select which records to capture in the archives, choosing what information is relevant to their work and reproducing this in another document again demonstrates how the researcher enacts what matters from the record (Barad, 2007: 148). Thus, in producing and reproducing the record each time the researcher enacts a cut that further narrows the meaning generated from the records for their particular purposes.

Although this later reuse of research artefacts was not directly observed, the notes and other artefacts that researchers used during the observations showed evidence of further interaction: such as adding their own reflections on the assembled sources. Likewise, some researchers commented that they would continue to work directly in their notes, building these up into a comprehensive resource for writing. Such findings support Palmer, Tefteau, and Pirmann's suggestion (2009: 22) that writing continues throughout the research process. As these interactions no longer involve direct use of archival records such activities lay beyond the scope of this study; however, these findings provide a strong basis for future direction to be undertaken in this area.

5.4 CONCLUSION

This study has identified three interpretive activities particular to research conducted beyond the archives itself: **storing archival records**, **configuring the record**, and **creating new documents**. Through these activities, the researcher enacts the archives ex situ to generate a meaning from the record. In storing archival records, researchers sought to both reproduce the archival arrangement while assembling research materials in one place to begin making connections with sources beyond

the archival records. In configuring the record, researchers enacted the archives through practice, in order to read the record as part of the archives; yet they also simultaneously facilitated intervention in the record by coordinating other activities to interpret the record in relation to their own work. Finally, in creating new documents, researchers undertook knowledge creation through note-taking and other activities, which highlighted the relevance of the record to their own work; furthermore, this activity produced new documents as an outcome of practice, which researchers indicated they would use in place of the records in future research activities.

While these activities differ from those undertaken within the archives as discussed in Chapter 4, they should be seen as part of a continuous research practice that blurs the boundary between what work is undertaken within and beyond the physical setting of the archives. How participants gathered materials within the archives fundamentally shapes their ability to enact this structure elsewhere. Likewise, the researcher's intention to work with the records in a particular way beyond the archives shapes how they collect materials from the physical or digital repository. These findings thus complement the findings from the first study and likewise extend Trace and Karadkar's (2017) understanding of *ex situ* research to provide evidence of how activities undertaken beyond the archives form part of a continuous research practice.

Through their research practices, then, the researcher extends the apparatus beyond purely archival relations to incorporate new resources and activities to enact the archives. This challenges our notion of the traditional boundaries of the archives and suggests a more fluid approach is necessary that acknowledges how these boundaries are enacted in practice. One way of doing so is to recognise the archives as an apparatus that enacts a particular cut: while the researcher's cut through the archives often focuses on archival relations and so aligns with archival practice, at others the researcher expands the relations through which the record is enacted to include those beyond the remit of what is captured by the archives. Ultimately, this allows the researcher to move away from a notionally archival representation of the record and towards a novel insight that they can apply within their own work.

6 BEYOND THE ARCHIVES: EXPANDING THE ARCHIVAL INTERFACE

6.1 OVERVIEW

In this chapter, I focus on the interface as a major focal point for the entanglement of human and non-human actors that enact the archives through the practices of humanities researchers. Again, I use entanglement here to refer to how such entities cannot pre-exist their intra-action, but are mutually constituted in relation to each other (Barad, 2007: 33). In doing so, I present a reassessment of the data collected during the second study through video analysis. This analysis allows me to focus in greater detail on activities such as reading and note-taking, which have been highlighted both in this work and previous research into humanities research practice (e.g. Palmer and Neumann, 2002; Palmer, Teffeau, and Pirmann, 2009) as integral ways of knowing in humanities research. This approach also enables me to further emphasise how the researcher's practices are situated within the material conditions of the environment in which they are undertaken: in this case, the archival interface.

This more specialised focus was chosen for its relevance to how researchers presently undertake archival research. While the literature has noted the growing popularity of an *ex situ* mode of research, the findings discussed in Chapters 4 and 5 demonstrate how this shifting of activities beyond the archival repository goes further than this, to shape how the archives is enacted by the humanities researcher. Due to the use of digitised records to facilitate this work, the interface has become an important site in which the researcher carries out their work. While the digital comprises a significant part of the interface discussed here, I consider a more expansive understanding that is inspired by Lucy Suchman's reflection on the interface as "a simulacrum of the site, not in the sense of a substitute for it but rather of a place in which to work, with its own specific materialities, constraints and possibilities." (Suchman, 2006: 279). In this manner, I consider the archival interface – as examined here through the researcher's own personalised research environment – as *a specific place in which to work*.

This differs from traditional conceptualisations of the interface, both in HCI and on the rare instances it has been touched on in Archival Studies. Within HCI, discussion of the interface has its roots in an engineering environment (Grudin, 1990: 269-270) that has tended to focus on eliciting requirements for a single user interacting with a system via the computer screen (Myers, Hudson, and Pausch, 2000). This can be seen to encapsulate an understanding within HCI that the interface is somehow separate from end-users (Kirsch, 2019). Likewise, this mirrors the prevailing assumption in archives that has often drawn a line between the archives and the researcher (Menne-Haritz, 2001). However, the

findings presented throughout this thesis so far have demonstrated how archival interactions are not of this nature: therefore, this separation should not be used to characterise them.

It is perhaps unsurprising, then, that although in Archival Studies the interface has received little attention, where it has been considered it has drawn on a traditional conceptualisation of the interface as multiple, individual points of contact between the researcher and the archives. This can be seen in studies of both traditional interfaces, including the archivist and finding aids (e.g. Duff, Craig, and Cherry, 2004; Johnson and Duff, 2005), as well as computer-mediated interfaces, such as TNA's online catalogue, Discovery (Ramsay, 2018). A rare example of a more expansive consideration of the archival interface is provided by Margaret Hedstrom, who defines this as "a tangible set of structures and tools that place archival documents in a context and provide an interpretative framework." (2002: 22).

Nonetheless, Hedstrom's definition, like other discussions of archival interfaces, generally focuses on **representation**. By representation, I draw on philosopher Ian Hacking's (1983) discussion of representing and intervening to refer to representations as an idealised means of capturing the world around us, created in order that we may intervene in some way. In Archival Studies, archival representation refers both to the *practices* of arranging and describing records, as well as the *systems* resulting from those activities, including traditional interfaces such as finding aids (Yakel, 2003: 2). We can go further to claim that archives themselves are representations: an idealised view of the processes and events that produce records and allow them to act as evidence. While archives have generally accepted their role in shaping the archives through representation and other archival practices (e.g. Duff and Harris, 2002; Meehan, 2014: 81; Yakel, 2003), the role of the researcher's intervention in such representations to create the archives for themselves has been little examined thus far.

Therefore, I would like to offer an alternative consideration of the archival interface that places the emphasis on **intervention**. In order to make the records actionable in their own work, researchers must intervene in the archival representation: whether by drawing on the archival arrangement through activities such as storing and configuring records or creating new documents through which to understand the record (see Chapter 5, *Beyond the Archives: Enacting the archives ex situ*). To paraphrase Suchman, it is through such interventions that the archives are produced, reproduced, and transformed through ongoing work across particular occasions and multiple sites of use (2007: 268-269).

In developing an alternative view of the archival interface that emphasises interpretation, rather than representation, I hope to complement existing perspectives by offering an in-depth understanding of

what it is that researchers *do* with records. By providing a fuller, richer account of how the researcher's activities are carried out within the interface as a particular simulacrum of the archives as "a place in which to work" (Suchman, 2006: 279) I suggest this as one way in which we might better integrate the researcher within conceptualisations of the archives, thus addressing RQ3, *How might the practices of humanities researchers be understood as part of the archives?*

The findings here are split into three sections, two of which focus on individual activities to consider how the archival interface is enacted. The first section considers how the researcher engages their selected archival materials during **reading** to interpret the content of the records. The second section then turns to how the researcher uses the interface to reorientate this information to their own work, focusing on the activity of **note-taking**. Finally, the third section unites these two activities in a final example that considers holistically how the interface is utilised. Again, through these examples, my aim here is to place the weight of thinking not on representing archival information, but how materials are made relevant in and through action.

6.2 FINDINGS

6.2.1 Enacting the interface for reading

First, I turn to how the researcher enacts the interface to engage with the record for reading. Reading is a primary activity involved in analysis for humanities researchers (Palmer, Teffeau, and Pirmann, 2009: 19-21; Palmer and Neumann, 2002: 99). While the use of e-texts has been the focus of prior studies (e.g. Sukovic, 2008; Talja and Maula, 2003; Toms and O'Brien, 2008), here I want to consider how, through reading, the researcher uses the interface to engage the record in a particular way.

I examine three clips that look to how the researcher enacts the interface when reading archival material. In 6.2.1.1 *Engaging with the record's content*, I consider how the researcher is able to activate a digital image as a record when working beyond the archives. In 6.2.1.2 *Interpreting the record's text*, I examine how when there are barriers to engaging with the record's content the researcher attends to the record on another level to make the content usable. Finally, in 6.2.1.3 *Enacting the archival arrangement*, I turn to how the researcher is able to recreate the experience of reading the record in the broader context of the archival folder. Together, these work to enact the interface at different levels to allow the researcher to engage with a nominally archival representation of the record beyond the archives.

6.2.1.1 Engaging with the record's content

As argued by Bannon and Bødker (1991), it is often not the interface that we seek to engage with but some work that we are attempting to accomplish *through* this. For researchers working beyond the archives, it was most often the **content** of records that they were interested in: the information carried by the records that provided evidence of historical processes or events.

Whether downloaded from an online repository or photographed within the archives itself, the records were usually available to the researcher as individual digital images, each representing one page or a double-page spread from the record. Due to this format, the interface had to be enacted in such a way that allowed the researcher to treat the image as a record and interpret its content through reading.

P09 had photographed each double-page spread of the multi-page record they were working with as a single image. On each page were a series of chronological entries demarcated either by date and/or a short line across the page. When interacting with the record, P09 zoomed in on one half of this double-page in order to make the text readable. Due to the size of the screen this also had the effect of obscuring much of the record and leaving P09 with only a small window onto the text itself (Figure 12). Therefore, to read through the record and interpret its content, P09 had to activate the interface in a manner that overcame this disruption to their view of the record.

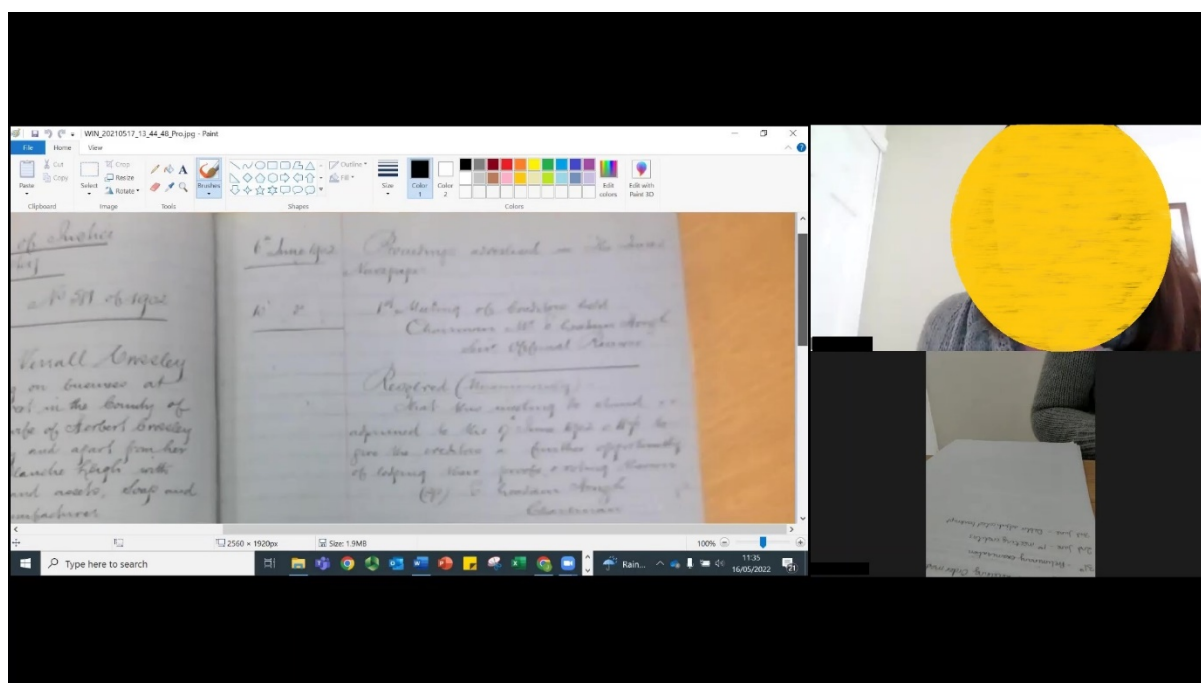


Figure 12 Screenshot of my screen, showing P09's screenshare on the left and their camera video top right. The physical paper on which P09 is taking notes is visible via the second camera, bottom right.

Screenshare	Main Camera (top right)	Second Camera (bottom right)
1 using the slider on the right hand side scrolls down the image of the record (10s)	<i>eyes widen slightly</i>	
2 reaches about halfway down the page and returns to the top		
3 reaches the top of the page again		
4 pauses at the top of the page		
5	<i>turns to right and down as they begin to take notes</i>	<i>moves right hand onto paper and begins taking notes</i>

During the clip captured in the transcript, P09 not only tracks across the page with their eyes but coordinates this movement with a continuous repositioning of the page to keep the next section of text in sight. The sidebar remains highlighted throughout the clip, showing that P09 maintains their grip on this as they read. This allows them to match the speed of movement to the speed at which they read: by constantly moving the page, P09 experiences the record not as a series of limited views of an image but as one continuous text. In doing so, P09 is able to activate the interface in a way that overcomes the disruption to the record posed by the limited view offered through the screen.

Through this interaction, the act of reading becomes as much a part of the interface as the software and hardware that make this intervention on the record possible. It is the actions of P09 that enables the record to be read *as* a record; yet the way the record has been captured as an image and the size of the screen set the conditions for the interaction, necessitating their continuous movement to facilitate reading. Likewise, reading requires not only visual engagement but other aspects of P09's body as they must engage with the hardware (e.g. the mouse) to continuously move the text on.

As such, rather than a single screen or even a window through which the record is viewed, the interface can be understood as this dynamic moment of encounter between researcher, record, technology, and action. Through reading, the interface is thus enacted in a particular manner and allows the researcher to generate knowledge from the record as an archival source. As I shall demonstrate, the interface understood from this perspective is comprised of many of these moments of interaction that allow the researcher to produce, reproduce, and transform (Suchman, 2006: 269) the archives for their own purposes.

6.2.1.2 *Interpreting the record's text*

Bødker (1991) notes that it is often when there is a problem or difficulty that we become aware of the interface. I would like to offer an example here that instead considers how in these moments the researcher shifts their awareness to enact the interface in a way that makes the record workable in a different manner. This points to the messy, multiple layering of action that comprises the interface between the researcher and the archives.

While it was often the content of the record that researchers sought to engage with, the condition of the record itself could necessitate that the researcher undertake pre-processing activities such as transcription to make the record usable in their work (Antonijević and Cahoy, 2018; Given and Willson, 2018). For P04, it was the illegibility of the record's **text** that caused them to shift their awareness to interpreting the record word-by-word to produce a transcript that would facilitate later engagement with the content of the record. A self-confessed poor typist, P04 chose to create these transcripts via dictation. Reading the record aloud, P04 would record this interaction using inbuilt software on their phone to transform their speech into text. Working in short sections they would then transfer these fragments to their computer later on, emailing the sections of the text to themselves before combining these into a Word document to edit (Figure 13).

Speech	Screenshare	Main Camera
1	moves the slider to the far left of the screen	
2 eleven		
3 he does not know that	begins to move the slider from left to right	
4 he does not know		<i>reaches head forwards</i>
5 that. the now defendant did at any time make		<i>nods slightly and leans head back again</i>
6 pause (6s)		
7	pauses side-to-side movement of screen but continues to hold slider (5s)	
8		<i>leans well towards the screen</i>
9 it appear	resumes the side-to-side movement, slowly at first	<i>leans back slightly but remains closer to the screen</i>

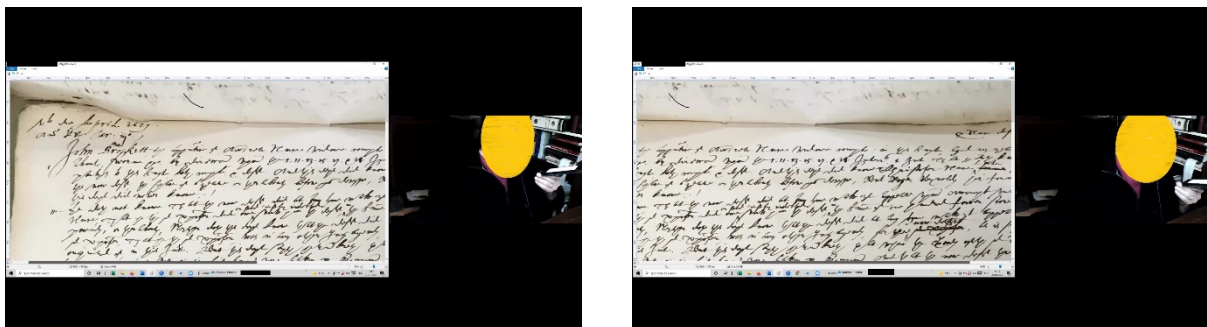


Figure 13 Two screenshots of my screen, showing P04's screenshare on the left and their camera video on the right. The left hand image shows P04 at the beginning of the clip; on the right, we see P04 lean towards the screen (line 8).

As with P09, P04 facilitates this process by coordinating their actions to enable continuous movement through the record. Throughout this clip, P04 keeps the phone close to their face to capture their speech; with their left hand holding the phone, their right hand is free to remain on the mouse. This enables P04 to select and hold the slider while working through a short section of text. They then use

this grip to track the record from side-to-side, allowing them both to follow the text on screen and reveal it as they move back and forth across the image.

While both P09 and P04 could be described as reading the record, P04 is focused on interpreting the actual text of the record rather than its content. This can be seen in their disjointed speech as they work through the record. Long pauses (e.g. lines 6-9) in both P04's speech and the continuous side-to-side motion signify their attempts to decipher particular words. These pauses are often accompanied by P04 leaning towards the screen: a movement which can be seen both as an attempt to enlarge the size of the text and as a signal of greater focus on a particular section of the record. In doing so, P04 also further isolates the word from its surrounding context: as they lean towards the screen their awareness is focused on an ever smaller section of text. Yet P04 does not release the mouse at any time during this clip; nor do they change the size of the image once they have begun. This suggests that these pauses are not to be read as disruptions to reading the text, but as an integral part of it, as the pauses are integrated within the overall rhythm of the task. This demonstrates how even at the level of knowing what a single word says, P04's understanding of the text is co-constituted in how the interface is being enacted.

The gaps in P04's speech can also be read as an awareness of how this present performance will affect their later engagement with the record's *content* via their own transcription. When reading the record aloud, these pauses appear as a notable disruption to the text; conversely, in the resulting transcript these pauses are not captured. This intention can also be seen later in the transcript where P04 cannot decipher a word: here, they substitute 'blank' for each word that is illegible (line 22). While this *is* captured within P04's transcript, it works to preserve the flow of the text and thus makes it easier to interpret the overall meaning of the record. Therefore, how P04 performs the activity of reading is entangled not only in the interface, but in both current and future ways of knowing and thus generating meaning from the record.

	Speech	Screenshare	Main Camera
20	sorry that he or said		<i>looks slightly to the left and stretches neck forwards</i>
21	pause (4s)		<i>leans well towards the screen</i>
22	blank blank unto this defendant the sum of 100 and 4 score and 13	moves screen slightly back towards the left	
23	pause 	reaches right hand side of the frame	
24		moves back towards left hand side of frame	<i>looks towards the left hand side of the frame</i>
25	pounds or thereabouts		

As this example shows, when encountering a difficulty in their task – reading through the record – P04 does not necessarily become aware of the interface, but turns their attention to another level on which the record can be engaged. In enacting the interface to engage with the text, rather than the content of the record, P04 acts in recognition of the relationship between this intervention and their later intended activity. In this sense, although separated temporally, these multiple layers of intervention can be read as part of the broader interface between the researcher and the archives.

6.2.1.3 *Enacting the archival arrangement*

Through the examples discussed above I have shown how the record is enacted at the level of **content** and **text**; here, I expand my focus to consider how the researcher enacts the interface to read the record as part of the archives. Specifically, I will look to how the researcher reproduces the archival **arrangement**. As noted in Chapter 5, the process of digitisation often disrupts the archives by flattening the hierarchical arrangement of records and instead represents the records as a stream of individual images. Though storage provides a means of *representing* these as a collection, it is only through the researcher’s *intervention* on the records that these are then enacted as part of the archives.

To see how this occurs in practice, I return to the example of P07. Following their visit to TNA, P07 uploaded their photographs of the records to their cloud storage and organised these by location and their respective archival folders. In preparation for the observation, I asked P07 to select a task to carry out during the session. They chose to re-read through a folder of archival materials and downloaded all the images from a single folder in advance of our session. P07 described this as a routine part of their work as they found that the images were often of a poorer quality when viewed online than if they downloaded them to their laptop first.

Screenshare	Main Camera
20 zooms out of the record until the whole page is visible	
21 moves on to next page	
22 reorientates record from horizontal to vertical	
23 zooms in to the record	
24 begins slowly scrolling down the page (2s)	
25 stops partway down the page	
26 tracks the text of one paragraph with cursor (5s)	
27 resumes scrolling down the page (2s)	
28 pause (5s)	
29 resumes scrolling down the page	
30	<i>frowns and leans towards screen</i>
31 tracks final few lines of the page with cursor	
32	<i>leans away from screen</i>



Figure 14 Three screenshots of P07's screen as they transition from one record to the next. In the final image the toolbar is visible as they reorient the image.

In this clip, P07 uses the inbuilt software available on their laptop to read through the archival folder. Elsewhere, they referred to this as a “highlighted view” of the records: this view expands the image of the record to fill their screen, showing only the record on a plain black background. It also temporarily hid other windows visible on screen – including P07’s notes – as well as enabling P07 to move more easily from one image to the next. While P07’s treatment of the individual record draws on similar actions as P09 – coordinating their reading to the movement of the image on screen – it goes beyond this to facilitate this continuous movement between records as well.

Likewise, as with P09’s enactment of the individual record, reading the record within this broader context requires constant maintenance on the part of P07. When working in the archives, to capture the full record P07 had often photographed the records in landscape. This meant that when working through the folder, as in this clip, they intervene to reorient the record each time and continue reading (Figure 14). Yet as with P04, the smooth integration of this action within their work – and apparent lack of irritation caused by the interruption – suggests that this has become an integral part of how the interface is enacted to facilitate P07’s research.

To engage with the record at the level of the archival folder, then, P07 must continuously enact the interface that allows them to generate a meaning from the records at this level. P07’s view of the “archival” collection is inevitably partial, as it is shaped by the decisions that they have made when working within the archives to take certain materials and leave others. Nonetheless, through activation of the archival structure that P07 has replicated in storing the records, they are able to intervene at the level of the archives and generate meaning from the collection as a whole.

6.2.1.4 Summary: Enacting the interface for reading

Through these examples I have shown how the researcher enacts the interface to engage with an archival representation of the record beyond the archives during reading. This occurs at three different levels. Firstly, at the level of the text, should the record not already be legible in a way that allows it to be read through. Secondly, at the level of content, whereby the researcher reads through

the record in order to determine its (self-contained) significance. Finally, the third level on which the record is enacted through its relation to the archives.

While this interface between the researcher and the archives is already shaped by previous activities – e.g. those undertaken within the archives – during reading the researcher still largely engages with an archival representation of the records. By this, I mean that the researcher seeks to enact the record(s) in a way that responds to what is materially preserved by the archives. Nonetheless, this is shaped by the interface as a particular site in which the researcher works, as seen by the need to continuously intervene in the record to read it as a record and as part of the archives. Without this, the record ceases to act as a record and is instead treated as an image or text.

In the following section, I shall consider how conversely, the interface is enacted during note-taking in ways that allow the researcher to disrupt the record's relation to the archives. Through this, the researcher begins to move away from an archival representation of the record and towards one which they can use in their own work.

6.2.2 Enacting the interface for note-taking

Here, I will discuss note-taking as another example of how the researcher enacts the archives. During note-taking the researcher moves away from interpreting the record and towards applying this information within their own work. As such, the interface is enacted in a different manner that allows the researcher to expand the interface beyond the record.

To do so, I discuss two examples. These demonstrate how the researcher first disrupts the record, making use of breaks and pauses to suspend the reading of the record in relation to the archives. This then allows the researcher to extract the relevant information from the record: this is the second example discussed in this section. Taken together, these examples show how the researcher intervenes in an archival representation of the record to create their own representation that foregrounds relations between materials essential to the researcher's own knowledge creation.

6.2.2.1 *Disrupting the record through the interface*

When reading, researchers made use of continuous motion through the digitised records: this allowed them to enact the record and archives through the interface. However, when working with the record researchers also made use of pauses and interruptions to disrupt the interface. In doing so, the researcher temporarily suspends the relationship between the information carried in the record and the archival representation to make an intervention, such as taking notes. Returning to the example of P09, in this first example I wish to turn to how the researcher performs this disruption, before discussing how the information is then extracted from its context in my second example.

Screenshare	Main Camera (top right)	Second Camera (bottom right)
1 using the slider on the right hand side scrolls down the image of the record (10s)	<i>eyes widen slightly</i>	
2 reaches about halfway down the page and returns to the top		
3 reaches the top of the page again		
4 pauses at the top of the page		
5	<i>turns to right and down as they begin to take notes</i>	<i>moves right hand onto paper and begins taking notes</i>
6	<i>looks up at the record on the screen</i>	
7	<i>looks down at the notepaper</i>	
8	<i>looks up at the record on the screen</i>	
9		<i>removes right hand from notepaper</i>
10 uses the slider to scroll slightly further down the page (2s)		
11		<i>moves right hand onto paper and begins taking notes on a new line</i>
12	<i>looks down at the notepaper</i>	
13	<i>looks back at the record on screen</i>	
14		<i>removes right hand from notepaper</i>
15 (3s)		
16 resumes scrolling down the page using the slider		

Expanding on the section discussed above, in this clip I examine how P09 identifies information relevant to their work and proceeds to take notes from the record. On reaching the end of a long section of text, P09's eyes widen slightly and they move the document on more slowly (line 1). This is the first indication that they have identified something of interest to their work, yet they continue reading for a few more lines of text. They then return to the top of the page; on reaching the top, they adjust the page slightly before releasing the slider in order to begin taking notes (lines 2-5).

Earlier in this clip – in the section discussed above (6.2.1.1) – the limited view of the record available to P09 (see Figure 12) posed a barrier to their ability to read through the record. Here, this previously limiting factor is used instead to focus P09's attention on a particular section of the record. The narrow window directs their attention to a specific section of text; while in releasing the slider they are able to retain their place in the record. Thus, the same affordances of the tool P09 previously used to enact the interface to facilitate reading are put to an entirely different use.

My interpretation of P09's actions is confirmed later on in the clip. After taking notes on the section described above, they again move the text down slightly before resuming note-taking, despite the fact that this section of text was already visible on screen (lines 10-11). This suggests that fixing the record on screen allows P09 to coordinate their actions between the record on screen and the physical notes that they have in front of them. In disrupting the record, they are able to quickly identify the relevant passage as their gaze flits back and forth between the record on screen and the sheet of paper they are taking notes on.

Here, we see how the interface is alternatively enacted through disruption, rather than the continuous motion seen during reading. In doing so, the researcher is able to interrupt the archival representation and isolate the information from the wider context of the record. This represents an expansion of the record beyond interaction with the records themselves as P09 begins to incorporate further artefacts and actions (i.e. taking notes on paper) to intervene in the record.

6.2.2.2 Extracting relevant information from the record

When note-taking, the researcher makes an active decision in what to take from the record. The previous section – 6.2.2.1 *Disrupting the record through the interface* – showed how pauses in the researcher's progression through the record enabled them to isolate information. Here, I examine a short clip that demonstrates how this information is then extracted during note-taking. The result is a new representation of the record shaped by the researcher's personal needs that nevertheless remains rooted in information presented in the record.

Prior to our session, P03 had downloaded a series of records from the British Newspaper Archive. Although P03 was not aware of the particularities of each record before engaging with these during the observation, they admitted that these had already "gone through a sift" to identify their potential relevance to their research on the history of Indian communities in Glasgow.

	Speech	Screenshare	Main Camera
1	so here we go		
2	this is		<i>narrows eyes slightly</i>
3	referencing uh	follows text with cursor, pausing on 2 nd 3 rd and 5 th lines of text (3s)	
4		navigates to top of page and minimises window, switching to a Word document that had been open in the background	
5	tch		
6			<i>drops left shoulder; P03's shoulders are now level</i>
7		begins typing summary of the document (24s)	
8		stops typing	

- 9 navigates part-way through text just written and
 adds single clarifying word (5s)
 10 continues with main summary of article (2s)

At the beginning of this clip, a digitised page from a broadsheet newspaper is visible on screen (Figure 15). The page is split into multiple columns, each of which contains several articles, with the start and end of each article marked by short lines and the article headings. P03 has zoomed in on a particular article: “ALIEN REGISTRATION. A GLASGOW CASE. QUESTIONS IN COMMONS.” At the beginning of this clip the title is partly cropped out of view, although P03 read this out in full earlier in the observation. Elsewhere on their screen – and currently hidden from view – P03 has a Word document open that they have been using to take notes throughout the observation. To this, they have already added the title of the article, as well as the name of the newspaper, the date it was published, and the page number.



Figure 15 Two screenshots of P03's screen, showing the record on the top and their notes on the bottom. While these are seen together here, during the observation P03 had to keep switching between these two views.

P03 initially begins to describe their interest in the article to me – as per the request to think aloud during the observation – but falls silent as they begin to read through the record. Focusing on the record they rest the cursor on the second, third, and fifth lines of text of the main body of the article. They then minimise this window to navigate to the Word document containing their notes and proceeds to summarise the first paragraph, totalling 11 lines of text. In doing so, P03 visibly replicates key details from the record in their own notes.

The coordination of action and replication of details across both the record and their own notes reveals how through interpretation, P03 expands the interface to encompass both documents, thus supporting their ability to produce an accurate summary of the record. When reading the record, P03 attends to the details that are of particular relevance to their work, as when they briefly rest the cursor on certain points within the text. These details then form the backbone of their initial summary, placed in conjunction with the overall topic of the article that P03 has identified from the title. The replication of these details allows the summary to function as a recognisable representation of the information in the article, despite the fact that it is clearly not a complete reproduction of the text. P03's focusing on some details, while glossing over others, also allows them to subtly reshape the meaning of the article to focus on their own research interests.

In taking notes from the record, P03 expands the interface to encompass not only the record itself but also the new documents that they produce through this practice. This demonstrates the fluidity of the interface, as further intervention on the part of the researcher requires it to expand to accommodate these additional practices and artefacts that comprise the relationship that is enacted between the researcher and the archives. It likewise challenges the boundaries of the archives and invites us to consider whether such activity lies “within” or “beyond” the archives.

6.2.2.3 Summary: Enacting the interface for note-taking

Through the examples discussed here I have shown how the interface is enacted differently for note-taking than for reading. Whereas in reading the researcher continues to draw heavily on an archival representation of the record, during note-taking this is disrupted to expand the interface in ways that support the researcher's work. This is achieved first by isolating the desired information through pauses that present a temporary disruption to the record; before extracting this information from its wider context. The interface is expanded to include both the additional activity of note-taking, as well as incorporating new documents in the form of the researcher's notes.

Not only does this further support the complication of in situ and ex situ research practice suggested by the findings presented in Chapters 4, *Within the Archives* and 5, *Beyond the Archives: Enacting the archives ex situ*, examining the interface also demonstrates how the boundaries of the archives are

fluid rather than fixed. These findings show how researchers continuously switch between enacting an archival representation and intervening in this to allow for a meaning of the record to be generated that is grounded in the text, content, and structure that is preserved by the archives, whilst making this relevant in the researcher's own work.

In this following, final section, I wish to take a more holistic approach to consider the interrelation of these two activities – reading and note-taking – in enacting the interface. Throughout this process, the researcher moves from a largely archival representation of the record towards their own interpretation of this. During this, the interface is expanded to not only incorporate new activities and create new documents, but also to add further sources of information as the researcher begins to bring the record into contact with other archival and non-archival materials.

6.2.3 Re-representing the archival record

Beyond seeking to capture the relevant details from the record, the researcher must also incorporate this within their own work. Here, I discuss an extended example from one participant, P01. I consider how, through the interface, P01 transforms a photographic record into a representation that better reflects the focus of their own research. To do so, I reunite the two practices discussed above – reading and note-taking – which were previously separated for the purpose of analysis.

6.2.3.1 Intervening in the record to align with the researcher's interests

While the majority of participants chose to work with textual records, P01 was working with a series of photographic records linked to the museum artefacts at the heart of their research. For the observation, P01 chose to conduct a visual analysis of these photographs. Prior to our session they had added a series of eight images to a Word document. Each image was presented on an individual page, under which P01 had added the respective accession numbers: unique identifiers that label the records within the museum's collections. The images were aligned to the left of the page and did not take up the full width, but were sized so that the complete image could be seen on screen without adjusting the page (Figure 16).

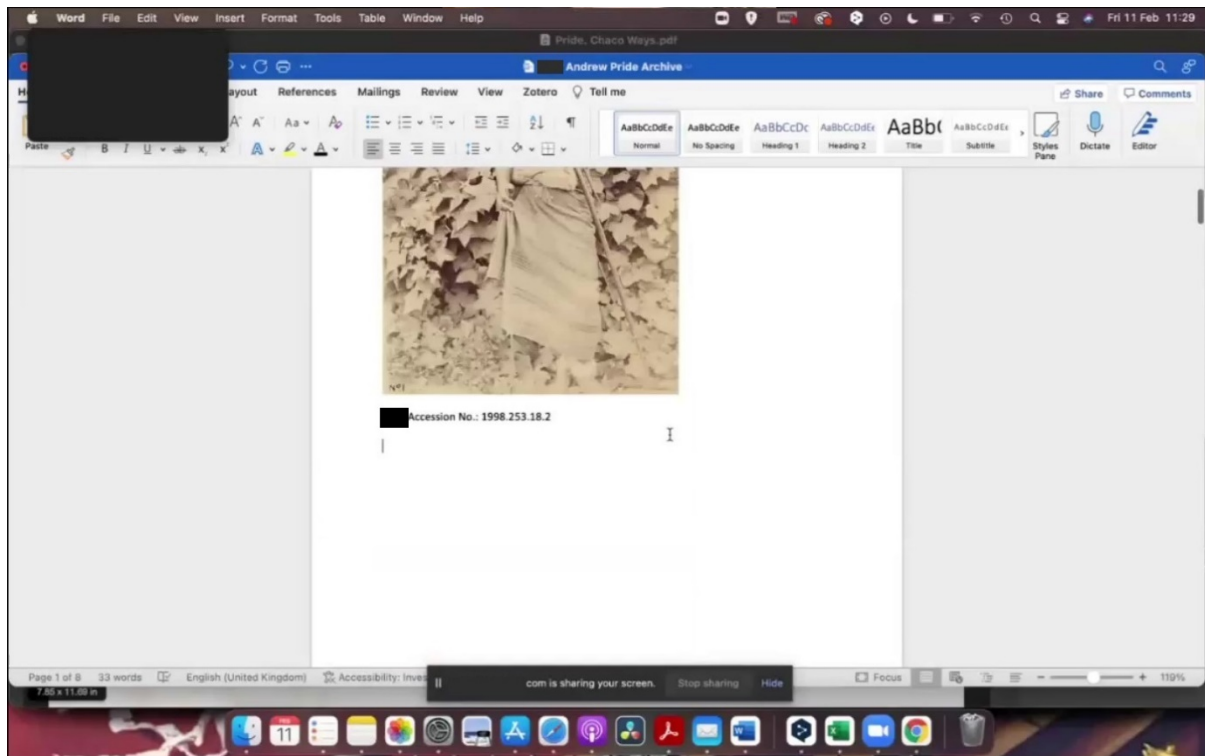


Figure 16 Screenshot of P01's screen, showing their notes at the beginning of the session. Note that the image and accession number already included. References to the museum P01 was working with have been redacted.

Screenshare	Main Camera
1	P01 resting one hand on chin while scrolling through document with the other (2s)
2	adjusts the screen slightly before beginning to type
3	writes 'Desc:'
4	adjusts the screen
5	looks directly at the screen (2s)
6	begins to write a brief description of the image on screen, beginning with the person pictured (8s)
7	
8	gaze drops lower on the screen gaze moves to centre of screen and back down (2s)
9	continues to describe the image, beginning with the building behind the person (3s)

In examining this short section of the observation, I first turn my attention to how P01 interprets the visual record to produce a generic summary of the image, "Desc: Man standing in front of building." Beginning on a new line beneath the accession number already added to the document, P01 adds the word "Desc:" before briefly pausing. This can be read as a caption for what follows, indicated by the colon which suggests the expansion of information. While typing this caption P01's gaze is lowered; but in the brief pause (2 seconds) before they resume typing this short description, their gaze moves to the centre of the screen. At the same time that P01's gaze is lifted, the document on-screen

momentarily shifts up and down; the temporary appearance of the slider on the right hand side of the page indicates that this has been selected. P01 then proceeds with the next word of their summary – ‘Man’ – before repeating the same process of briefly pausing to look at the image before continuing with the summary.

The changes in P01’s gaze and the shifting of the document on-screen signal where P01’s attention is brought to bear on the image itself. The pauses, though brief, suggest that P01 is formulating their description of the image in these moments. Careful consideration is given to the image itself, even for the briefest of descriptions, in order to ensure that the text P01 produces is rooted firmly in the information presented by the record. In repeatedly shifting their attention back and forth, P01 is able both to read the image as well as translate this interpretation into text.

P01 repeats this process a second time over the duration of the clip. This time, they focus on a specific aspect of the image that is particularly relevant to their research: the “adornment” that the person is wearing (lines 11-15). After a pause of 2 seconds after completing the generic description, they begin again with the caption before proceeding to break this down in greater detail in the subsequent text. This time P01’s attention frequently switches between several different places, indicated by the position of their gaze variously at the centre of the screen; a lower position on screen; and a lowered gaze. On the screen, this corresponds to the image in the centre of the screen; the text beneath this; and their laptop keyboard (Figure 17).

Screenshare	Main Camera
11 writes ‘Adornment:’	
12 pause (2s)	
13 proceeds to describe the adornment the person is wearing (22s)	<i>gaze repeatedly flicks between centre of screen and back down</i>
14	
15 stops	
16	<i>gaze moves to centre of screen and is held (3s)</i>
17 describes items the person is holding (5s)	<i>lowers gaze again</i>
18	<i>gaze moves to centre of screen and back down (2s)</i>
19 stops	<i>leans slightly forwards</i>
20	<i>leans further forward and rests chin on one hand</i>

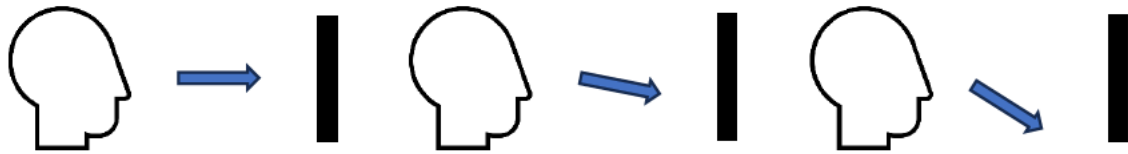


Figure 17 Diagram showing P01's gaze focused on the middle and bottom of the screen, and below the screen at the keyboard (L-R). From "side profile" by Mooms, from [Noun Project](#) (CC-BY-3.0)

In this brief section, P01 again reveals how they read the visual record. Their increased attendance on the image – in comparison to when they are producing the generic description – reflects the heightened significance of these details to their work. Similarly, their frequent pauses before describing each category of adornment suggests that they are giving careful consideration to how they will summarise the image. This increased attendance given to the image is also reflected in the greater detail provided in their summary. P01 breaks down the adornment into multiple different categories, although they do not attempt to describe these in detail. This may be due to the role the photographs play in their work as an attempt to understand "how the featherwork works together".

Such action is facilitated by *how* P01 chooses to enact the interface for interpretation. While they could have chosen to create their notes separately from the image, in choosing to insert the image here they combine the affordances of different technologies – i.e. for reading or for writing – to create their own personalised means of engaging with the record. As we shall see, these notes come to represent the meaning of the record for P01, as opposed to a more generic archival representation.

6.2.3.2 *Reorienting the record to the researcher's work*

Having described the image in a way that aligns this record with their own research interests, P01 reorients this knowledge around the true focus of their research: the museum artefacts. They achieve this by working across multiple windows on screen (Figure 18), which allows them to directly compare the different artefacts that contribute to their understanding of the record. As the central focus of their research activities during the observation, the Word document in which P01 has been taking notes remains at the front of the screen. To this, P01 has already added the accession number of the museum artefact that they have identified in the photograph. Behind this, two further windows are visible: to the right, P01's "master copy" of the four museum artefacts; and at the back the full-screen window of the PDF file.

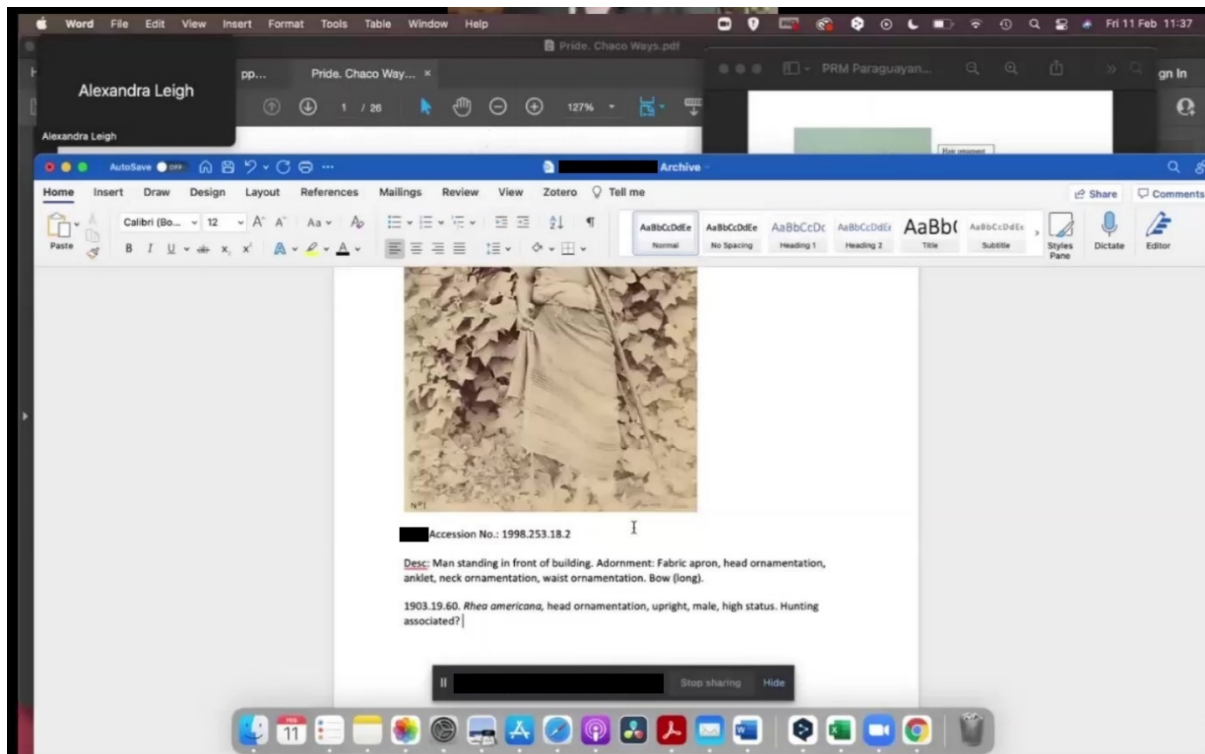


Figure 18 Screenshot of P01's screen, showing their notes at the front of the screen. As well as their notes, they have now opened their master copy of images of their museum artefacts (behind the main document and to the right), as well as a PDF of a contemporary publication (behind and to the left).

Screenshare

- 1 scrolls down the Word document (4s)
- 2 writes out a species name next to the accession number
- 3 highlights species name and italicises this
- 4 describes the artefact as it appears in the photograph and the attributes of the wearer on the same line as the species name and accession number (8s)
- 5
- 6 navigates to the top of the word document
- 7 navigates back to the text below the image
- 8 continues description of the image (10s)
- 9

Main Camera

leans forward and rests hand on chin

leans forward and rests chin on hand

The description that follows the artefact's accession number is clearly drawn from the photographic record and not the item, which is also readily available to P01 on screen. During this second segment of video it is notable that P01 does not lift their gaze, whereas in the section discussed earlier P01 changed gaze direction multiple times. The lack of reference to the record suggests that P01 is producing this description largely from memory. This is confirmed by the close resemblance of the description produced here to that written earlier by P01, only a few minutes before (see Figure 16). What distinguishes these two descriptions is the accession number that precedes each description: the first of these refers to the photograph, while the second refers to the artefact.

This interpretation is further supported by P01's revision of their description part-way through this clip (lines 5-8). They very briefly write the beginning of a word – "cla" – before deleting this again. Leaning forward on one hand, they scroll up the page so that the complete image is briefly visible for a moment. They then scroll down to the line of text they have been adding to and continues with their description of the individual pictured as "high status". This sequence of actions suggests that "high status" should be read as the replacement for what P01 had been about to write. Although these are likely to be synonymous terms, the careful attendance to the image at this point suggests that P01 is ensuring that their description of the artefact here is exclusively rooted in the photographic record.

It seems likely that P01 already possesses additional knowledge that they could use to interpret the record. In discussing this photograph elsewhere during our session, P01 mentions that they have previously come across another contemporary source that describes the individual pictured in the photograph as a "chief". This source is the PDF document that has been visible at the back of the screen during both of these clips. Though it is not utilised until later in the observation its presence suggests P01's intention to bring these different artefacts together. Despite this, P01 does not use this information within their description of either the record or artefact at this stage, confirming that they are intentionally working to keep the focus of their interpretation on the record.

This suggests that P01's purpose in producing this second description is to gain an insight into the artefact – the focus of their research – from the photographic record they have been describing. Such a reading is supported by the arrangement of the Word document itself, which reinforces the photographic records as the organising concept for P01's research during this session. The only images present within the document are the images of the records themselves. These take precedence: they create the structure around which the document is organised and their description is the first activity to occur in P01's process of analysing each image. The addition of the museum artefact number is thus secondary and used to reorientate the knowledge produced from the photographic record around the artefact instead.

In reorienting the information from the record around the museum artefact, P01 creates a new representation of the record through intervention. This is achieved through a particular activation of the interface, which P01 uses to bring together multiple sources and enables direct comparison between archival and non-archival artefacts to be achieved. While their description remains rooted in the record, they move away from treating the photograph as a solely archival item. The information gleaned from the record is then put to a new use to describe the museum artefact and thus entangles the information from these two separate sources to be intervened in once again, this time through the representation that P01 has created.

6.2.3.3 *Summary: Re-representing the archival record*

Through interpretation, the researcher intervenes in the archival record and re-represents this according to their own interests. They first seek to align this with their own particular research interests – identifying information of relevance – before reorienting this information around their own particular object of study, the museum artefacts.

In doing so, P01's activities create the space in which they work – the interface – in a manner that allows them to perform the actions necessary to interpret the record. This allows them to intervene in the record and move beyond an understanding of the photograph as an archival object. Removed from the archival context and interpreted with reference to other items, P01 is able to shift the emphasis by which they represent the record. This enables them to intervene a second time in their own representation, rather than one viewed through the archival lens, and thus makes the record actionable in their work.

6.2.4 Summary of findings

By focusing on the interface from the perspective of intervention, rather than representation, these findings have shown how the archives are constantly created and recreated within the particular conditions and materiality of the interface (Suchman, 2006: 279). This blurs the line between in situ and ex situ work – and therefore the boundaries of the archives – and shows the interface to be an important site in which archival research is undertaken beyond the archives, both at home and in other personalised research environments.

Though this chapter has focused on how the interface between researcher and archives can be understood through activities such as reading and note-taking, it is also clear that these activities simultaneously produce new documents or other artefacts that function as novel representations of the record, personalised to the researcher's needs. While later use of these in future practice lies beyond the scope of this research, which has focused on direct interactions with archival records, in creating these documents the researcher enacts new ways of knowing the archives that extend potential relations beyond those preserved by the archives itself. Therefore, these findings show not only the blurred boundaries between in situ and ex situ archival work, but also the fluidity of the archival boundaries which can be expanded as part of a network of broader relations to provide new insight into the meanings of records.

6.3 DISCUSSION

On rare occasions where the archival interface has been considered, previous studies have focused on how individual interfaces – such as the archivist (Duff, Craig, and Cherry, 2004; Johnson and Duff,

2005) or physical and digital finding aids (e.g. Daniels and Yakel, 2010; Duff and Stoyanova, 1998; Freund and Toms, 2016; Krause and Yakel, 2008; Prom, 2004; Ramsay, 2018; Yakel, 2004) – represent the archives to the researcher. Conversely, the findings discussed in this chapter have emphasised how the archival interface can be understood through intervention, in the form of activities such as reading and note-taking. This has gone far beyond previous discussion of such activities from the perspectives of Information Science and Digital Humanities (e.g. Brockman et al., 2001; Palmer and Neumann, 2002; Palmer, Tefteau, and Pirmann, 2009; Unsworth 2000) to reveal how these activities produce the interface as a set of interconnected relations through which the researcher is able to enact the archives *ex situ*.

Understanding the interface from this perspective reveals the entanglement of researcher, archives, and technology through this situated interaction, as the archives is continuously produced and reproduced by the researcher in order to carry out their work. Not only does this suggest that for the researcher, the boundaries of the archives lie in a different place to where they may be for the archivist, but also that as being enacted in practice these boundaries are fluid rather than fixed.

When reading, researchers enacted the archival interface in order to engage with the record *as a* record. If we accept that the record's ability to function as evidence of historical events or processes results from archival practice, including representational practices such as arrangement and description (Meehan, 2014: 65), it is by reproducing these practices that the researcher is able to read this document as a record. While the archival arrangement was partially recreated in the researcher's personal organisation, this structure must still be activated during activities such as reading. This allowed the researcher to variously interpret the record at the level of the text, content, and archival structure. The researcher's actions thus become part of the archival interface when engaging the record beyond the archives.

Nonetheless, the particular materialities and circumstances of this interface mean that the researcher's personal collection becomes not merely a substitute for the archives but part of the interface as *a space in which to work* in its own right (Suchman, 2006: 279). During reading, it was the affordances and constraints of the technology utilised by the researcher that occasioned their particular actions: the very size of the screen, for instance, made it necessary to create the continuous action that overcomes this disruption. Although these researchers may have sought to recreate the ability to read through the archival collection as they would *in situ* (Trace and Karadkar, 2017) this was nevertheless shaped by the experience of working *ex situ*. The particularities of reading as a situated activity results in an entanglement of the archival structure with those technologies utilised by the researcher, as well as the researcher's own interpretation of the record and unique ways of working.

During note-taking, researchers were observed isolating information from the record in order to extract this and add it to their own document. Again, this demonstrates how the researcher's actions form an integral part of the interface. Although in this study researchers used the same software and tools to facilitate note-taking as reading, in note-taking these were used to entirely different effect. Rather than using continuous motion to overcome the limitations of the screen size, researchers made use of pauses to suspend their ability to read the record either as a record or in relation to the archives. This allowed them to make the record usable by copying information that is of particular relevance to their work. Thus this different application of tools again illustrates the researcher's role in activating the archival interface.

Furthermore, across both reading and note-taking the researcher expanded the interface beyond the individual record by coordinating their activities across multiple documents, including non-archival sources. While this might be understood as stepping beyond an "archival" interface, the entanglement between the researcher and archives is still present in the careful attention that the researcher pays to the record. This can be seen in the close replication of information between the record itself and the resulting notes that researchers observed here produced. Although these notes are ultimately a new representation of the record, this nonetheless remained rooted in the archival representation.

These findings therefore suggest the interface as one area in which the practices of humanities researchers might be understood as part of the archives (RQ3). Just as HCI has seen the user as somehow distinct from the interface (Kirsch, 2019), I have argued throughout this thesis that the archives has seen the researcher as separate from the archives. While Archival Studies now broadly accepts the potential for multiple meanings to be generated from the archives (Ketelaar, 2001), this has remained a relativist stance that keeps the archival meaning "of" a record distinct from its meaning "for" someone or some particular occasion (Ketelaar, 2012: 23). However, through both examples I have discussed here – reading and note-taking – these findings instead reveal a continuous process of representation and intervention (Hacking, 1983: 31) that entangles both archives and researcher throughout the research process. Understanding the archives in this relational manner thus begins to collapse the distinction between the archives and researcher as traditionally perceived in archival theory and practice.

These findings therefore inform a more expansive understanding of the archival interface. This takes us beyond the idea of the interface as a singular point of interaction and presented in archives as traditional representational interfaces such as the print and digital catalogues. Instead, the archival interface can be understood to encompass not only archival representation, but also the researcher's interventions in practice, as well as the various technologies that they use to accomplish this.

6.4 CONCLUSION

In this chapter, I have provided an in-depth examination of how the researcher produces and reproduces the archives beyond the physical or digital repository by focusing on those parts of the observational data that provided detailed insights into the researcher's interactions with the archives. The findings discussed here complement the analysis presented in Chapter 5, *Beyond the Archives: Enacting the archives ex situ*, by providing a richer account of the entanglement of researcher, technology, and archives that produces the archival interface.

Grounded in the work of Suchman (2006) and Hacking (1983), this analysis demonstrates how the archival interface encompasses far more than traditional means of representation, such as the physical or digital catalogue (Yakel, 2003; Ramsay, 2018). Instead, the interface is revealed as a complex web of relations between different elements that allow the researcher to make the record and archives relevant and actionable in their work. In reading, the researcher may often seek to enact an archival representation of the record, yet this is made relevant and useful through the actions of the researcher, whilst being further shaped by the technology available to them. Likewise, in note-taking the researcher's role is evident as they put the technology used to enact the interface to an entirely different purpose. While the researcher may seek to afford the ability to interpret the archives *ex situ* (Trace and Karadkar, 2017), the archives is ultimately refashioned through their interventions.

The findings presented in this study and Chapter 5, *Beyond the Archives: Enacting the archives ex situ* contribute to an understanding of the continuous process of producing and reproducing the archives beyond the physical or digital repository. This provides a fresh perspective on the archival interface beyond representation to incorporate the researcher's intervention as an integral part of the interface. This is particularly important to understand in the context of increasingly remote usage of the archives, whether through materials collected in-person or downloaded online, as it allows us to account for and incorporate new ways in which researchers may enact both records and archives during knowledge creation. While this study has focused closely on two key interpretive activities, reading and note-taking, future work may reveal other activities through which the interface is enacted in different ways. This would further contribute to our understanding of how the archives is reproduced through the researcher's practices.

7 DISCUSSION

7.1 OVERVIEW

In this thesis, I set out to understand how humanities researchers use archival records to generate novel insights into historical events, people, and processes. Surprisingly, this has been considered very little in prior research, with most studies of archival research focusing on information seeking (Rhee, 2015; Sundqvist, 2015). Sited within the framework of information behaviours, such studies have led to an understanding of the archives from a primarily mediational perspective; and in turn, has suggested an emphasis on how the archives communicates the information in the record in a way that means it can be located and accurately interpreted in context.

Conversely, in adopting a relational approach grounded in practice theories, this thesis has provided an alternative emphasis for understanding interactions between the researcher and archives. The first study presented, Chapter 4, *Within the Archives* considered how the researcher carries out their work within the archives. This found a significant orientation to research undertaken beyond the archives; as such, the second study, Chapter 5, *Beyond the Archives: Enacting the archives ex situ*, looked to research practice in a personal environment, such as the home or office. Finally, as all researchers incorporated digitised records within their work, in Chapter 6, *Beyond the Archives: Expanding the archival interface*, I presented a detailed examination of the interface between researcher and archives.

In providing this rich insight into how meaning is generated from the record through the practices of the researcher, I have drawn on existing understandings of the relationship between researcher and archives from Archival Studies (e.g. Duff and Johnson, 2002; Duff, Monks-Leeson and Galey, 2012; Ketelaar, 2012) while demonstrating how these can be framed in a more relational manner. This alternative way of viewing the archives invites us to reconsider the relationship between the researcher and the archives as one in which the researcher is actively involved in enacting the archives for themselves, rather a passive recipient of information mediated by the archives.

In this discussion, I take a step back from this work to examine how the activities of the researcher enact not just the record but the archives itself. I do so by first looking at how the researcher enacts the archives both through those relations maintained by the archives, as well as those that have traditionally been considered outside of the archives' remit, before turning to how this challenges traditional understandings of the archives' boundaries. This addresses both RQ1, *How do the researcher's practices generate a meaning from the record and archives?* and RQ2, *How do archival*

practices (i.e. those practices that sustain relations between records) shape the meaning that the researcher generates from the record?

By demonstrating how the researcher produces and reproduces the archives for themselves, it shows how the researcher can be incorporated within conceptualisations of the archives. This line of enquiry addresses RQ3, *How might the practices of humanities researchers be understood as part of the archives?* Furthermore, in recognising the researcher as an integral part of the archives it becomes possible to reconsider what lies within and beyond the boundaries of the archives.

The final section of this discussion will address the implications of this work: namely, the value in seeing the archives in practice; the need to design systems that make archival records not only discoverable but also actionable; as well as a more fluid consideration of the archives that allows us to intentionally focus on different “cuts” (Barad, 2007: 148) that consider how the archives are variously enacted for different actors and purposes; and the impact this has on the boundaries of the archives.

7.2 ENACTING THE ARCHIVES

To recognise how the archives is enacted through various apparatuses means to understand the archives as a constantly unfolding set of relations (cf. Barad, 2007: 146). Constituted in and through material-discursive practice, *where* we view these practices from thus determines *what* the archives is (cf. Mol, 2002: 53-55). Traditionally, the archives have been viewed from the position of the archivist: this defines the archives in relation to archival practice which, while entirely suitable for an understanding of the archives centred around the record, limits what we might consider as “within” the boundaries of the archives. In other words, by always considering the archives from the position of the archivist, a particular cut is enacted that defines what the archives is and what it might be.

In this discussion, I wish to return to the notion of the researcher’s *material-discursive* practices as an apparatus that enacts the archives according to a particular cut (Barad, 2007: 148). In this instance, this is defined through the practices of the humanities researcher, rather than the archivist. These practices necessarily overlap: some activities comprising archival practice are also part of the researcher’s apparatus. Here, I have primarily discussed this through the archival activity of arrangement, which has been proven to be an essential part of the apparatus for the researcher. Nonetheless, the researcher also enacts the archives through relations that lie outside of what is traditionally considered to be archival. Such relations include not only the different activities undertaken by the researcher, but also those materials held outside of the archives.

In doing so, the researcher enacts the archives in novel ways; while this process is unique to every researcher, there are also commonalities in practice that I have identified throughout this work. This provides a basis for an improved human-centred understanding of the archives that allows us to move beyond recognising that records may speak to multiple meanings (Ketelaar, 2012: 23) but also the multiplicity of the archives itself. This is not merely a case of perspective, but refers to how, for each individual, the archives *is* materially different as enacted in practice (Mol, 2002: 35). Thus, such a relational understanding of the archives offers the opportunity to develop a human-centred approach to the archives that is capable of addressing the needs of those who create, keep, use, and are documented (Douglas, Ballin, and Lapp, 2022: 5) in archives.

I begin by discussing how in producing and reproducing the archival arrangement, the researcher's actions both in the archival reading rooms and in a personal research environment such as the home or office can be understood as part of an apparatus that enacts the archives. I then move on to discussing how in foregrounding relations between records and other, non-archival sources, the researcher extends the relations through which the record is understood. Finally, I consider how knowing – or rather, the potential for knowing (Orlikowski, 2002: 252-253) – is anchored at various points in the researcher's process through different material arrangements or apparatuses.

7.2.1 The researcher as part of the apparatus

In this section, I consider how those relations maintained by the archives form part of the apparatus used by the researcher in their own practice to enact both record and archives. Firstly, in addressing how the record is enacted in relation to the archives, I consider how this allows the researcher to generate a notionally *archival* meaning from the record. Secondly, in considering how these relations are uniquely enacted through the researcher's practice, I demonstrate how this meaning is nonetheless specific to the researcher.

An archival meaning can be considered as that which is generated by drawing on those relations between records that are maintained by the archives. However, these relations are not *preserved* as is often suggested in archival practice (e.g. Meehan, 2014: 65) but *enacted*. Researchers primarily performed these relations through the archival arrangement. This arrangement was central to the researcher's activities of **scanning** and **in-depth reading**, as well as how they reproduced the archival arrangement for use ex situ, by **gathering, organising, storing** and **configuring** records.

In **scanning** and **in-depth reading** of records, the researcher draws on the relations between records to produce the archives in situ. While previous archival user studies, often conducted from an Information Science perspective, have commented on the researcher's process of building contextual

knowledge (Duff and Johnson, 2002) and the role of finding aids in shaping meaning produced from archival records (Duff, Monks-Leeson, and Galey, 2012) *how* the archival arrangement is enacted in practice by researchers has not been a previous focus of study. Nonetheless, the need for researchers to understand the record as more than the sum of its parts has previously been commented on by Duff and Johnson (2002: 487-488); findings which are supported here by researchers' desire to draw on these relations when reading through the records.

The importance of archival arrangement to researcher's practices is more strongly highlighted in the maintenance of this arrangement through **gathering, organising, storing, and configuring** records *ex situ*. While gathering, organising, and storing have received some attention in the literature that attends specifically to the archives (e.g. Antonijević and Cahoy, 2018; Trace and Karadkar, 2017) as well as wider humanities research practices (e.g. Given and Willson, 2018; Palmer, Tefteau, and Pirmann, 2009), this has not emphasised the role of these activities in knowing. Furthermore, configuring has not been the focus of previous research into the use of primary sources.

The findings presented in Chapter 4, *Within the Archives*, demonstrate how researchers pay careful attention to **gathering** and **organising** records in ways that enable these to be stored according to the archival arrangement in their personal files, supporting findings by Antonijević and Cahoy (2018: n.p.) that these processes often begin when working *in situ*. Notably, the researchers observed in the studies presented here only sought to replicate the archival arrangement at the lowest level of the hierarchy: arranging archival records within their respective folders. Antonijević and Cahoy (2018) have also noted how researchers reproduced the archival arrangement at this level; while Trace and Karadkar (2017) found that researchers generally stored records according to the archival arrangement. This suggests that in maintaining this arrangement, researchers go beyond simply facilitating later referencing but reproduce a practice that they see as essential to generating a particular, *archival*, meaning from the records.

Further evidence for this analysis can be found in how researchers chose to enact this arrangement when **configuring** records for use *ex situ*. This paralleled researchers' processes of reading *in situ*, as researchers sought to facilitate easy movement from record to record and thus replicated the experience of reading through the archival folder. In doing so, the researcher is able to overcome the disruption posed by digitisation – which often renders records as a series of static images – in order to read the records in relation to one another, and thus access a notionally archival meaning. The importance of being able to access this archival meaning for researchers can likewise be seen in the long-term **storing** of materials, as suggested by several participants in this work. Researchers appeared reluctant to disrupt the archival arrangement of materials in their own files. Instead, this

order was maintained even when researchers began work on a new project, with researchers either moving the entire folder or copying and pasting records into a particular project folder.

In each of these activities, we see the relations that make the record *archival* are enacted by the researcher through their research practice. This allows the researcher to generate a nominally archival meaning from the records, by understanding the record through such relations as preserved by the archives. If we were to focus on the arrangement of records as an organising structure, it is easy to see such activities as an adoption of the archival arrangement: the structure used to represent the records in the archives is also used within the researcher's work. Yet by focusing on *how* this is enacted in practice, we see how it is through such practice that the researcher enacts a particular cut (Barad, 2007: 148) through the archives.

Though during scanning and in-depth reading researchers sought to read through the file as a whole, their selective attendance to information simultaneously enacts the record in line with their own interests, reflecting the general description of scanning by Palmer, Tefteau, and Pirmann (2009) as well as comments by Duff and Johnson that in the archives researchers are continuously making connections between archival sources (2002: 489). Here, this can be seen in researchers' descriptions of how information would "jump out" at them when scanning through the record, causing them to pause and read certain sections in more depth. While the idea of relevant information jumping out at the researcher has been commented on in previous literature, reflecting the idea of serendipitous discovery (Crean, 2011; Martin and Quan-Haase, 2013), the researcher also selectively attends to the record and archives in further activities, such as when gathering, organising, and storing records for later use. For instance, when gathering records, most researchers chose only to take those records that they felt were relevant to their work; and as noted above, in organising and storing their personal collections researchers only reproduced the archival arrangement at the level it was necessary to recreate a particular meaning from the record.

The selectivity exercised not only during search, but also in gathering, organising, and storing records, suggests that this goes beyond serendipity. Instead, in such activities I suggest that the researcher not only enacts the records through its archival relations but also in relation to their own work. This determines their selective attendance to what matters (Barad, 2007: 144-145, 149) when enacting a particular meaning from the record. Such a meaning remains archival, in that it is enacted through the archival relations; but it is nonetheless partial and situated in the researcher's practices that form a broader part of the apparatus.

In enacting the archives through their research practice, the archives that the researcher encounters is fundamentally different from that of the archivist. The apparatus through which the record is known can be understood as an unfolding set of relations that, while partially overlapping with archival practice, enacts the archives in a different way that generates a novel meaning from the records for the researcher. This demonstrates how the researcher is an integral part of the apparatus that enacts the archives: while the researcher seeks to produce a notionally archival meaning, this is nonetheless entangled with their own research interests and thus enacts a different archives for themselves than is enacted by the archivist.

7.2.2 Extending the archives through further relations

While researchers sought to understand the record through relations maintained by the archives, they also extended the apparatus in ways that created novel insights into the record. In addition to bringing the record into contact with records held in different archival collections as well as non-archival materials, researchers enacted the records through various activities that enabled different ways of knowing the record. In this next section, I consider what happens when the researcher enacts the record in relation to other, non-archival sources, to foreground alternative ways of knowing the record.

This was often carried out through the same activities as used to understand the record through traditional archival relations: **configuring** was used not only to enact relations between archival records but also to disrupt these. Here, I focus on how configuring was used to coordinate the activities of comparison and note-taking, and how through each a different cut is enacted for the researcher that challenges the notional boundaries of the archives.

Commonly facilitated by split-screening, researchers sought to make direct comparisons between records across different collections as well as non-archival sources, including primary and secondary literature. This allowed researchers to configure alternative, temporary arrangements of materials that enacted the record in relation to other sources. In doing so, the researcher alters the apparatus previously used to perform a notionally archival meaning to create a novel insight into the record instead. Thus, while direct comparison has previously been described as an important activity that has been linked to relating, referring, and annotating (Anderson, Blanke, and Dunn, 2010; Unsworth, 2000) I argue that by focusing on configuring as a *material* arrangement, we see how such activity goes beyond mere interpretation to enact a “cut” (Barad, 2007: 148) that allows the researcher to know the record in novel ways.

Note-taking was another activity enabled by how the researcher configured the record in relation to their own work. As with direct comparison, the researcher often split the screen to conduct note-taking: other common strategies included using a second screen or taking notes manually. This allowed the researcher to expand the apparatus to accommodate not only new materials but also to coordinate different actions that provided other ways of knowing the record. Whereas when enacting the record as part of the archives the researcher foregrounds those relations preserved by the archives, here the researcher alters the apparatus and extends it to incorporate relations outside of those maintained by the archives.

Nonetheless, the ways in which researchers configured records for note-taking continued to enact a separation between the record and their own work. While splitting the screen allowed for note-taking to occur, it also reflects a distinction between the archival materials and the researcher's notes. No researchers annotated materials directly, a finding which is also reflected in Antonijević and Cahoy's (2018) study. Yet while Antonijević and Cahoy attribute this to a method of digitisation that commonly creates image files that lack text recognition (2018: n.p.), in this research even those researchers who converted records to PDF format with text recognition did not annotate notes directly. I suggest that in doing so, the researcher seeks to preserve an "archival" copy of their selected records that is free from any potential interpretation. This allows for the record to continue to be enacted as part of the archives – by configuring the record in relation to other materials from the same folder – while also enabling the researcher to intervene (Hacking, 1983) in the record.

This separation also allowed for any new documents created during this process to be utilised as part of a material arrangement that variously extended the archives through these additional relations or could be used independently in the researcher's work. In doing so, the researcher provides a cut not only through the archives but one that enacts their own research in particular ways. Although at first the researcher may wish to enact their work in relation to the archives, the focus of the researcher's work is often not a sole archival collection but a topic that is itself enacted through a wider set of relations. Therefore, at this point in the researcher's work we see a shift from practices oriented to enacting the archives, to enacting the record in relation to their own work.

While archival research has previously been described as a continuous process of building contextual knowledge (Duff and Johnson, 2002; Duff, Monks-Leeson, and Galey, 2012) such terminology separates the record from how it is used by the researcher. In adopting a relational perspective I instead consider this process to reflect how the researcher is constantly enacting the archives through a series of unfolding relations, including those maintained by the archives and those that extend beyond this. If we understand the archives as enacted through the apparatus, then the cut the

researcher takes challenges the archival boundaries by incorporating a wider set of relations than we might traditionally consider as part of the archives.

7.2.3 Anchoring knowing in material arrangements

If we consider *knowing* to be virtual (Orlikowski, 2002: 252-253) then we cannot seek to preserve or capture knowing: it can only exist in practice. Nonetheless, the possibilities for interpretation can be anchored within particular material arrangements as part of an apparatus that enables and constrains certain ways of knowing the record (Barad, 2007: 148). In the researcher's process of moving from the archival records and towards applying a particular interpretation within their own work, I identify several different points in which knowing is anchored: the archives itself, as represented by the archival repository and those practices which sustain it (Millar, 2017: 4); the archives represented in the researcher's personal collections; and the new documents that the researcher creates through practice.

Archives themselves present one such material arrangement through which potential meanings are both enabled and constrained. Archival activities such as selection, arrangement, description, and disposal do not only preserve or maintain particular relations between records but in doing so also set the potential meanings that can be generated from it. Thus, archives are revealed not only as an object of study but in setting "the material conditions of possibility and impossibility of mattering" (Barad, 2007: 148) can also be considered as an apparatus through which the record is enacted. This partly consists of the arrangement of records within files – whether physical or digital – which is encountered by the researcher as a ready-made context within which they can draw on relations maintained by the archives.

Although archival theory has previously emphasised how the archives is shaped by the practices of the archivist (e.g. Duff and Harris, 2002; Nesmith, 2002; Yakel, 2003), as I have argued throughout this work the researcher does not sit outside of this apparatus. In enacting the archives – here, primarily through producing and reproducing the archival arrangement – the researcher's own actions enact the archives in a manner particular to their own work. While the possibilities for action are partly constrained by archival practice, what the researcher attends to likewise determines what meanings are generated, whether in situ or ex situ. As such, although we can consider knowing to be anchored in such material arrangements as presented in the archives, for the researcher such arrangements are likewise entangled in their own material-discursive practices.

A second point at which knowing is anchored is in the researcher's own personal collections. This differs from their enactment of the record in situ. Within the archives, the researcher is able to draw

on both records that are directly relevant to their work as well as those that shape their understanding but are not deemed relevant. In gathering records from the archives and replicating the archival arrangement through their organisation and storage, the researcher seeks to maintain the same relations through which the record and archives were enacted in situ. Nonetheless, in doing so the researcher alters the apparatus that generated this meaning through their selective attendance to what they need to capture to preserve a particular meaning of the record.

Thus, in reproducing the archives in their own personal collections, the researcher creates another material arrangement or apparatus in which their knowing is anchored. Although this is a partial reproduction of the archives, this personal collection can nonetheless be seen as generating a notionally archival meaning as the researcher continues to draw on the archival arrangement to preserve the meaning of the records in relation to one another.

The ability of the researcher's personal collection to generate an archival meaning can be seen in the distinction that the researcher enacts between their collection of archival materials and other notes and sources. In Chapter 5, *Beyond the Archives: Enacting the archives ex situ*, when initiating a new project researchers would not rearrange the original files but moved or copied the whole archival folder into a new thematic project file. This suggests how researchers use these collections to enact a boundary (Barad, 2007: 148) between the record and their own work that maintains the ability of the assembled records to generate a notionally "archival" meaning. Previous studies have found that researchers can maintain these personal collections over extended periods of time (Antonijević and Cahoy, 2018; Kamposiori, Warwick, and Mahoney, 2018). Although these studies do not comment on whether this preserves the archival arrangement, the findings here support the interpretation that such collections *become* the archives for some researchers.

The researcher enacts a further boundary between the archives and their own work by creating notes in a separate document rather than annotating the records directly. While keeping a "clean" copy of the record maintains its ability to be enacted in relation to the archives, it likewise allows the researcher to use the notes in other material arrangements that centre around their own work instead of the archives. Although the scope of this thesis means that further research is needed to examine the later use of these documents in humanities research practice, such findings provide a promising basis on which to ground future work. Some researchers described how they would continue to work in these new documents, fleshing these out with further information from other sources as well as their own reflections. Such activity closely resembles assembling, mentioned first by Ellis (1993: 483) and then built on by Palmer, Tefteau and Pirmann (2009: 22). This suggests that the researcher's notes should also be seen as a material arrangement that anchors the researcher's knowing: one that allows

the researcher to move beyond the archives and enact the record in relation to their own research topic.

The researcher thus anchors particular ways of knowing through material arrangements of archival records and other research materials. The ways in which they enact the records within the archives draws primarily on the archival arrangement in which they are found; nevertheless, these are simultaneously understood in relation to the researcher's own work, resulting in a partial enactment of these relations. This selective attendance is continued in the researcher's own personal collections and results in a notionally archival meaning that is nonetheless entangled with the researcher's own research topic. Finally, in creating new documents that assemble select information from the record and other sources, the researcher captures the outcome of this activity to allow the researcher to apply information from the record within their own work. These material arrangements can thus be seen as part of a processual approach to knowing that allows the researcher to enact the archives through different apparatuses that generate different meanings from the records.

7.2.4 Summary: Enacting the archives

Through the activities discussed here, I have demonstrated how in enacting the archives through practices different to those of the archivist, the researcher produces for themselves an archives that is specific to their particular research needs. Although this draws heavily on archival relations, as seen in the reproduction of the archival arrangement, it also expands the relations that the researcher uses to enact the archives both through further materials and additional practices. Nonetheless, the rooting of this practice in the archival relations means that the researcher continues to enact a cut that enables this apparatus to produce a notionally archival meaning.

This suggests that even when working at home or in another personal research environment, the researcher continues to work "within" the boundaries of the archives as enacted in their own practice. Nonetheless, being *within* the archives also implies a being *beyond* the archives: as seen here in the researcher's creation of new documents for use in later research activities. This indicates that through practice the researcher enacts for themselves a boundary for the archives in a quite different way to that of the archivist: I shall explore this further in the following section.

7.3 WITHIN AND BEYOND THE ARCHIVES

The findings from these studies expand our understanding of a nominally "ex situ" manner of research. This term has been used by Trace and Karadkar (2017: 500) to describe researchers who treat archival visits as primarily data gathering exercises (Rutner and Schonfeld, 2012: 12) and conduct most of their

analysis offsite. The researchers participating in both the studies presented here largely fit this pattern: photographing large numbers of records in situ, while engaging in more in-depth analytical work ex situ.

While this research provides a rich and detailed insight into activities undertaken outside of the archives, it likewise complicates the very notion of being “within” or “beyond” the archives. The researcher’s role in enacting the archives in a partial, unique manner both in situ and ex situ means that they continued to work with a notionally archival meaning of the record once they had left the reading rooms. Likewise, the use of digital devices such as mobile phones, tablets, and laptops allows the researcher to bring non-archival relations to bear on the record while working onsite.

Here, I will first consider the findings of this research both in terms of its contribution to expanding our understanding of ex situ research, before moving on to a discussion of how in enacting the archives, the researcher’s practices complicate the notion of being in or out of the archives. While I have so far used the terms “within” and “beyond” to refer to the researcher’s physical location, here I propose a reconsideration of this. Instead, I suggest that we can apply the notion of being *within* or *beyond* to the archives as an *apparatus*, to understand whether the researcher might be working “within” the archives and when they may be considered to have moved “beyond” it.

7.3.1 An expanded understanding of ex situ archival research

Most previous archival user studies have focused on what we might call in situ interactions: “what researchers do from the point at which they enter repositories until they pack up to leave” (Orbach, 1991: 29). Yet the growing popularity of an ex situ style of research identified across a number of studies (Milligan, 2020; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017) points to how much research involving archives takes place outside of the archival reading rooms.

In taking a practice-oriented approach, this thesis has contributed to our understanding of an ex situ style of research by highlighting activities such as **gathering, organising, storing, and configuring**. Collecting, commonly considered in both Information Science and Digital Humanities research to comprise the activities of gathering and organising (Anderson, Blanke, and Dunn, 2010; Palmer, Tefteau, and Pirmann, 2009; Trace and Karadkar, 2017) has previously been described in the literature as facilitating the ongoing work of interpretation and analysis (e.g. Trace and Karadkar, 2017: 500). Likewise, the tendency of researchers to store large collections of primary sources has been noted in several previous studies led by digital humanists, information scientists, and historians (e.g. Kamposiori, Warwick, and Mahoney, 2018; Milligan, 2020; Rutner and Schonfeld, 2012; Trace and Karadkar, 2017).

Nonetheless, although such studies identify the trend towards much analytical work being carried out beyond the archival reading room, they do not emphasise the work that must be done to make the archives *happen* once the researcher is offsite. In this thesis, taking a focus on practice has enabled me to go beyond merely identifying the importance of these activities in how archival research is being conducted to show how through these activities the archives is made relevant and actionable in the researcher's work. During collecting, the researcher selects the records they believe are necessary to enact a particular, archival meaning, once they have left the reading rooms. Likewise, the replication of the archival arrangement in organising and storing materials speaks to how the researcher reproduces the archives in such a way that these relations maintained by the archives can be enacted to produce an archival meaning elsewhere. These are not just activities that facilitate interpretation: but in "enact[ing] what matters and what is excluded from mattering" (Barad, 2007: 148), these activities can be seen as an integral part of the apparatus that generates an archival meaning from the record once the researcher has left the archives.

Furthermore, the emphasis on practice has allowed me to identify two activities not previously discussed in relation to the archives: **configuring** and **creating**. As discussed above in 7.2.2 *Extending the archives through further relations*, configuring not only provides a means of enacting the archival relations so that the record can be read as part of the archives, but also provides the means to expand these relations beyond the purely archival and thus generate novel insights into the record. Such insights are maintained by creating material arrangements that capture such conditions of knowing in a more permanent manner, often through note-taking. The act of creating new artefacts containing screenshots and quotations from the records, as well as references and the researcher's own reflections, suggests that these resources may be seen as part of a continuous process of writing that ultimately leads to the creation of a new text (cf. Ellis, 1993: 483; Palmer, Tefteau, and Pirmann, 2009: 22).

Thus, *ex situ* work is not only about having access to records outside the archives. For many researchers, it is a process by which they maintain access to the archives itself by reproducing the material arrangement that they see as necessary to sustain the archives for their own needs. Nonetheless, as I have discussed earlier, the reproduction of the archives *ex situ* does not produce an exact replica of the archives in the researcher's personal collections. Instead, in producing and reproducing the archives, the researcher enacts particular relations that they see as relevant to the record's meaning and thus subtly reshapes the archives according to their partial and situated view.

7.3.2 In situ and ex situ or within and beyond?

While such findings inform our understanding of how research is conducted beyond the archives, I would here like to complicate this picture by challenging the consideration of what is “in situ” and “ex situ”. In Trace and Karadkar’s brief treatment of in situ and ex situ research (2017: 500), their description primarily refers to the location in which analysis of the records take place. However, the studies I have presented in this thesis demonstrate how this distinction is blurred by the actions of the researcher. When working ex situ, the continued enactment of the relations between records suggest that the researcher is still working “within” the archives. Likewise, when working in situ, the use of various practices and tools to disrupt the archival arrangement and directly compare sources shows how the researcher can move “beyond” a strictly archival meaning before they have even left the archives.

Even when working in an ex situ mode of research, the researcher continues to enact the record in relation to the archives: in this work, this was primarily achieved by reproducing the archival arrangement through activities such as **gathering, organising, storing, and configuring**. Such activities allow the researcher to generate a meaning from the record that is grounded in the relations between records maintained by the archives. While this supports the suggestion made by Trace and Karadkar (2017) and others (Milligan, 2020; Rutner and Schonfeld, 2012) that analysis previously conducted *in situ* is now largely conducted *ex situ*, these findings go beyond this to show how the researcher continues to generate meaning from the records through their relation to the archives. As such, I suggest that although these researchers may have left the physical or virtual archival repository they continue to act “within” the boundaries of the archives as determined by these relations.

This is not to say that the archives is not transformed through this process of reproduction. When collecting materials from the archives – whether in-person or online – researchers behaved selectively, only choosing those materials that appeared relevant to their work. Although this varied hugely between researchers, with some only taking individual records and others finding a whole series of records necessary to maintain a particular meaning, the choice about what to take and what to leave inevitably shapes how the archives is reproduced ex situ. Likewise, those researchers that chose to replicate the archival arrangement often did so only at the lowest level – of records within files – as this was seen as necessary to enact the relations between records. In this sense, the archives that the researcher reproduces at home is shaped by their cut through the material and is particular to their own research needs.

But even in situ, to interpret the record the archives must be enacted by the researcher, as seen in Chapter 4, *Within the Archives*, with reference to activities of **scanning** and **in-depth reading**. As I have

argued above, the researcher is not distinct from the archival apparatus but is an intrinsic part of it that determines how the archives is enacted (Barad, 2007: 144-145). Therefore, the researcher's enactment of the archives is always inevitably partial (Haraway, 1988). In acknowledging this partiality, the distinction between the meaning "of" the record that is somehow preserved outside of practice and a meaning "for" the record, enacted by the researcher (Ketelaar, 2012: 23) collapses: in generating a meaning from the record, the researcher always enacts the archives through their own particular cut whether they are operating in situ or ex situ.

Furthermore, although this research has primarily focused on how researchers ex situ continue to work "within" the archives, the findings also point to how researchers who are working in situ might be considered to be working "beyond" the archives. The allowance of digital devices in the reading room (Cox and Archives Students, 2007; Trace and Karadkar, 2013) not only enables researchers to collect vast quantities of materials for use elsewhere (Milligan, 2020; Rutner and Schonfeld, 2012) but also facilitates the introduction of further resources for direct comparison within the archives. This might be achieved through the use of online collections to compare digitised records onsite, or through comparison of self-digitised materials with physical records that the researcher has already collected. In this sense, the researcher alters the archival apparatus in situ by introducing different sources for direct comparison or even rearranging archival records to better comprehend them. This then enacts the cut that the researcher takes through the archives and changes how the researcher knows the records in practice.

Rather than understanding researchers as adopting an in situ or ex situ style of research, I propose that instead we shift our attention to how the archives are enacted through various agential "cuts" (Barad, 2007: 148) that define a separation between being "within" or "beyond" the archives. One such cut can be seen in the distinction between the archives as enacted through the practices of the archivist and those of the researcher. While these may draw on the same structures, as seen in the researcher's partial adoption of the archival arrangement, the ways in which these are used ultimately shapes the archives in different ways. Likewise, the wider aims of the researcher's work mean that they also enact the record through relations that lie outside of the archive's traditional boundaries.

Just as the archivist's cut and the researcher's cut enact the archives in different ways, the boundaries of the archives are enacted differently according to these separate practices. In the researcher's practice, the boundary of the archives does not necessarily align with whether they are physically in situ or ex situ. Instead, I propose that the researcher continues to be "within" the archives whenever they enact the record primarily through its archival relations and thus produce a notionally archival meaning. In doing so, we are able to recognise that the researcher working at home or in another

personal research environment may still be working within the archives, even if they have left the reading rooms.

Conversely, what is considered “beyond” the archives is much harder to define. Researchers continued to enact the record in relation to the archives while also expanding the relations that comprised the archival apparatus: for instance, by configuring the record side-by-side alongside other sources as well as their own notes. Where such relations are coordinated alongside the archival, we may consider the researcher to still work primarily within the archival structure: although these relations are extended, the record continues to be enacted in relation to the archives through configurations that allow it to behave as part of the archival arrangement.

To determine what is beyond the archives, we may look to where the researcher enacts this boundary in practice. Through activities such as configuring and storing, the researcher creates a distinction between the record and their own work. Creating further resources through note-taking and other forms of assembling (Palmer, Tefteau, and Pirmann, 2009: 22), allows the researcher to use these notes both to extend the archives during action, as well as to utilise these independently in a different set of relations that reorientates these documents to the researcher’s own work. While such documents are configured alongside the record such relations can still be considered as part of an extended archival apparatus. However, when used independently without reference to archival relations, the researcher instead enacts these documents as a source of information for their own work.

Here, I have shown that not only do the boundaries of the archives lie in a different place for the researcher than for the archivist, but even these are not fixed. The boundaries of the archives as enacted by the researcher can be expanded to accommodate further relations and practices that lie beyond an activation of those relations preserved by the archives. Yet through these different material relations, the researcher enacts a boundary that distinguishes for themselves what is “within” the archives from what is “beyond” it.

7.3.3 Summary: Within and beyond the archives

Whether working in situ or ex situ, the researcher continues to enact the archives in practice. Activities previously discussed in the literature, such as scanning, in-depth reading, gathering, organising, and storing are carried out both in situ and ex situ to enact the archives in such a way that allows the researcher to generate a notionally archival meaning. Furthermore, through the additional activity of configuring I have shown how the researcher draws on these relations in practice to continue accessing the archives ex situ. This points to a continuation of the researcher’s practice “within” the

archives *ex situ*, as they continue to draw on relations between archival records to generate a notionally archival meaning.

While I have proposed that the researcher may be considered “beyond” the archives once the record is no longer enacted primarily through its archival relations, this external boundary is much harder to define. In some instances the researcher may extend the archival relations through direct comparison with other artefacts; yet in creating new documents they reorientate these relations around their own topic of research. Although this points to the fluidity of archival boundaries for the researcher, and suggests that we look to how these material arrangements are used in practice to determine whether the researcher can be considered within or beyond the boundaries of the archives.

7.4 IMPLICATIONS

In this research I have adopted a practice-oriented approach that has allowed me to develop a relational view of the archives. This considers how records and archives are enacted both through the relations that the archives maintains between records in its care, as well as through relations between external sources that allow the researcher to develop an alternative view of the record(s). Here I outline the main implications of this research for the archives, including designers and archivists, and ultimately, end-users.

7.4.1 Seeing the archives *in practice*

A practice-oriented approach to the archives addresses recent calls for a human- and person-centred understanding of the archives (Douglas, Ballin, and Ahmadbeigi, 2021; Douglas, Ballin and Lapp, 2022; Sexton, Shepherd, and Duff, 2023). While recent research has used practice theory to examine how the archives are enacted through the practices of records creators (Colwell, 2020) and archivists (Ivanov, 2019), this is the first practice-oriented study of archival end-users.

Reframing the archives through a relational, rather than a mediational perspective, has supported my focus on activities beyond directed information-seeking, and search more generally. Activities such as scanning, in-depth reading, gathering, organising, storing, and configuring demonstrate how the researcher produces and reproduces both records and archives for themselves. Furthermore, both configuring and creating have shown how researchers move from understanding the record primarily through relations between records, to orienting this information within their own work, showing how the archives can be understood through a broader set of relations. These activities thus contribute to our understanding of the archives as a site of knowledge generation, not merely knowledge

preservation (Stoler, 2002), expanding this by focusing on the actions of the researcher rather than the archivist.

Therefore, this work suggests that archives – though implicitly relational – have not gone far enough to adopt relational thinking. Researchers are not merely continually building contextual knowledge (Duff and Johnson, 2002) but enacting relations within and beyond the archives. As well as relations between records, and between record and archivist, archives should consider in both practice and design the relation between the researcher and the record, and the wider network of relations that the record is part of.

7.4.2 From *discoverable* to *actionable*

A second implication of this work, therefore, is the need to shift our emphasis in the design of archival systems and tools so that records are not just *discoverable* but also *actionable*. By this, I specifically mean attending to how the record and archives are made actionable and relevant to the researcher through their work. This research has shown how knowing is grounded in material arrangements, whether those maintained through archival practice or those created by the researcher through their work. For instance, in scanning through the records held within an archival folder, the researcher activates the archival relations maintained by that arrangement; likewise, at home the researcher might reproduce this arrangement by using photo viewing software that allows them to easily click from one page to the next. These types of interactions are shown here to support knowledge creation, building on previous understandings of working with archival records (e.g. Duff and Johnson, 2002; Duff, Monks-Leeson, and Galey, 2012; Korkeamäki and Kumpulainen, 2019; Late and Kumpulainen, 2022) to show how such knowing is grounded in the material arrangement of records.

Systems and tools that allow for not only discovery but also actions that make the record workable are particularly important in the light of the growing numbers of researchers adopting an *ex situ* mode of research. As researchers seek to remove materials from the archives to continue their research elsewhere, practices such as gathering, organising, storing, and configuring are central to how the researcher is able to enact the archives. In this work, I have gone beyond previous discussion of these activities as facilitating research beyond the archives to consider how these activities enact the archives for the researcher *ex situ*. This has shown how the researcher's practices can be considered as a part of the archives and suggests that these should be an integral part of how archival tools and services are delivered.

7.4.3 The archives as a “cut”

In this work I have also described how the archives is enacted through the apparatus, a set of material-discursive practices that make a particular “cut” that determines what matters and what gets to matter (Barad, 2007: 148) when generating meaning from archival records. Viewing the archives as enacted through different cuts implies that there are different archives for those who create, keep, use, and are recorded in the archives (Douglas, Ballin, and Lapp, 2022: 5). Here, we can think of archives as *multiple*: organised, managed, and used, in various ways through different networks of relations. This this goes beyond merely perspective (cf. Mol, 2002: 33, 53-55) to actually constitute a different archives for all those who come into contact with it.

Adopting this position allows us to avoid a dualism that separates an objective meaning “of” the record, maintained by the archives, and a subjective meaning “for” the record, interpreted by the researcher (Ketelaar, 2012: 23). Instead, all meanings are recognised as situated and partial, generated through a particular practice: whether those of the researcher or those of the archivist. This position allows us to continue to recognise an “archival” meaning as one that draws primarily on those relations maintained through archival practice, while accounting for how different meanings emerge through the wider relations that also enact the record.

This more expansive understanding of the archives thus allows for us to address the fluidity of the archives in both practice and design. If we recognise that the archives is not one single thing, but enacted in practice, then we can begin to consider the archives as multiple. This opens up opportunities to consciously address which cuts are taken through the archives and thus provides another way of taking a human-centred approach to archival theory, practice, and design.

7.4.4 Blurring the boundaries of the archives

A further implication of understanding the archives as enacted in practice is the challenge that this presents to the notional boundaries of the archives. Whether we consider the researcher to be within or beyond the archives depends on how this boundary is enacted. When considered through archival practice, the researcher’s interpretation of the record lies outside of the archives (Menne-Haritz, 2001: 61). Yet when considered through the researcher’s practice we see how the archives is extended to incorporate different actions, materials, and locations to enact the record not only in relation to the archives but also to the researcher’s own work.

Therefore, whether the researcher is within or beyond the archival boundaries depends on what cut is taken: it is a case of recognising the cut appropriate to our purposes. When considering the design

of the archives for the archivist, it may be appropriate to focus on archival practice and consider the researcher to lie outside of this. Conversely, when designing the archives for the researcher, research activities can and should be incorporated beyond finding information, to encompass what researchers actually do with records. The boundaries of the archives are thus forever changing: what we may consider to be within or beyond the archives depends on the cut that is being enacted and for what purpose.

7.5 SUMMARY OF DISCUSSION

In this discussion, I have shown how the researcher enacts the archives for themselves, both in situ and ex situ. In doing so, the researcher draws on not only those relations maintained by the archives but extends the relations through which the record is understood by bringing it into contact with other materials, as well as by coordinating activities different to those of the archivist.

By understanding how the archives are enacted in and through research practice, I have developed our knowledge of ex situ research as proposed by Trace and Karadkar (2017), while also differentiating this from an understanding of whether the researcher is “within” or “beyond” the archives. Here, I have shown how in enacting the archives in their own practice, the traditional boundaries of the archives – set at the limits of the repository that culminates in providing access to the records – are challenged. The boundaries of the archives as enacted in the researcher’s practice do not readily align with an in situ or ex situ mode of research: instead, I have shown how being within or beyond the archives is enacted through the cut taken by the researcher that defines the record in relation to the archives or through alternative material arrangements.

In taking a relational, practice-oriented approach to the archives I have thus provided an alternative way of understanding the archives from the traditional, mediational perspective implicit in previous archival user studies. Rather than considering the archives from different perspectives, understanding the archives as it is enacted by a particular cut or apparatus allows us to consider what the archives *is* for different people. This creates an opportunity to incorporate relations beyond those ordinarily considered as part of the archives, while allowing these to remain distinct from an archival position by considering whose practices the archives is being enacted through. This more expansive position is here based on the practices of humanities researchers, but has wider potential implications for all those whose practices relate to the archives.

8 CONCLUSION

8.1 OVERVIEW

I began this work with three, interwoven research objectives: to improve our understanding of how humanities researchers generate a meaning from the record in practice; to provide a basis on which to better integrate the researcher within conceptualisations of the archives; and to challenge the notional boundaries of the archives.

To address these, the following three research questions were identified. These were developed iteratively over the course of this research. While the overarching questions remained the same, during each study several sub-questions were added to refine the scope of this work. As such, the finalised research questions were presented as follows:

- RQ1: How do the researcher's practices generate a meaning from the record and archives?
 - RQ1.1: What key activities, beyond information acquisition, do humanities' researchers engage in when conducting archival research?
 - RQ1.2: How does the researcher enact the archives through these activities as part of a wider practice?
 - RQ1.3: How do activities undertaken beyond the archives differ from those undertaken within?
- RQ2: How do archival practices (i.e. those practices that sustain relations between records) shape the meaning that the researcher generates from the record?
 - RQ2.1 In what ways do the researcher's practices extend, alter, or break with archival practices of representation, such as description and arrangement?
- RQ3: How might the practices of humanities researchers be understood as part of the archives?

I will begin by explaining in brief how this thesis addresses each of these research questions, before moving on to a more in-depth discussion of the main areas in which this thesis has contributed.

RQ1: How do the researcher's practices generate a meaning from the record and archives?

This research has demonstrated how the researcher's practices generate meaning from archival records. I have done so through discussion of seven activities that contribute to humanities research practice: **scanning, in-depth reading, gathering, organising, storing, configuring, and creating**. While scanning, reading, gathering, and organising have been previously discussed in the literature (e.g. Antonijević and Cahoy, 2018; Kamposiori, Warwick, and Mahoney, 2018; Palmer and Neumann, 2002; Palmer, Tefteau, and Pirman, 2009), storing, configuring, and creating are all activities that have been

rarely considered in relation to the archives and knowledge creation before. Such activities extend our understanding of research practice using archival materials and are thus important for the additional insight they provide into how research is being conducted both in situ and ex situ.

Furthermore, these activities have gone beyond merely showing how the researcher conducts archival research, to demonstrate how the archives is enacted in and through research practice. In particular, the findings of this research have shown how the researcher draws on the archival arrangement in order to generate a notionally archival meaning from the relations between records. Nonetheless, the difference between research practice and archival practice – as seen in the activities undertaken by researchers and the additional relations they draw on to understand the record – likewise means that the archives enacted by the researcher is demonstrably different to that of the archivist. This points to the importance of incorporating a human-centred approach in archival theory, design, and practice that is capable of supporting researchers and other archival end-users to enact the archives in ways that help them create valuable novel insights.

While the researcher undertakes different activities in situ and ex situ, these can be considered holistically to comprise a broader research practice that enacts the archives for the researcher. Within the archives, activities such as scanning, gathering, and organising are aimed at removing materials from the archives to work on elsewhere; beyond the archives, storing and configuring records sought to recreate relations between records maintained by the archives and thus partially recreate the in situ experience. However, this practice remains processual, in that it is possible to observe the researcher iteratively move away from an exclusively archival meaning from the record as they seek to apply this within their own work. As reflected in previous work (e.g. Sinn and Soares, 2014) this is not a linear progression but a messy and entangled process that sees the researcher frequently switching between a meaning generated through the archival apparatus and one that centres on their own work. When considering the design of future archives, we should aim not to disentangle this process but embrace the fluidity of the archives to generate different ways of knowing for different users.

RQ2: How do archival practices (i.e. those practices that sustain relations between records) shape the meaning that the researcher generates from the record?

In this work, I have demonstrated how archival practice shapes the meaning generated from the record through the reproduction of the archival arrangement in the researcher's own work. Arranging, as a key archival activity (e.g. Meehan, 2014; Yakel, 2003), is shown to be central to how the researcher enacts the archives for themselves. The importance of this practice is sustained across the traditional

boundaries of the archival repository, with the researcher using the archival arrangement to enact the archives both in and ex situ.

The archival arrangement is utilised by researchers in activities such as scanning and in-depth reading to understand the record through those relations that are maintained by the archives. These are then sustained through the researcher's own practices, including gathering, organising, and storing, that enable the researcher to enact the archives ex situ. Nonetheless, as in the archives, in the researcher's personal collections this arrangement provides only potential relations between records until this is enacted through activities such as configuring. This shows how archival practice alone is not enough to make the archives *happen*; it is reliant on the practices of the researcher to act on these relations and generate meaning from them.

Meaning, then, is not something that is unlocked by a particular researcher taking a particular perspective but can be acknowledged as generated through a specific enactment of the archives. This allows us to move beyond a relativist position that recognises a meaning "of" the record as well as their meanings "for" something or someone (Ketelaar, 2012: 23) and towards a multiplicity that recognises how each practice produces a different archives (cf. Mol, 2002: 53-55, 84) that speaks to a different meaning. In doing so, we can recognise the importance and overlapping nature of archival practice and research practice, yet acknowledge how these feature in distinct apparatuses that produce different meanings for the record.

RQ3: How might the practices of humanities researchers be understood as part of the archives?

By addressing RQ1 and RQ2 through a practice-oriented approach I have established a basis on which the researcher's practices might be understood as part of the archives. Through RQ1, I have shown how the activities of the researcher enact the archives to generate a meaning particular to their work. In answering RQ2, I have shown how the researcher replicates the archival practice of arrangement to continue to generate a notionally archival meaning from the record. This demonstrates how knowing occurs in action, by enacting the relations between records; as well as expanding these relations beyond the purely archival to unite the record as part of a wider landscape of social, historical, and cultural relations.

If we acknowledge that each practice produces a different archives, then the practices of the researcher are integral to enacting the archives for themselves. Thus the archives is not just something that the researcher uses to access the record, but is constituted in a wider set of relations that the researcher activates when generating knowing for the record. This provides an opportunity not only to acknowledge the researcher as part of the archives, but also to connect the archives as part of these

wider relations. In taking a relational, practice-oriented approach, it is possible not only to “zoom in” (Nicolini, 2009, 2017) to the individual activities that we may wish to consider in the design of the next-generation of digital archives, but also to “zoom out” to the web of relations that the archives is part of. This zooming out has broader implications for the archives: if the boundaries of the archives are enacted in practice, then such boundaries have the potential to extend much further than previously imagined when they are considered through the researcher’s practice.

8.2 ENACTING THE ARCHIVES

This research has demonstrated how a relational approach provides a suitable alternative to the mediational focus employed in many previous studies of humanities research practice in the archives. The practice-orientation adopted here addresses the calls for a more relational position to be taken on the archives (Douglas, Ballin, and Ahmadbeigi, 2021; Douglas, Ballin, and Lapp, 2022; Sexton, Shepherd, and Duff, 2023) by focusing on how the practices of humanities researchers enact the archives for themselves. This complements previous studies that have adopted a practice-orientation to investigate the archives from the position of archivists (Ivanov, 2019) and records creators (Colwell, 2020); while to date, this is the first work that has adopted this empirical and theoretical lens to understand the work of humanities researchers.

By adopting this position, I have shown how the archives is enacted through the practices of humanities researchers. This differs from the archives as enacted by archivists: the researcher incorporates different activities to perform those relations maintained by the archives in new ways, as well as drawing on those relations traditionally considered to lie outside of the archives. This both provides a complementary position from which we can consider the archives as enacted by the practices of the researcher rather than the archivist, as well as informing our understanding of how humanities researchers generate meaning from archival records.

The archives have traditionally been considered from the position of the archivist. In taking the position that practices enact the archives in different ways, this work opens up an opportunity to reconsider what the archives *is* (Mol, 2002: 53-55). Whereas the archives have been defined through selection, arrangement, description, and disposal, here it is enacted in scanning, in-depth reading, gathering, organising, storing, configuring, and creating. These different sets of activities demonstrates how the archives can be understood as material-discursive practices (Barad, 2007: 146) but constitute entirely different apparatus for doing so.

Therefore, this work likewise provides further insight into how meaning is generated from archival records. This enables us to recognise meaning as not just *found* or *interpreted* but enacted through

such material arrangements in practice; and thus provides a shift in thinking from a paradigm that focuses on providing access to the record (Menne-Haritz, 2001) to one that seeks to support meaning-making activities.

8.3 UNDERSTANDING ARCHIVAL RESEARCH BEYOND INFORMATION DISCOVERY

Previous archival user studies have rarely extended beyond discovery in general, and seeking in particular (Rhee, 2015; Sundqvist, 2015). In focusing on activities beyond seeking, this research has furthered understanding of how archival records are used in research. By considering the material as well as social dimensions of practice, I have identified several new activities for archival research, while reframing our understanding of those activities previously discussed in the literature.

Activities such as scanning, in-depth reading, gathering, organising and storing have previously been recognised as important activities in humanities research (e.g. Antonijević and Cahoy, 2018; Kamposiori, Warwick, and Mahoney, 2018; Palmer and Neumann, 2002; Palmer, Tefteau, and Pirman, 2009). Although scanning and in-depth reading have been recognised as having a broadly interpretive role by aligning information with the researcher's interests (Palmer and Neumann, 2002: 99), gathering, organising, and storing have primarily been noted for enabling continued access to primary sources for researchers once they have left the repository (Rutner and Schonfeld, 2012; Trace and Karadkar, 2017). In this research I have shown that such activities go far beyond this to enact the archives in such a way that makes the record relevant and actionable in the researcher's own work, whether they are working in situ or ex situ. Activities such as gathering, organising, and storing are therefore shown to be integral to generating meaning during humanistic archival research.

I have also identified two further activities that contribute to this process that have not been widely discussed in the literature in relation to the archives: configuring and creating. Here, I have shown configuring to be an essential activity for humanities researchers working with archival materials. It allows them to enact the record both as part of the archives, as well as through broader relations that shape their own topic of study. Likewise, creating new documents was established as an important activity through which researchers move away from generating a meaning from the record through its archival relations. Instead, creating provided researchers with an opportunity to anchor the record in another material arrangement: one more permanent than that provided through configuring the record, that could maintain a certain way of knowing the record through different relations. While this bears some similarity to the activity of assembling, described first by Ellis (1993: 483) and later developed further by Palmer, Tefteau, and Pirmann (2009: 22) here this is expanded to incorporate not only text but also images of records and other artefacts.

The activities discussed in this thesis are therefore notable for their ability to address the material dimensions of practice. While previous activities have largely been discussed in terms of how researchers think about records or other primary sources, here I have considered these in relation to what researchers *do* with records. This opens up a new line of thinking for investigations into research practice that acknowledges the materiality of archival and other primary source collections.

8.4 FROM IN SITU AND EX SITU TO WITHIN AND BEYOND

Although the studies presented in this thesis were conducted both in the archival reading room and in the researcher's personal research space, the orientation of many of these activities to working with records elsewhere means that these have provided additional evidence for the popularity of an *ex situ* mode of research. Nonetheless, I have also gone beyond this to show how the researcher continues to enact the record in relation to the archives even when working *ex situ*. This provides an empirical basis on which we can consider the researcher to extend the boundaries of the archives beyond what has traditionally been considered in theory and practice.

In this research I have provided a holistic picture of *ex situ* research, from gathering records within the archives to using these beyond it. This has developed the proposed *ex situ* research as described by Trace and Karadkar (2017: 500) by linking activities undertaken within the archives to those carried out beyond it. Activities such as scanning and reading within the archives seek to identify materials to be gathered and organised so that they can be used once the researcher has left the reading rooms. These are stored and configured in particular arrangements, so that researchers can interpret them both in relation to the archives and the wider set of relations that inform the researcher's work. Through these activities I have thus contributed to an understanding of *ex situ* research that has developed Trace and Karadkar's original definition by providing a rich and detailed insight into the types of activities necessary to undertake archival research outside of the reading rooms.

Furthermore, in adopting a relational view of the archives it has been possible for me to complicate and extend this picture of *ex situ* research by demonstrating how it goes beyond carrying out analysis at home or in another personal research environment to enacting the archives *ex situ*. This has been particularly evident in the researcher's replication of the archival arrangement, which is activated across activities in order to enact a meaning from the record through the relations that are maintained by the archives.

This demonstrates how the researcher being *within* or *beyond* the archives does not necessarily align with their working *in situ* or *ex situ*. I suggest that those researchers working *ex situ*, when continuing

to enact the archives in their work, can still be considered *within* the archival boundaries. Therefore this position provides an alternative “cut” that opens up the possibility of attending to researcher’s activities beyond the archives in archival theory, practice, and design, as an integral part of the archives. As researchers increasingly work beyond the physical archives, it becomes important to consider how the archives may be enacted elsewhere; as future researchers may well not be confined to the archives at all.

8.5 FUTURE WORK

This research opens up opportunities for future research to be undertaken both inside and outside the archival reading rooms. In focusing on direct interactions with archival records, whether physical, digitised, or born-digital, this research sought to understand what the researcher actually *does* when working with archival records in a practical manner (Orlikowski, 2002: 271). Although suitable for the purposes of this work, this scope meant that the later reuse of notes and other research materials that researchers produced in the course of their work lay beyond the scope of this thesis. Nonetheless, Chapter 5, *Beyond the Archives: Enacting the archives ex situ* suggested that the later use of these records merged into non-archival specific research practices such as assembling, which Palmer, Tefteau, and Pirmann (2009: 22) have used to describe the beginnings of producing a text as a research output. To strengthen the connection between these activities as part of a wider humanities research process, it would be appropriate to study how researchers transform these notes and wider materials through their further work.

Future work based on this research could likewise be conducted within the archival reading rooms to further examine the role of newly identified activities such as configuring and creating. These activities emerged during the second study: while there was not enough evidence to identify these in the first study carried out within the archives, certain examples captured in the interviews suggest that this occurs. Therefore, future work in this area could return to the archives to examine how the use of various devices available in the reading rooms are shaping how researchers work in situ. While there is some existing research into the use of digital devices in the reading rooms (Cox and Archives Students, 2007; Milligan, 2020; Trace and Karadkar, 2013) these have tended to focus on the self-digitisation of records for use elsewhere. It would be useful to confirm the findings in this work that suggest researchers are also using these devices to disrupt the relations between records temporarily, and understand the records as part of alternative material arrangements before leaving the archives.

Finally, this research opens up the possibility for future work adopting a relational perspective to conduct further human-centred research within the archives. Other types of end-user groups are likely

to take further “cuts” through the archives that enact it in different ways. For example, end-users at The National Archives are not limited to historical users but may include administrative users, such as government departments, or evidentiary users including lawyers and journalists, seeking evidence amongst documents they retain. Each group will enact the archives in different ways through their practice: further research conducted from a relational perspective could help to develop a deeper understanding of what the archives *is* for each group of end-users and thus support the design of future archival tools, services, and practice.

8.6 SUMMARY OF CONCLUSIONS

Through this work I have demonstrated why researchers should be considered as an integral part of the archives. The actions that the researcher takes *make the archives happen*: just as the archivist is responsible for undertaking practices that shape the archives as it is encountered by the researcher, the researcher enacts the archives for themselves in ways that make and remake the archives again and again. The archives is not a fixed entity at the end of a long process of use and reuse of documents, but part of an ongoing web of relations that continue to produce and reproduce meaning through partial, situated ways of knowing.

For researchers, the archives does not stop at the repository but continues to be entangled with a vast expanse of primary sources representing wider social, historical, and cultural relations. This more expansive view of the archives offered by practice allows us to zoom in and out of the archives as is necessary; to follow the web of relations radiating outwards (Gherardi, 2019: 7) to other collections that can be drawn on to constitute a particular topic or object of research; as well as inwards, to specific activities that designers may wish to accommodate in the affordances of the tools we use not only to discover but also to make archival collections actionable in the researcher’s work.

Understanding the archives through practice means recognising how such practices make the archives a material reality (cf. Gherardi, 2019: 6). In adopting such a position we allow ourselves to recognise the multiplicity of the archives: the archives that one person encounters can never be the same as another. I hope that in demonstrating how the archives is enacted by the researcher this work creates further opportunities to understand “the archives” through different practices: encompassing those who create, keep, use, and are documented in records (Douglas, Ballin, and Lapp, 2022: 5). The implications of this extend far beyond designing the next generation of archival systems, to prompt researchers from disciplines such as Archival Studies, Information Science, and Human Information Interaction to re-think the scope and boundaries of the archives and thus provide a fresh perspective on what the archives is and what it might be.

APPENDICES

APPENDIX 1

Study 1: Consent Form, Information Sheet & Ethics Applications



City, University of London
Northampton Square
London
EC1V 0HB
United Kingdom

T +44 (0)20 7040 5060

Participant Consent Form

Title of Study: Making meaning: exploring researchers' construction of meaning in archives

1	I confirm that I have had the project explained to me, and I have read the Participant Information Sheet, which I may keep for my records. I understand this study will involve:	
	1.1 Being observed carrying out my regular research activities	
	1.2 Having my research activities audio-recorded	
	1.3 Having my research activities screen-recorded/screen-captured if necessary	
	1.4 Being interviewed on the research activity carried out and my wider attitudes to the archival research process	
	1.5 Having that interview audio-recorded	
	1.6 Having my photograph taken	
2	This information will be held by City as data controller and processed for the following purpose: <i>Public Task</i> . The legal basis for processing your personal data will be that this research is a task in the public interest, that is City, University of London considers the lawful basis for processing personal data to fall under Article 6(1)(e) of GDPR (public task) as the processing of research participant data is necessary for learning and teaching purposes and all research with human participants by staff and students has to be scrutinised and approved by one of City's Research Ethics Committees.	
3	I understand that no information that could lead to the identification of any individual will be shared with any other party other than the researcher and those involved in marking and moderating the coursework produced based on those findings.	
4	I understand that data from this study will be stored securely on an encrypted, password-protected computer and deleted in line with City's data retention policy.	
5	I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the study without being penalised or disadvantaged in any way.	
6	I agree to City recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my consent is conditional on City complying with its duties and obligations under the General Data Protection Regulation (GDPR).	
7	I agree to take part in this study	

Name of participant [printed]:

Signature:

Date:

Name of researcher [printed]

Signature:

Date:

Participant Information Sheet

Title of study: Making meaning: exploring the construction of meaning within archives

Principle Investigator: Alexandra Leigh

Supervisors:

City, University of London: Dr Stephann Makri; Dr Alex Taylor

The National Archives UK: Dr Alec Mulinder; Ms Sarra Hamdi

We would like to invite you to take part in a research study that seeks to understand how users construct meaning in archives.

Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The study will investigate how users construct meaning while interacting with archives, archival tools and archival information. We wish to explore the research process that takes place within archives and how researchers create meaning from archives throughout that process.

Why have I been invited?

You have been invited to take part in this study because you are carrying out archival research at The National Archives UK, in Richmond. You are also an adult (over the age of 18).

Do I have to take part?

Participation is voluntary and you can choose whether to take part or not. You can choose not to participate in part or all of the study. You can withdraw at any stage of the study without being penalised or disadvantaged in any way. If you do decide to take part you will be asked to sign a consent form. You will still be free to withdraw at any time and without giving a reason.

What will happen if I take part?

You will be asked to carry out your regular research activities while being observed by a researcher. If you need to use a laptop or computer, we may ask that you do so on a separate machine in order to capture your actions (screen-recording or screen-capture). We may ask you to comment on what you are doing. Observations will be audio-recorded and interviewers may take handwritten notes. Researchers may also take photographs as you carry out your research activities; you may ask not to be included in these images.

Following your research, we will conduct a short interview about the research process that you have just carried out and your wider experiences of archival research. The interview will also be audio-recorded and interviewers may take handwritten notes. The total process will take around 1 hour.

What do I have to do?

Please carry out your regular research activities as normally as possible; if prompted, describe your actions as fully as possible. Please note, there are no wrong answers and any information you can provide will be helpful.

During the interview, please answer the questions asked as fully and accurately as possible. However, you are still free not to answer any questions if you would rather not do so.

What are the possible disadvantages and risks of taking part?

There are no foreseeable significant disadvantages or risks in taking part in this study. We recognise that if you are researching a personal or family-related topic (e.g. genealogy) there is a small risk you may become distressed discussing your research. If this does occur we will direct you to appropriate support services.

Your personal data, comments, and any other information you provide will be de-identified. In the case of genealogical research, where family names could potentially identify you, personal data found in archival records will be anonymised or redacted.

What are the possible benefits of taking part?

This research will help us to understand archival research activities and may feed into the design of future archival systems to better support researchers.

What will happen when the research study stops?

Audio recordings will be listened to by the primary researcher and de-identified. Screen-capture and screen-recordings will be viewed by the primary research and de-identified. Photographs will be used to aid analysis and may be replicated in publications; any photographs containing identifiable individuals will not be used for publications.

Data may be shared with the primary researcher's supervisory team at City, University of London and The National Archives UK. Data will be retained only for as long is necessary; it will be deleted in line with City's research data retention policy. Findings from interviews and screen-recordings/screen-capture will be de-identified in the event of publication.

Will my taking part in the study be kept confidential?

The data gathered in this study will be kept confidential. It will be de-identified whenever possible and stored electronically on an encrypted device, in a password protected location.

What will happen to results of the research study?

The results of the study will feed into the primary researcher's PhD topic, 'Beneath the archives: understanding user's mental models of digital archives.' De-identified results may also be used in academic publications and presentations.

What should I do if I want to take part?

Read, initial, and sign the participant 'informed consent' form. Please carry out your research as naturally as possible, even though you are being observed.

What will happen if I do not want to carry on with the study?

You are free to withdraw from the study at any time, without any explanation and free from penalty.

Data Protection Privacy Notice: What are my rights under the data protection legislation?

City, University of London is the data controller for the personal data collected for this research project. Your personal data will be processed for the purposes outlined in this notice. The legal basis for processing your personal data will be that this research is a task in the public interest, that is City,

University of London considers the lawful basis for processing personal data to fall under Article 6(1)(e) of GDPR (public task) as the processing of research participant data is necessary for learning and teaching purposes and all research with human participants by staff and students has to be scrutinised and approved by one of City's Research Ethics Committees.

What if I have concerns about how my personal data will be used after participating in the research?

If you have any problems, concerns or questions about this study, please ask to speak to a member of the research team. If you are dissatisfied with the response, you can contact the Data Protection Officer, Dr William Jordan at dpo@city.ac.uk. Further guidance can be sought from the Information Compliance Team at dataprotection@city.ac.uk or phone 0207 040 4000. If you are dissatisfied with City's response you may also complain to the Information Commissioner's Office at www.ico.org.uk.

What if there is a problem?

If you have any problems, concerns or questions about this study, you should ask to speak to a member of the research team. If you remain unhappy and wish to complain formally, you can do this through City's complaints procedure. To complain about the study, you can phone 020 7040 3040. You can then ask to speak to the Secretary to Senate Research Ethics Committee and inform them that the name of the project is: **'Making meaning: exploring the construction of meaning within archives.'**

You could also write to the Secretary at:

Anna Ramberg Research Governance & Integrity Manager

Research & Enterprise City, University of London Northampton Square London EC1V 0HB

Email: Anna.Ramberg.1@city.ac.uk

City holds insurance policies which apply to this study. If you feel you have been harmed or injured by taking part in this study you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Who has reviewed the study?

This study has been approved by City, University of London – Computer Science Research Ethics Committee.

For further information about the research or if you have any queries or concerns, please contact:

Alexandra Leigh

alexandra.leigh@city.ac.uk

Dr Stephann Makri

stephann.makri.1@city.ac.uk

City, University of London Northampton Square
London
EC1V 0HB

Sarra Hamdi

sarra.hamdi@nationalarchives.gov.uk

The National Archives
Kew, Richmond
Surrey
TW9 4DU

Thank you for taking the time to read this information sheet and for taking part.

Ethics ETH1920-0141: Ms Alexandra Leigh (Low risk)

Date Created	29 Aug 2019
Date Submitted	30 Aug 2019
Date forwarded to committee	30 Aug 2019
Academic Staff	Ms Alexandra Leigh
Student ID	180051036
Category	Doctoral Researcher
Supervisor	Dr Stephann Makri
Project	Within and beyond: enacting the archives through the practices of humanities researchers
School	School of Science & Technology
Department	Department of Computer Science
Current status	Approved

Ethics application

Risks

R1) Does the project have funding?

No

R2) Does the project involve human participants?

Yes

R3) Will the researcher be located outside of the UK during the conduct of the research?

No

R4) Will any part of the project be carried out under the auspices of an external organisation, involve collaboration between institutions, or involve data collection at an external organisation?

Yes

R5) Does your project involve access to, or use of, material that could be classified as security sensitive?

No

R6) Does the project involve the use of live animals?

No

R7) Does the project involve the use of animal tissue?

No

R8) Does the project involve accessing obscene materials?

No

R9) Does the project involve access to confidential business data (e.g. commercially sensitive data, trade secrets, minutes of internal meetings)?

No

R10) Does the project involve access to personal data (e.g. personnel or student records) not in the public domain?

No

R11) Does the project involve deviation from standard or routine clinical practice, outside of current guidelines?

No

R12) Will the project involve the potential for adverse impact on employment, social or financial standing?

No

R13) Will the project involve the potential for psychological distress, anxiety, humiliation or pain greater than that of normal life for the participant?

No

R15) Will the project involve research into illegal or criminal activity where there is a risk that the researcher will be placed in physical danger or in legal jeopardy?

No

R16) Will the project specifically recruit individuals who may be involved in illegal or criminal activity?

No

R17) Will the project involve engaging individuals who may be involved in terrorism, radicalisation, extremism or violent activity and other activity that falls within the Counter-Terrorism and Security Act (2015)?

No

Applicant & research team

T1) Principal Applicant

Name

[Ms Alexandra Leigh](#)

T2) Co-Applicant(s) at City

T3) External Co-Applicant(s)

T4) Supervisor(s)

[Dr Stephann Makri](#)

[Dr Alex Taylor](#)

T5) Do any of the investigators have direct personal involvement in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

No

T6) Will any of the investigators receive any personal benefits or incentives, including payment above normal salary, from undertaking the research or from the results of the research above those normally associated with scholarly activity?

No

T7) List anyone else involved in the project.

Dr Alec Mulinder (The National Archives); Ms Sarra Hamdi (The National Archives) - external PhD co-supervisors.

Project details

P1) Project title

Making meaning: exploring researchers' construction of meaning in archives

P1.1) Short project title

Making meaning in archives

P2) Provide a lay summary of the background and aims of the research, including the research questions (max 400 words).

BACKGROUND

This exploratory study is part of the Collaborative Doctoral Partnership project, 'Beneath the Archive: understanding users' mental models of digital archives to inform user-centred design for humanities research.' This project has been developed with and is co-supervised by The National Archives UK. As a PhD student with The National Archives UK no formal consent is required to collect data in the host institution.

The study has been designed to generate a holistic view of archival research processes by eliciting snapshots of different stages of archival research. This will highlight stages of the research process that require further in-depth exploration in order to understanding the construction of meaning in archives.

AIMS

This exploratory study aims to establish which activities within the archival research process are key to making meaning in archives. This will provide a direction for further research.

The study also seeks to establish whether performance theory, in particular the concept of repertoire as defined by Taylor (2003) is a good fit for understanding information behaviour activities of researchers in the archive.

RESEARCH QUESTIONS

What activities do researchers carry out to construct meaning during archival research?

Do archival researchers construct meaning throughout their research process or is it concentrated in certain activities?

Are the same meaning-making activities utilised during different stages of archival research?

Do users construct meaning at the level of the record, folder, or archive? Do they construct meaning between these levels?

Does performance theory, in particular repertoire, provide an adequate lens for describing meaning-making activities within the archive?

P4) Provide a summary and brief explanation of the research design, method, and data analysis.

RESEARCH DESIGN

This is an exploratory study that will adopt an inductive, qualitative approach to elicit areas of the archival research process that require further investigation for the understanding of meaning-making in archives. It will also deductively apply ideas and concepts from performance theory, i.e. repertoire, to test the fit of this theory for describing archival research.

RESEARCH METHOD

A maximum of 20 participants will be recruited through the reading rooms at The National Archives, UK. Participants will be approached during the usual conduct of their research activities in order to ensure a naturalistic setting. Examples of research activities to be observed might include: users finding items using Discovery (The National Archives' catalogue); contextual research into a topic using Google; viewing physical and digital records. Data saturation will determine the exact number of participants recruited (i.e. the point at which additional participants no longer adds additional insight that can be used to address the research questions).

Participants will be sampled based on their current stage of research, in order to provide a holistic view of the research process through 'snapshots'. This will ensure minimal disturbance to researchers' usual activities. The research process has been divided into three broad stages, based on Meho and Tibbo's (2003) adaptation of Ellis' model of information-seeking behaviour of social scientists. These are Searching, Accessing, and Processing. While Meho and Tibbo use this model to describe information-seeking, some of the activities they identify under Processing could also be described as 'use' (e.g. Information-Managing, Synthesising, Writing): the model is therefore appropriate to gaining a holistic view of archival research. An iterative approach to data-gathering will be used: any additional stages or activities strongly identified by participants in early on will be added to later sessions.

Think-aloud observations and semi-structured in-person interviews will be used to assess how users approach archival research and what meaning-making activities occur within the three stages identified above. Observations will be recorded using a combination of audio and screen-recording software; interviews will be audio-recorded.

DATA ANALYSIS

A Thematic Analysis approach (Braun & Clarke, 2006) will be used to identify important themes and sub-themes relating to the construction of meaning in archives. The analysis of user's meaning-

making activities will be inductive in approach, focusing on generating themes surrounding meaning-making from the think-aloud observations and interviews. In determining the fit of performance theory to the data observed, a deductive approach will be adopted: this will generate themes from key aspects of performance theory (e.g. 'twice-performed actions': Schechner, 2013) and related to participants' descriptions of their meaning-making processes.

Analysis will be supported by the Qualitative Data Analysis tool NVivo.

P4.1) If relevant, please upload your research protocol.

P5) What do you consider are the ethical issues associated with conducting this research and how do you propose to address them?

Research in archives can often be highly personal, for example for genealogical researchers investigating their family history. This has a minimal chance for participants to become distressed. While this would generally fall within the bounds of their usual archival activities, participants may become upset when discussing their research in interview. If participants do become distressed during the study at any time, the interview will be terminated, I will remain with them until they are no longer distressed and direct them to appropriate support services.

Genealogical researchers may be studying relatives which could potentially identify them even if the participant data is anonymised. As such any reference to individuals being researched will also be anonymised or redacted in the study data.

P6) Project start date

30 Sept 2019

P7) Anticipated project end date

31 Jan 2020

P8) Where will the research take place?

The National Archives UK, Richmond.

P10) Is this application or any part of this research project being submitted to another ethics committee, or has it previously been submitted to an ethics committee?

No

External organisations

E1) Provide details of the external organisation/institution involved with this project.

The National Archives UK, Richmond. Joint supervisors of the Collaborative Doctoral Award, 'Understanding users' mental models of digital archives to inform user-centred design for humanities research.'

E2) If applicable, has permission to conduct research in, at or through another institution or organisation been obtained?

Yes

E2.1) Provide details and attach the correspondence.

PhD project is a Collaborative Doctoral Award, jointly administered and supervised by The National Archives. As a PhD student currently registered with The National Archives, no formal consent is required to collect data at the host institution.

Human participants: information and participation

The options for the following question are one or more of:

'Under 18'; 'Adults at risk'; 'Individuals aged 16 and over potentially without the capacity to consent'; 'None of the above'.

H1) Will persons from any of the following groups be participating in the project?

None of the above

H2) How many participants will be recruited?

20

H3) Explain how the sample size has been determined.

This is the maximum number of participants that will be recruited, based on the principle of data saturation whereby no more participants are recruited once adding new participants does not yield additional insight.

H4) What is the age group of the participants?

Lower Upper

18

H5) Please specify inclusion and exclusion criteria.

No participants to be excluded on the basis of age, gender, ethnicity, race, disability, sexuality, religion or any other factor. No participants will be recruited under the age of 18.

H6) What are the potential risks and burdens for research participants and how will you minimise them?

See earlier for potential emotional effect on participants researching personal topics and redaction of potentially identifiable data from archival research.

H7) Will you specifically recruit pregnant women, women in labour, or women who have had a recent stillbirth or miscarriage (within the last 12 months)?

No

H8) Will you directly recruit any staff and/or students at City?

None of the above

H8.1) If you intend to contact staff/students directly for recruitment purpose, please upload a letter of approval from the respective School(s)/Department(s).

H9) How are participants to be identified, approached and recruited, and by whom?

Participants will be identified, approached and recruited at The National Archives during the normal course of their research. The principle researcher will identify and recruit participants.

H10) Please upload your participant information sheets and consent form, or if they are online (e.g. on Qualtrics) paste the link below.

H11) If appropriate, please upload a copy of the advertisement, including recruitment emails, flyers or letter.

H12) Describe the procedure that will be used when seeking and obtaining consent, including when consent will be obtained.

All details on the participant information sheet and informed consent form will be explained verbally to participants in person, before the study begins, by the principle researcher. Participants will be given as much time as they need to read the forms and ask questions before signing them. Participants will receive a signed copy of the consent form as soon as they have signed both copies. Participants will be told about the aim, method and format of the study before the study begins, when recruiting participants.

H13) Are there any pressures that may make it difficult for participants to refuse to take part in the project?

No

H14) Is any part of the research being conducted with participants outside the UK?

No

Human participants: method

The options for the following question are one or more of:

'Invasive procedures (for example medical or surgical)'; 'Intrusive procedures (for example psychological or social)'; 'Potentially harmful procedures of any kind'; 'Drugs, placebos, or other substances administered to participants'; 'None of the above'.

M1) Will any of the following methods be involved in the project:

None of the above

M2) Does the project involve any deceptive research practices?

No

M3) Is there a possibility for over-research of participants?

No

M4) Please upload copies of any questionnaires, topic guides for interviews or focus groups, or equivalent research materials.

M5) Will participants be provided with the findings or outcomes of the project?

Yes

M5.1) Explain how this information will be provided.

Participants will be given the option to receive notification of any published research paper via email or post. Personal data for this purpose will be stored in a password protected document on an encrypted device.

M6) If the research is intended to benefit the participants, third parties or the local community, please give details.

M7) Are you offering any incentives for participating?

Yes

M7.1) Please give details, justifying their type and amount.

£10 voucher per participant for The National Archives shop and/or cafe. This is in line with usual incentives provided by the The National Archives for user testing or focus groups.

M8) Does the research involve clinical trial or clinical intervention testing that does not require Health Research Authority or MHRA approval?

No

M9) Will the project involve the collection of human tissue or other biological samples that does not fall under the Human Tissue Act (2004) that does not require Health Research Authority Research Ethics Service approval?

No

M10) Will the project involve potentially sensitive topics, such as participants' sexual behaviour, their legal or political behaviour, their experience of violence?

No

M11) Will the project involve activities that may lead to 'labelling' either by the researcher (e.g. categorisation) or by the participant (e.g. 'I'm stupid', 'I'm not normal')?

No

Data

D1) Indicate which of the following you will be using to collect your data.

Interviews

Participant observation

Audio/digital recording interviewees or events

Computer-based tasks, screen recording or software instrumentation

D2) How will the the privacy of the participants be protected?

De-identified samples or data

D3) Will the research involve use of direct quotes?

Yes

D5) Where/how do you intend to store your data?

Password protected computer files

Storage on encrypted device (e.g. laptop, hard drive, USB

Storage at City

D6) Will personal data collected be shared with other organisations?

No

D7) Will the data be accessed by people other than the named researcher, supervisors or examiners?

No

D8) Is the data intended or required (e.g. by funding body) to be published for reuse or to be shared as part of longitudinal research or a different/wider research project now or in the future?

No

D10) How long are you intending to keep the research data generated by the study?

10 years, in line with City's institutional guidelines.

D11) How long will personal data be stored or accessed after the study has ended?

For up to 2 years, to allow participants to be sent details of any research outputs if published.

D12) How are you intending to destroy the personal data after this period?

Participant names and details will be stored in an identifying table, encrypted and password protected. This will then be deleted.

Health & safety

HS1) Are there any health and safety risks to the researchers over and above that of their normal working life?

No

HS3) Are there hazards associated with undertaking this project where a formal risk assessment would be required?

No

Ethics ETH1920-0370: Ms Alexandra Leigh (Low risk)

Date Created	18 Oct 2019
Date Submitted	18 Oct 2019
Date forwarded to committee	18 Oct 2019
Academic Staff	Ms Alexandra Leigh
Student ID	180051036
Category	Doctoral Researcher
Supervisor	Dr Stephann Makri
Project	Within and beyond: enacting the archives through the practices of humanities researchers
School	School of Science & Technology
Department	Department of Computer Science
Current status	Approved

Ethics application

Amendments

SA1) Types of modification/s

Change the design and/or methodology of the project, including changing or adding a new research method and/or research instrument

Change project documentation such as protocol, information sheets, consent forms, questionnaires, recruitment materials (please upload the relevant files with highlighted changes)

SA2) Details of modification

New data collection methods:

1. Photography. Still photography of participants and research materials. Revised documentation: additional option on consent form (to have photograph taken); right to opt out of photography explicitly mentioned in participant information sheet.
2. Screen-capture. Still screen capture of participants' computer-mediated research activities. Revised documentation: amended section on screen-recording to include screen-capture on consent form; all instances of screen-recording in participant information sheet amended to refer to screen-capture too.

New recruitment method:

1. Recruitment in advance (in addition to recruitment on the day) via advertisement in The National Archives' Research Newsletter (email only); via posters displayed at The National Archives site in Richmond; and via digital poster shared via The National Archives' social media accounts (Twitter). New materials (poster) attached.

SA3) Justify why the amendment is needed

New data collection methods:

1. Photography: desire to capture similar level of detail to screen-recordings during participants interactions with physical documents.

2. Screen-capture: alternative to screen-recording needed due to an inability to install screen-recording software on either The National Archives' computers in the reading rooms or participants own devices.

New recruitment methods:

1. Recruitment in advance: desire to ensure certain level of participation in the project by asking some participants to sign up in advance.

SA4) Other information

SA5) Please upload all relevant documentation with highlighted changes

Project amendments

P1) Project title

P2) Principal Applicant

Name

P3) Co-Applicant(s) at City

P4) External Co-Applicant(s)

P5) Supervisor(s)

Study 2: Consent Form, Information Sheet & Ethics Applications



City, University of London
Northampton Square
London
EC1V 0HB
United Kingdom

T +44 (0)20 7040 5060

Participant Consent Form



Title of Study: Beyond the Archive: Understanding humanities researchers' information activities in a personal research environment

		Please initial each box
1	I confirm that I have had the project explained to me, and I have read the Participant Information Sheet, which I may keep for my records. I understand this study will involve:	
	1.1 Submitting photographs of my personal research space	
	1.2 Being observed carrying out my regular research activities	
	1.3 Having my research activities video-recorded	
	1.4 Having my research activities screen-recorded	
	1.5 Being interviewed on the research activity being carried out and my wider attitudes to the archival research process	
	1.6 Having that interview video-recorded	
	1.7 Use of direct quotations from interviews	
	1.8 Submitting copies of research materials generated during the observation	
2	This information will be held by City as data controller and processed for the following purpose: <i>Public Task</i> . The legal basis for processing your personal data will be that this research is a task in the public interest, that is City, University of London considers the lawful basis for processing personal data to fall under Article 6(1)(e) of GDPR (public task) as the processing of research participant data is necessary for learning and teaching purposes and all research with human participants by staff and students has to be scrutinised and approved by one of City's Research Ethics Committees.	
3	I understand that no information that could lead to the identification of any individual will be shared with any other party other than the researcher and those involved in marking and moderating the coursework produced based on those findings.	
4	I understand that data from this study will be stored securely on an encrypted, password-protected computer and deleted in line with City's data retention policy.	
5	I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the study without being penalised or disadvantaged in any way.	
6	I agree to City recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my consent is conditional on City complying with its duties and obligations under the General Data Protection Regulation (GDPR).	
7	I agree to take part in this study	

Name of participant [printed]:

Signature:

Date:

Name of researcher [printed]: Alexandra Leigh

Signature:

Date: |

Participant Information Sheet

Title of study: Beyond the Archive: Understanding humanities researchers' information activities in a personal research environment

Principle Investigator: Alexandra Leigh

Supervisors:

City, University of London: Dr Stephann Makri; Dr Alex Taylor

The National Archives, UK: Dr Alec Mulinder; Ms Sarra Hamdi

We would like to invite you to take part in a research study that seeks to understand how users construct meaning from archival materials.

Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The study will investigate how users construct meaning while interacting with archival materials. We wish to understand how humanities researchers interact with archival materials once they have left the physical building e.g. in their home or office. This will identify research practices that users undertake when creating new knowledge from archival materials

Why have I been invited?

You have been invited to take part in this study because you are currently conducting humanities research with archival materials, including but not limited to materials gathered from The National Archives, UK, in Richmond. You are also an adult (over the age of 18) and have access to a device (e.g. laptop, desktop, tablet) that supports video-calling via Zoom.

Do I have to take part?

Participation is voluntary and you can choose whether to take part or not. You can choose not to participate in part or all of the study. You can withdraw at any stage of the study without being penalised or disadvantaged in any way. If you do decide to take part you will be asked to sign a consent form. You will still be free to withdraw at any time and without giving a reason.

What will happen if I take part?

Once you have agreed to take part, first you will be asked to submit photographs of your research space – your home or other personal workspace – via a secure platform, a few days before your scheduled interview date. Instructions will be provided as to what to do and how to submit the photographs. You will then take part in a combined interview and observation session over Zoom, which will take around 90 minutes.

During the interview, you will first be invited to discuss the photographs you have submitted, in the wider context of your research process. You may be asked to share your screen in order to demonstrate how your virtual research space – e.g. your primary device, such as a computer or tablet – is organised and how this supports your research. Finally, you will be asked to carry out a routine research task of your choice that involves the use of archival materials – such as in-depth

reading, note-taking, or writing – while being observed by a researcher. At the end of the session, you will be given the option to submit a copy of any materials you have created during the session, such as notes or an annotated copy of the archival material you were working with.

The interview will be recorded using Zoom. This will record video and audio from your own device, as well as capturing your activities on your screen, allowing the researcher to compare your activities across both physical and virtual spaces. A secondary copy of this video will also be recorded using Panopto screen-capture software.

You will have the option to take part in the study again in three to four weeks' time; and again, six to eight weeks after your initial session. Each will involve repeating only the observation part of the study and will take around 45 minutes. Participation in these later stages of the study are entirely optional; you are free to take part in some or all of the study, or choose not to take part at all.

What do I have to do?

During the interview, please answer the questions asked as fully and accurately as possible. During the observation, please carry out your regular research activities as normally as possible, while describing what you are doing. The researcher may ask questions to elaborate or expand on this; if prompted, please answer as fully as possible.

Please note, there are no wrong answers and any information you can provide will be helpful. However, you are still free not to answer any questions if you would rather not do so.

What are the possible disadvantages and risks of taking part?

There are no foreseeable significant disadvantages or risks in taking part in this study. We recognise that there is a small risk you may become distressed discussing your research, particularly if you are researching a sensitive or personal topic. If this does occur we will give you the option to pause the study and direct you to appropriate support services.

Your personal data, comments, and any other information you provide will be de-identified. In the case of family history research, where any names could potentially identify you, references to personal data found in archival records will be anonymised or redacted.

What are the possible benefits of taking part?

This research will help us to understand archival research activities and may feed into the design of future archival systems to better support researchers who are working remotely (i.e. at a distance from the archive).

What will happen when the research study stops?

Video recordings and screen capture will be viewed by the primary researcher and de-identified. Video data will be partially transcribed and stored in de-identified files. Videos will be used to aid analysis and may be replicated in publications and presentations. Any images or video containing identifiable individuals will not be used in publications. You may also opt-out of having your video used in publications and presentations.

Data may be shared with the primary researcher's supervisory team at City, University of London and The National Archives, UK. Data will be retained only for as long is necessary; it will be deleted in line with City's research data retention policy. Findings from interviews and screen recordings will be de-identified in the event of publication.

Will my taking part in the study be kept confidential?

The data gathered in this study will be kept confidential. It will be de-identified whenever possible and stored electronically on an encrypted device, in a password protected location.

What will happen to results of the research study?

The results of the study will feed into the primary researcher's PhD topic, 'Beneath the archives: understanding user's mental models of digital archives.' De-identified results may also be used in academic publications and presentations.

What should I do if I want to take part?

Read, initial, and sign the participant 'informed consent' form and return it to the principle researcher electronically. Please carry out your research as naturally as possible, even though you are being observed.

What will happen if I do not want to carry on with the study?

You are free to withdraw from the study at any time, without any explanation and free from penalty.

Data Protection Privacy Notice: What are my rights under the data protection legislation?

City, University of London is the data controller for the personal data collected for this research project. Your personal data will be processed for the purposes outlined in this notice. The legal basis for processing your personal data will be that this research is a task in the public interest, that is City, University of London considers the lawful basis for processing personal data to fall under Article 6(1)(e) of GDPR (public task) as the processing of research participant data is necessary for learning and teaching purposes and all research with human participants by staff and students has to be scrutinised and approved by one of City's Research Ethics Committees.

What if I have concerns about how my personal data will be used after participating in the research?

If you have any problems, concerns or questions about this study, please ask to speak to a member of the research team. If you are dissatisfied with the response, you can contact the Data Protection Officer, Dr Emma White at dpo@city.ac.uk. Further guidance can be sought from the Information Governance team at dataprotection@city.ac.uk or phone 0207 040 4000. If you are dissatisfied with City's response you may also complain to the Information Commissioner's Office at www.ico.org.uk.

What if there is a problem?

If you have any problems, concerns or questions about this study, you should ask to speak to a member of the research team. If you remain unhappy and wish to complain formally, you can do this through City's complaints procedure. To complain about the study, you can phone 020 7040 3040. You can then ask to speak to the Secretary to Senate Research Ethics Committee and inform them that the name of the project is: "Beyond the Archive: Understanding humanities researchers' information activities in a personal research environment."

You could also write to the Secretary at:

Anna Ramberg, Research Governance & Integrity Manager

Research & Enterprise City, University of London Northampton Square London EC1V 0HB

Email: Anna.Ramberg.1@city.ac.uk

City holds insurance policies which apply to this study. If you feel you have been harmed or injured by taking part in this study you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Who has reviewed the study?

This study has been approved by City, University of London – Computer Science Research Ethics Committee.

For further information about the research or if you have any queries or concerns, please contact:

Alexandra Leigh
alexandra.leigh@city.ac.uk

Dr Stephann Makri
stephann.makri.1@city.ac.uk
City, University of London
Northampton Square
London
EC1V 0HB

Sarra Hamdi
Sarra.hamdi@nationalarchives.gov.uk
The National Archives
Kew, Richmond
Surrey
TW9 4DU

Thank you for taking the time to read this information sheet and for taking part in this study.

Ethics ETH2021-1697: Ms Alexandra Leigh (Low risk)

Date Created	31 Mar 2021
Date Submitted	05 May 2021
Date forwarded to committee	05 May 2021
Academic Staff	Ms Alexandra Leigh
Student ID	180051036
Category	Doctoral Researcher
Supervisor	Dr Stephann Makri
Project	Within and beyond: enacting the archives through the practices of humanities researchers
School	School of Science & Technology
Department	Department of Computer Science
Current status	Approved

Ethics application

Risks

R1) Does the project have funding?

No

R2) Does the project involve human participants?

Yes

R3) Will the researcher be located outside of the UK during the conduct of the research?

No

R4) Will any part of the project be carried out under the auspices of an external organisation, involve collaboration between institutions, or involve data collection at an external organisation?

Yes

R5) Does your project involve access to, or use of, terrorist or extremist material that could be classified as security sensitive?

No

R6) Does the project involve the use of live animals?

No

R7) Does the project involve the use of animal tissue?

No

R8) Does the project involve accessing obscene materials?

No

R9) Does the project involve access to confidential business data (e.g. commercially sensitive data, trade secrets, minutes of internal meetings)?

No

R10) Does the project involve access to personal data (e.g. personnel or student records) not in the public domain?

No

R11) Does the project involve deviation from standard or routine clinical practice, outside of current guidelines?

No

R12) Will the project involve the potential for adverse impact on employment, social or financial standing?

No

R13) Will the project involve the potential for psychological distress, anxiety, humiliation or pain greater than that of normal life for the participant?

No

R15) Will the project involve research into illegal or criminal activity where there is a risk that the researcher will be placed in physical danger or in legal jeopardy?

No

R16) Will the project specifically recruit individuals who may be involved in illegal or criminal activity?

No

R17) Will the project involve engaging individuals who may be involved in terrorism, radicalisation, extremism or violent activity and other activity that falls within the Counter-Terrorism and Security Act (2015)?

No

Applicant & research team

T1) Principal Applicant

Name

[Ms Alexandra Leigh](#)

T2) Co-Applicant(s) at City

T3) External Co-Applicant(s)

T4) Supervisor(s)

[Dr Stephann Makri](#)

[Alec Mulinder](#)

[Dr Alex Taylor](#)

[Sarrah Hamdi](#)

T5) Do any of the investigators have direct personal involvement in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

No

T6) Will any of the investigators receive any personal benefits or incentives, including payment above normal salary, from undertaking the research or from the results of the research above those normally associated with scholarly activity?

No

T7) List anyone else involved in the project.

Project details

P1) Project title

Beyond the Archive: Understanding humanities researchers' information activities in a personal research environment

P1.1) Short project title

Beyond the Archive

P2) Provide a lay summary of the background and aims of the research, including the research questions (max 400 words).

BACKGROUND

This study is part of the Collaborative Doctoral Partnership project, 'Beneath the Archive: understanding users' mental models of digital archives to inform user-centred design for humanities research.' This project has been developed with and is co-supervised by The National Archives UK.

It follows on from an initial study that identified key information activities involved in archival research taking place within the archive building. The previous study also reflected the significance of conducting research beyond the physical archive for humanities researchers. As such, this study seeks to expand on the first study by investigating these information activities in a second setting: the user's home or office.

AIMS

This study aims to understand the information activities researchers undertake when conducting archival research beyond the physical archival setting. It seeks to expand on the activities identified in the first study: scanning, relating, collecting, and organising. This will explore both how these are

performed in a different setting and whether any additional information activities can be identified that feature more prominently once the user has left the archive.

RESEARCH QUESTIONS

RQ1 What key information activities, beyond information seeking, do humanities researchers undertake as part of their research practice when interacting with archival materials beyond the physical archive?

RQ1.1 How does this differ from information activities undertaken within the archive?

RQ2 In what way do the user's information activities extend, alter, or break with archival representational structures, such as description and classification?

P4) Provide a summary and brief explanation of the research design, method, and data analysis.

RESEARCH DESIGN

The study will take a qualitative approach to elicit rich, meaningful data. A combined interview-observation, based on the Contextual Inquiry method (Holtzblatt and Beyer, 2017), will be used to gather data. This will allow an understanding of how humanities researchers use archival information outside of the archive to be developed. Analysis will be primarily inductive, in that it will look for additional information activities that will expand understanding of the use of archival information in end-users' research practices. Nonetheless, it will also deductively apply categories of activity identified in a previous study - relevant to research conducted within the archive - as sensitising concepts. This will provide a holistic view of information activities pertaining to the archive, allowing a renegotiation of the boundaries between in situ and ex situ research (Trace and Karadkar, 2017).

A remote method of data collection is proposed due to ongoing coronavirus restrictions.

RESEARCH METHOD

This study will involve the use of multiple qualitative methods – guided tour; combined interview-observation; and the submission of photographs and research materials – to understand the information activities of humanities researchers. Participants will submit photographs in advance that document the layout of their physical research space, via a unique folder set up on OneDrive that only the participant and the researcher have access to. Each participant will deposit images in a separate folder to ensure each can only access their own images. The session – carried out online via Zoom – will begin with a discussion of these to allow the participant to elaborate on the images submitted.

The participant will then provide a guided tour using screen-sharing of their virtual research environment, i.e. their laptop or tablet that they primarily work from, including but not limited to filing structures, frequently visited sites or saved tabs, and desktop layout. This will be used to assess how humanities researchers organise information in their personal workspace and allow for comparison to archival practices, such as arrangement.

This will be followed by a combined interview-observation, rooted in the 'Contextual Inquiry' method described by Holtzblatt and Beyer (2017) that asks researchers to complete a task while engaging in a discussion with the researcher. The participant will be asked to describe what they are doing as they do it, as well as responding to questions from the researcher that clarify or elaborate on their activities. Observations will allow for data to be gathered on how users approach archival research outside of the archive itself and the information activities comprising this. Participants will also be

asked to submit to the researcher, via an exclusive OneDrive folder, an example of the work carried out in the interview, if they are comfortable doing so, such as an annotated copy of archival material or notes made by the participant.

Participants will be those who are currently working directly with archival materials, in the routine course of their research (see H9 for further details on participant recruitment). Archival materials represent a broad range of potential materials, including but not limited to paper documents, images, videos, audio, and datasets. Both digitised and born-digital materials will be included in the study. The materials participants are working with will already have been identified and collected by the participant. The task for observation during the session will be self-selected by participants.

The total session with the participant will be recorded using Zoom's inbuilt functionality. This will allow for the screen to be captured via screen-sharing, whilst simultaneously allowing the researcher to continue to see the participant's actions in the physical space and ask for clarification and comment as they move about. The combined screen and video data will allow the researcher to understand how information activities are integrated within the physical space. A back-up copy of the video will be recorded using Panopto; a back-up audio copy will be created using an external microphone. All recordings will be saved directly to an encrypted device.

Participants will have the opportunity to conclude the research at this point or to repeat the observation again in three to four weeks' time, in order to gather longitudinal data. A maximum of three observations will be carried out with the researcher, covering a period of six to eight weeks in total.

DATA ANALYSIS

Data will be analysed according to Interaction Analysis principles (Jordan and Henderson, 1995). Video data will first be reviewed multiple times to produce a content log. This will be used to review and identify segments of the video significant to understanding the participants' information activities. Once identified, these segments of video will be reviewed in detail and transcribed according to Interaction Analysis principles.

The transcripts and video segments will then be analytically coded. This will primarily be inductive, seeking to capture information activities particular to research carried out beyond the archive, though it will also deductively apply information activities identified in a previous study as sensitising concepts. Analytic coding will be supported by use of a Qualitative Data Analysis tool (e.g. NVivo, MaxQDA). Analysis will take place iteratively, with data being analysed as further sessions are still being conducted. This will allow 'information power' (Malterud, Siersma & Guassora, 2016) to be identified and used to determine the final number of participants recruited.

P4.1) If relevant, please upload your research protocol.

P5) What do you consider are the ethical issues associated with conducting this research and how do you propose to address them?

The study proposed here seeks to study individuals within their personal research environment e.g. home or office. As these are highly personal spaces, there are ethical concerns surrounding both invasion of privacy and identification of participants' work or homes. Participants will be given the opportunity to remove any items, such as any family photos, prior to beginning recording. Any remaining identifying features will be blurred in photographs and video footage. Participants will be

given the option to choose whether or not video footage may be shared in research publications and presentations.

During the interview, participants will be notified before the researcher begins recording. As the participant will be in a space where non-participants are potentially present, before recording participants will be told they can ask to pause the recording at any time. At the end of the session, the researcher will also ask the participant if there are any sections of the video they wish to remove from inclusion in the study.

Archival research can be highly personal, e.g. genealogical researchers investigating their family history. Likewise, some details of historical documents may be distressing. While this would fall within the remit of experiences as part of routine archival research, participants may become upset when discussing their research in interview. If participants do become distressed during the study at any time, the interview will be paused, I will remain on the call with them until they are no longer distressed and if appropriate direct them to support services.

Genealogical researchers may be studying relatives which could potentially identify them even if the participant data is anonymised. As such any reference to individuals being researched will also be anonymised or redacted in the study data.

When submitting copies of research materials to the researcher, the participant may opt to share annotated copies of archival material. This may violate agreements the participant has made with the archive they copied the material from. As such, this will be on an entirely voluntary basis and the researcher will ask the participant to confirm this does not violate any agreements made with the archive.

P6) Project start date

The start date will be the date of approval.

P7) Anticipated project end date

06 Apr 2023

P8) Where will the research take place?

Research will take place virtually, using a video platform such as Zoom. Participants will be asked to join the video call from their choice of workspace, whether that is from home or in the office.

P10) Is this application or any part of this research project being submitted to another ethics committee, or has it previously been submitted to an ethics committee?

No

External organisations

E1) Provide details of the external organisation/institution involved with this project.

The National Archives UK, Richmond. Joint supervisors of the Collaborative Doctoral Award, 'Understanding users' mental models of digital archives to inform user-centred design for humanities research.'

E2) If applicable, has permission to conduct research in, at or through another institution or organisation been obtained?

No

Human participants: information and participation

The options for the following question are one or more of:

'Under 18'; 'Adults at risk'; 'Individuals aged 16 and over potentially without the capacity to consent';

'None of the above'.

H1) Will persons from any of the following groups be participating in the project?

None of the above

H2) How many participants will be recruited?

15

H3) Explain how the sample size has been determined.

This is the maximum number of participants that will be recruited, based on the principle of 'information power' whereby the number of participants is ascertained in relation to the amount of information that a sample holds, relevant to that study (Malterud, Siersma & Guassora, 2016).

H4) What is the age group of the participants?

Lower Upper

18

H5) Please specify inclusion and exclusion criteria.

No participants to be excluded on the basis of age, gender, ethnicity, race, disability, sexuality, religion or any other factor. No participants will be recruited under the age of 18.

Archivists are excluded from the study as RQ2 seeks to investigate how much researchers replicate the practices of the archive. Archivists might be expected to replicate this more closely because of their work experience and could skew the results.

H6) What are the potential risks and burdens for research participants and how will you minimise them?

There is a potential emotional effect on participants who may be researching personal topics or viewing affecting material. While this is not anticipated to exceed the remit of experiences as part of routine archival research, if participants become distressed the interview will be paused and participants directed to appropriate support services.

As participants will be working in a personal research environment, there is a risk that identifiable information will be included in the video. The participant will be asked to confirm that they have removed identifying objects or information prior to beginning recording. Any items remaining in the footage that could identify the individual e.g. family photographs or place of work will be redacted from the footage.

Genealogical researchers may be studying relatives which could potentially identify them even if the participant data is anonymised. As such any reference to individuals being researched will also be anonymised or redacted in the study data.

There is a risk that in sharing sample materials (e.g. annotated copies of archival documents) with the researcher, the participant will be in violation of agreements made with the archive when copying

material. As such, this will be on an entirely voluntary basis and the researcher will ask the participant to confirm this does not violate any agreements made with the archive before sharing material.

H7) Will you specifically recruit pregnant women, women in labour, or women who have had a recent stillbirth or miscarriage (within the last 12 months)?

No

H8) Will you directly recruit any staff and/or students at City?

None of the above

H8.1) If you intend to contact staff/students directly for recruitment purpose, please upload a letter of approval from the respective School(s)/Department(s).

H9) How are participants to be identified, approached and recruited, and by whom?

Participants will be self-identified researchers, including all disciplines and approaches. They will be approached through a number of channels maintained by The National Archives, including their newsletter for researchers, 'Discovery'; social media, including blog posts and Twitter; and an event for archivists and historians, organised by TNA and History UK on their changing work practices during the coronavirus pandemic. An advert will also be forwarded to relevant university humanities departments in the UK, for circulation on staff and student mailing lists. This will also be sent to local and community archives in the UK for circulation on mailing lists, as well as the Collaborative Doctoral Partnership consortium, of which the PhD researcher is a member. The PhD researcher will recruit participants.

H10) Please upload your participant information sheets and consent form, or if they are online (e.g. on Qualtrics) paste the link below.

H11) If appropriate, please upload a copy of the advertisement, including recruitment emails, flyers or letter.

H12) Describe the procedure that will be used when seeking and obtaining consent, including when consent will be obtained.

Participants will be told about the aim, method and format of the study before the study begins, when recruiting participants. Participants will be sent the information sheet and informed consent form at least one week prior to the session. Participants will be asked to read the information sheet in advance and offered the opportunity to speak to the researcher via a video-call and ask any questions before signing the consent form. If taking part in the study, the participant will send an electronically signed copy of the consent form to the researcher, this to be signed and returned prior to the commencement of the study.

H13) Are there any pressures that may make it difficult for participants to refuse to take part in the project?

No

H14) Is any part of the research being conducted with participants outside the UK?

Yes

Human participants: method

The options for the following question are one or more of:

'Invasive procedures (for example medical or surgical)'; 'Intrusive procedures (for example psychological or social)'; 'Potentially harmful procedures of any kind'; 'Drugs, placebos, or other substances administered to participants'; 'None of the above'.

M1) Will any of the following methods be involved in the project:

None of the above

M2) Does the project involve any deceptive research practices?

No

M3) Is there a possibility for over-research of participants?

No

M4) Please upload copies of any questionnaires, topic guides for interviews or focus groups, or equivalent research materials.

M5) Will participants be provided with the findings or outcomes of the project?

Yes

M5.1) Explain how this information will be provided.

Participants will be given the option to receive notification of any published research paper via email or post. Personal data for this purpose will be stored in a password protected document on an encrypted device.

M6) If the research is intended to benefit the participants, third parties or the local community, please give details.

M7) Are you offering any incentives for participating?

Yes

M7.1) Please give details, justifying their type and amount.

Participants will be offered a gift voucher, equivalent to value of £25 for the first session (c. 90 minutes). A further £10 voucher will be offered for each subsequent session (c. 40 minutes). This results in total maximum of £45 in gift vouchers for participation in all three sessions. This reflects the extended length of the first session and provides an incentive to engage in later sessions. It offers remuneration for full participation at roughly £15 p/h, above the London Living Wage.

M8) Does the research involve clinical trial or clinical intervention testing that does not require Health Research Authority or MHRA approval?

No

M9) Will the project involve the collection of human tissue or other biological samples that does not fall under the Human Tissue Act (2004) that does not require Health Research Authority Research Ethics Service approval?

No

M10) Will the project involve potentially sensitive topics, such as participants' sexual behaviour, their legal or political behaviour, their experience of violence?

No

M11) Will the project involve activities that may lead to 'labelling' either by the researcher (e.g. categorisation) or by the participant (e.g. 'I'm stupid', 'I'm not normal')?

No

Data

D1) Indicate which of the following you will be using to collect your data.

Interviews

Participant observation

Audio/digital recording interviewees or events

Video recording

Computer-based tasks, screen recording or software instrumentation

Other

D1.1) Provide details if you have selected other.

Photographs of their research space (home or office) submitted by participants. Copies of research materials created and submitted by participants in the course of the study (e.g. annotated copies of archival records, written notes).

D2) How will the the privacy of the participants be protected?

De-identified samples or data

D3) Will the research involve use of direct quotes?

Yes

D5) Where/how do you intend to store your data?

Data to be kept in a locked filing cabinet

Password protected computer files

Storage on encrypted device (e.g. laptop, hard drive, USB

Storage at City

D6) Will personal data collected be shared with other organisations?

No

D7) Will the data be accessed by people other than the named researcher, supervisors or examiners?

No

D8) Is the data intended or required (e.g. by funding body) to be published for reuse or to be shared as part of longitudinal research or a different/wider research project now or in the future?

No

D10) How long are you intending to keep the research data generated by the study?

10 years, in line with City's institutional guidelines.

D11) How long will personal data be stored or accessed after the study has ended?

For up to 2 years, to allow participants to be sent details of any research outputs if published

D12) How are you intending to destroy the personal data after this period?

Participant names, details and identifiers will be stored electronically in an identifying table, encrypted and password-protected. This will then be deleted.

Health & safety

HS1) Are there any health and safety risks to the researchers over and above that of their normal working life?

No

HS3) Are there hazards associated with undertaking this project where a formal risk assessment would be required?

No

Ethics ETH2122-0624: Ms Alexandra Leigh (Low risk)

Date Created	12 Nov 2021
Date Submitted	15 Nov 2021
Date forwarded to committee	15 Nov 2021
Academic Staff	Ms Alexandra Leigh
Student ID	180051036
Category	Doctoral Researcher
Supervisor	Dr Stephann Makri
Project	Within and beyond: enacting the archives through the practices of humanities researchers
School	School of Science & Technology
Department	Department of Computer Science
Current status	Approved

Ethics application

Amendments

SA1) Types of modification/s

Other

SA2) Details of modification

Increase in participant remuneration from £25 to £40 for initial session (90 mins); and from £10 to £20 for any subsequent observations (45 mins).

SA3) Justify why the amendment is needed

A greater incentive was felt to be necessary to facilitate successful recruitment of participants.

SA4) Other information

SA5) Please upload all relevant documentation with highlighted changes

Project amendments

P1) Project title

Understanding Users' Mental Models of Digital Archives to inform User-Centred Design for Humanities Research'

P2) Principal Applicant

Name

[Ms Alexandra Leigh](#)

P3) Co-Applicant(s) at City

P4) External Co-Applicant(s)

P5) Supervisor(s)

[Dr Stephann Makri](#)

[Alec Mulinder](#)

[Dr Alex Taylor](#)

[Sarra Hamdi](#)

Ethics ETH2122-1897: Ms Alexandra Leigh (Low risk)

Date Created	24 Jun 2022
Date Submitted	24 Jun 2022
Date forwarded to committee	06 Jul 2022
Academic Staff	Ms Alexandra Leigh
Student ID	180051036
Category	Doctoral Researcher
Supervisor	Dr Stephann Makri
Project	Within and beyond: enacting the archives through the practices of humanities researchers
School	School of Science & Technology
Department	Department of Computer Science
Current status	Approved

Ethics application

Amendments

SA1) Types of modification/s

Other

SA2) Details of modification

Additional recruitment channel. In addition to sending adverts to university departments and archives for circulation, an advert will also be circulated to relevant organisations within the library, archives and records management sector, including but not limited to the Archives and Records Association (ARA).

SA3) Justify why the amendment is needed

To ensure a variety of research undertaken by participants is observed, it is desirable to ensure that participants are spread across users of physical, digitised and born-digital archival materials.

It has not yet been possible to recruit users of born-digital material; this approach seeks to widen the recruitment field to reach these users in particular.

SA4) Other information

No additional recruitment materials or changes to recruitment materials needed (only recruitment materials previously approved will be used)

SA5) Please upload all relevant documentation with highlighted changes

Project amendments

P1) Project title

Understanding Users' Mental Models of Digital Archives to inform User-Centred Design for Humanities Research'

P2) Principal Applicant

Name

[Ms Alexandra Leigh](#)

P3) Co-Applicant(s) at City

P4) External Co-Applicant(s)

P5) Supervisor(s)

[Dr Stephann Makri](#)

[Dr Alex Taylor](#)

APPENDIX 2

Study 2: Topic Guide for Interview

Introduction

- Thank participant for taking part in this study
- Outline the aims of the study in brief
- Describe three main stages of interview:
 - discussion of photographs;
 - guided tour of virtual research space;
 - observation
- Inform participant they are free to ask questions at any stage during the interview
- Inform participant they may ask to pause the interview at any time and for any reason
- Confirm there will be a 5-minute break following the guided tour and prior to the observation
- Inform participant they may decide at any time they no longer wish to take part in the study and that if this occurs they will also be offered the opportunity to remove the data collected so far from the study
- Inform participant you will be taking notes in case there is anything you wish to come back to later
- Inform participant there will be time at the end of the session to come back to anything they feel is important and that might have been missed
- Inform participant they may be asked at the end of the interview if they wish to repeat the observation only in three to four weeks' time
- Confirm participant has removed any items from view they do not wish to be captured on video
- Confirm participant is happy to begin recording

Ask for short introduction to research topic

Discussion of submitted photographs

- Summarise photographs back to participant, e.g. you've shared with us images of your desk space and several bookcases of research materials
- Identify and elicit details on why the participant has elected to submit these photographs and how what the images document is important to their information activities, for example:
 - How do these photos relate to the physical arrangement of your workspace?
 - Is this space exclusively yours or do you share it with another?
 - Do you keep both primary and secondary sources as a physical copy? Why?
 - What do you use these planning tools (e.g. wall-chart or post-its) for?

Guided Tour of Virtual Research Space e.g. laptop or desktop computer, tablet

- Introduce guided tour and its purpose to the participant
- Ask the participant to give a tour of their virtual research space, focusing on the storage of primary materials, e.g. materials gathered from the archive
- Identify and elicit details of how the virtual research space supports the participant's information activities, for example:
 - How do you organise primary and secondary sources?
 - Where do you keep outputs (e.g. annotated copies or written notes)? Can you show me these?

Break

- Notify participant of 5-minute break before beginning the observation
- Inform participant the recording will be paused for the duration of this and that they may wish to turn off their camera and microphone
- At end of break, ask participant to turn back on camera and audio and confirm they are happy for the recording to be resumed

Observation

- Introduce observation and its purpose to the participant
- Ask participant to describe what they are doing as they go along and provide examples e.g. I'm going to add some annotations to this document; I'm just going to get a book to look something up
- Confirm we are interested in observing what happens during routine research practices and ask the participant to act as normally as is possible, e.g. if you need to get up to refer to other materials feel free to do so
- Notify participant they might be asked questions from time to time about what they are doing or to clarify or elaborate on something they have said
- Remind participant that they can ask to pause the recording at any time

Ask participant to confirm what the task is that they are working on today

- Identify and elicit details on the participant's information activities and how these relate to their wider research practices, for example:
 - I can see you are comparing two documents there, what are they?
 - What is that you're making a note of? Why is it important to your work?

Closing

- Notify participant we have reached the end of the observation
- Ask any clarification questions, for example,
 - 'You referred to this book several times, can you expand on why it is useful to your work?'
- Confirm participant is happy for the recording to be used and there are no sections of the recording that they would like to remove from the study (e.g. if a family member has entered the room during recording)
- Ask participant if they have any questions

- Ask participant if they would be happy to submit any of their research outputs today (e.g. notes, annotated copies of archival documents)
- Ask participant if they would like to continue participation in the study and repeat the observation only in three to four weeks' time
- Explain remuneration and confirm they have received
- Thank participant

Study 2: Instructions for Photography Task

Instructions to participants:

Before your observation, I would like you to photograph your personal research space – the space where you conduct your research (e.g. one or more rooms in your home; an office space) and any tools or items that you use (e.g. noticeboards, post-it-notes, filing systems, digital devices etc.).

Submit one or more photos via the OneDrive link provided. This link is unique to you: only yourself and the principle investigator have access to this folder. Please do not share this link with anyone else.

The aim of this is to capture a reflection of your personal workspace as you see it and to understand how it is set up to work for you. This will be used to support an initial discussion on your research practices, which will happen before the observation.

You can photograph anything you believe is relevant to your work. Ideas for things you might include could be:

- your desk space as it normally looks during research
- bookcases or other storage for physical materials
- assorted materials, primary or secondary, that you frequently use
- organisation and writing space – e. g. a paper filing system, noticeboard, post-it-notes
- digital devices used in the course of your research
- personal items e.g. a favourite mug, desk-plant

Please do not photograph anything that could identify you (e.g. photos of you, friends or family members; things with your name or contact details on). Before photographing, please remove anything from your workspace that you do not wish to share with us.

Thank you. I look forward to discussing your photos with you!

APPENDIX 3

Sample Transcript (Study 1 – P07)

0.02-0.27

(P07 asks if it would be better they do not wear headphones during study: usually would. Researcher asks that they do not if they're comfortable with that. Researcher introduces the project and asks P07 to give a brief overview of their research.)

0:27

P07: Um, I'm currently doing my PhD. So I'm in my second year.

So this is my fieldwork, really. I'm collecting data for my PhD project, which is on land and housing policy in Malaysia.

And I'm doing that by looking through historical records

on how these policies were developed back in British colonial period,

0:48 which is why I'm here. So I've gone through, I've been to the archives for...

the past month or so? A week at a time. This is I think my fourth week here,

So I'm a bit... quite... not too far along, but I've sort of moved from

the sort of initial period of just exploring what's there,

into doing actual like, looking at the materials

1:16 and determining whether things are relevant to my project or not.

1:20

R: Oh ok, so like specific things you thought might be of interest,

now you're looking specifically for particular information.

1:26

P07: Yeah.

(1:27-1:49 – R recaps what the participant needs to do during the study.)

1:51

P07: So what I've done I think yesterday or two days ago

was actually go through an index of-

This is actually, one of the items that I'm looking at,

which is a collection of proceeding from the Federal Council

back I think in, from year 1915 to 1918.

2:15

P07: So for this to be sort of, for this to sort of make sense for me,
to essentially find relevant things in this volume,
I had to actually refer to an index, which I've done, I think two days ago.

2:31

P07: And what I'll do today is essentially go back-
go through that index and see, and try to reference things
that are relevant in this particular volume.

2:42

R: So is the index, is that a digital copy?
Have you taken photographs of that previously?

2:46

P07: Yes. So so it's actually, is a physical volume,
but it's a different, it's a different volume.
You can only use one volume at a time.
So what I've done is actually take pictures of the stuff
that I thought were relevant, and what I'll be doing for the next I think,
3:04 couple of days or the past few days is actually
to just cross-reference to the volumes I'm looking at.

3:11

P07: Does that make sense?

3:13

R: Yeah. Brilliant.

(3:13-3:25 – pause.)

3:26

R: So, sorry, do you know if the index. Is that-
Was that also produced at the same time as documents?
Or is that something an archivist has compiled like,
[like an access catalogue or something

3:34

P07: [ahhhhm let me] just check that, I didn't think of that actually,
but it was probably produced by the colonial office,

but probably the library rather than the actual, like... the actual...

I suppose secretary- like these are essentially secretaries' files.

I don't think the index was produced, were produced by th- by the-

3:59 oh I might be wrong actually, it's actually produced by the Malayan civil service.

Yeah. And it was produced in year 1931.

Yeah. To cover the period from 1909 to 1929.

Yeah, so it was done much later, but I suppose its for the purpose of people trying to make this accessible.

4:18

R: Great. So it's 1931 for 19- 1929. Ok, thanks.

(4:25-4:42 – pause.)

4:43

P07: So I start my sessions, essentially, by preparing my notes for the day.

To essentially track what I've done, for like each day, and what I do is essentially, note down the reference numbers of the volumes that I'm looking at and putting down my own thoughts, if there are any, or if I think there are relevant materials.

5:18

P07: Sometimes I also put in images of the stuff that I think is relevant, particularly if it's something that's... if the documents are not a few documents, things like letters of correspondence, stuff like that.

So with reports it's easier to know what you're looking at when I look back later on. But with stuff like personal letters,

5:44 you'd have to really go through the whole thing again, to- so for me to prevent myself from doing that over.

Again, I mean, I probably would have to do that during my analysis, but I try to just, note down my own thoughts when I'm reading it. If that makes sense.

6:05

P07: So that's what I, what I try to do before I start every day, Just to keep track of how I'm working, I suppose, yeah.

(6:14-6:59 – P07 proceeds to set up research notes before even opening the volume.)

(7:00-7:51 – P07 double checks call slips as they're opening the volume.)

7:52

R: So do you remember in the index from last time
what it is that you thought was relevant and you are looking for
or are you having to read through the index again this time?

8:00

P07: So I've actually highlighted it?
I mean, I'm looking at land and housing. So I've made a copy of the pages-
of the index pages that are relevant to my topic. And what I've done
is really I've- things that I've gone through I've marked it out.

(Has photo reel on tablet containing images of index, with some notes. P07 has drawn boxes around the individual images to highlight which sections of the volume will be of interest to them.)

8:22

P07: So, today, I think I will be going through... probably 1915 onwards?
Oh no sorry, I actually- I've looked at 1915,
so probably 1916 onwards.
And I will do that now.

8:40

R: So with these, ((indicating the annotated indexes)) are the boxes,
is that for general relevance and then the crosses are like particular relevance?

8:46

P07: Well, because of the way it's catalogued here,
I wouldn't know what these are, until I actually look at them.
Just because it's not descriptive enough in the catalogue.
So I have to actually, like, open these line items one by one
to see if they lead to what I'm doing. They might not.

9:07 So things that are relevant I've marked it with a- with a-
with a- [what do you

9.14

R: [Tick.] =

P07: = With a tick, yeah. And things like that that are, not relevant are crossed out.

But there's no way for me to know that just by the index?

Index item? It's just too, it's not descriptive enough. Yeah.

(9:32-9:57 – pause).

9:58

P07: I'm going through this chronologically just because it's easier,

and it's really just because that's how the index is structured.

It's probably... I thought about doing it by relevance,

but it's just too difficult to go through that without like-

because it's, with the volumes themselves,

10:19 I mean you'd have to like, flip them back and forth in order to do that, right?

10:24

R: Okay, so do you think you'll sort them by relevance later on?

Is that something you'll go back and

10:28

P07: Yeah, so that's something I'll probably do that later on.

Yeah, I mean, I've categorised them into files in my computer.

But I obviously have to do that much later on

when I'm actually looking at it to analyse it.

Right now I'm just skimming through the material to find relevant items?

10:48 Hopefully, like in a month or so after I'm done with my visits-

not, not really done but just at a reflective point in, in my study,

I'll probably do that to try to just categorise it again.

(11.25-12:15 – P07 reading through single volume of bounded reports.)

12:16

P07: So with, with this particular document

because it's essentially meetings of minutes,

I would have to go through them to see if they're relevant to my study.

With some of the other documents I don't have to read it as closely,

just because it's, if it's an annual report, or whatever,

12:40 I just pick out the sections that I think are relevant, but with the minutes of meetings

you have to go through the line items to see it's (overlapping speech)

12:49

R: Right. Yeah, yeah. So are the annual reports are they sort of quite-
is that because they're, like standardised in layout,
they'll have the same headings whereas these,
I guess the things they discuss change?

13:02

P07: They don't have the same headings throughout the years.
That would, I think, change periodically

13:08

R: In the reports?

13:09

P07: In the reports, but they have headings, which are helpful. ((laughs))
So if I just want to say, look at land and housing,
I can sort of ignore all the other stuff that are-
that I know are not particularly relevant to my topic.
With the minutes, the meeting minutes, they go, I mean they go about how...

13:37 It's...the way it's...the way it's um... sorry, I'm not awake yet!
If I'm being quite honest.

13:49

P07: The way it's preserved, its really how- I mean like, the way it's written down
is really how the meeting progresses, right, how the meeting progresses in time.
So um... some meetings are useful in that they lay out what papers are being-
what papers are being discussed during the meeting.
So I can look at that like a table of content, for that particular document.

14:13 But a lot, a lot of times they don't have that. So I would have-
I mean the index helps. But the index is very basic.
So I still have to spend time and read through the relevant sections.
If that makes sense.

14:28

R: Yes. Yeah it does.

(14:30-15:33 – P07 continues reading volume, using index to look up relevant sections)

(15:34-15:47 – P07 inserts call slip into catalogue at the relevant section. Turns back to start of meeting minutes, with call slip poking out of the top.)

15:48

P07: When I find things that I think could be relevant to my research,
which is this section really, what I will do is... document it with my phone.
But I, I try to take the details of the documents itself so that I don't forget it
or rather than just a section that I'm looking at.

16:10

R: Yeah, so is that a photograph of the- is that the start of the minutes
[and then] with =

16:14

P07: [Yeah]

R: = the call slip as well.

16:15

P07: Yeah

16:16

R: Ok.

(16:17-16:32 – pause.)

16:33

R: And so with determining the relevance of something, you know,
you picked out that passage just there. Is that kind of...
what are you looking for to pick out the relevant things
have you got like, sort of keywords that you find you pick up on?
Or is it more generally the themes
that you've determined around education...

16:55

P07: So...what I'm trying to look at now
is really to see how the policy on land tenure has changed.
So this particular passage really outlines

an amendment that was made during that time.

And it outlines why those amendments were made

17:14 So it's- that's really directly relevant to what I'm doing.

17:16

R: So this policy that you're looking for at the moment
that's directly named in documents?

17:24

P07: The name changes throughout the years because I'm looking at,
I'm looking at the period between 19- 1897 to about 1955.
So there are a lot of different enactments that we relate to land tenure.

17:39

P07: And while I'm only looking at sort of one city in Malaysia,
the way the history is structured, is that that city was essentially governed
by different sort of systems of governance in that time,
so the name would change, and the name of, the...
I guess the government would change.

18:07 Because in- during the initial periods it would just be like a state level thing.
Then it became part of a federation. So that, that changes.
But my key words would really- because I know what I'm looking for?
I mean, I know the names of the governing institution? That I'm looking for?
And I know the names of the legislation that I'm looking at.

18:37 So that's what guides me to [what] is relevant.

18:40

R: [So...] you've got enough like background knowledge that you know...
the exact terms you're looking for, rather than just a general like-
it's got names rather than just being like this is the policy on, topic.

18:52

P07: Yeah, yeah.

(18:55-19:30 – pause.)

19:31

R: So will the images on your phone sync directly to the tablet?

19:36

P07: No, I'll do that later.

I mean, I can but I think it slows down my tablet quite a bit if I do that.

(19:45-19:56 – pause.)

19:57

R: Do you find there's any photos you discard between taking them on your phone and moving them across to the tablet or is- are you pretty...

Because you know what you're doing with the phone? Is it just sort of everything?

20:07

P07: So I've not done yet that yet. I probably would. But I-

I don't foresee myself doing that until probably the end of my PhD project just because I think the stuff that I have taken with my phone are all...

I mean it's all relevant whether or not it makes it into my project would be- would be sort of the- the sampling frame for that would be different I think. Yeah.

20:40

R: Right. So- sorry, I will let you get on with something in a minute.

So the photographs in the tablet are they- did you take those with the tablet the ones that are sort of integrated into your notes?

20:49

P07: Um, no. So if I wanted to make notations on the pages and stuff then I would transfer the photos from my phone to my tablet, right away.

So that I don't forget. But I don't do that for every- [photo

21:05

R: [That's just selected

21:06

P07: Yes just the selected ones. Because my primary storage for all the photographs is not the tablet. It's my computer. Um, yeah.

21:17

R: Okay. Yeah, no that makes sense.

(21:19-22:01 – pause.)

(22:02-23:17 – P07 checks through self-digitised indexes to see next topic of research. Resumes looking through the volume.)

23:18

R: Is this a new section? Or is this the same section you were just looking at?

23.21

P07: It's a new section, so this is not relevant. So I'm not taking a photo of this.

23:27

P07: But I do have to sort of go through the list to see if it is,
it is relevant to my project or not.

23.35

R: So will you just make a note just to say, not relevant, is that on the inde[xes?

23.39

P07: [Yeah] so I've just so[rt of crossed it out] =

23:40

R: [Oh, yeah yeah yeah]

23:41

P07: = because I put it before

(23:42-25:23 – pause.)

25:24

P07: So I'm done with this, just because I've gone through this yesterday
and so this is just the last section

(25:32-25:40 – P07 talks to self quietly.)

25:41

R: What is it you're double checking?

25.42

P07: Oh sorry... I'm just check- rechecking the table of contents in case I-
because, um... I do get worried that the indexes just doesn't capture so-
might not capture everything that, that's in... the volumes
So I'm just double checking the table of contents
to see if there might be something that's relevant,

26:07 but is not quite captured by the inde-

I mean the index has its, its really by subject. Right?

But I might be interested in I mean,

things that are related to land or housing might be related to something else?

That... I might not be able to connect. I mean, just using the index itself,

26:35 so I do go through the table of contents again, for all the volumes that

I've been looking at. To double check just in case I miss anything out.

(26:44-27:02 – pause.)

27:03

P07: I mean, because of the way it's catalogued,

I'm not able to spend all my time going through all the minutes,

obviously, because that'll just take too much time.

So I'm using the index to narrow my scope.

But I think it just gives me a little bit more secure-

27:22 I mean, just a sense of security, just to double-check it, here.

27:29

R: So do you have another volume that you're looking at today,

that you're happy to go through? Or is it- do you have to wait to order?

27.34

P07: No, I have, I have a lot actually.

27.36

R: Oh, okay, great! If you're happy to carry on for 15 more minutes or so

I'll just wait here.

27:47

R: So with the volumes are you only able to- the one volume rule

is that you're only allowed to bring the one volume to the table?

27:55

P07: Um so I think its different for different types of materials?

So if it's the reports or the bound volumes, you're only allowed one, at the table?

I think with files you can bring in three- or like loose, loose files,

you're allowed to bring three to the table.

28.15

R: So the indexes were also a bound volume, [were they?

28.18

P07: [Yeah]. Um, but even if they're not,
I wouldn't be able to use it with this because I won't-
I'm only allowed to look at one of- one bound volume at a time.

(28:41-29:40 – P07 goes to collect another volume.)

(29:40-31:02 – Returns and sets up document. Double-checks the call slip number and the title on the side of the volume, before putting on the book support.)

(31:02-31:21 – P09 talks to self, checking dates. Sets up notes on tablet.)

31:22

R: So if the indexes are arranged thematically, how do you match which-
the volume you've got with the themes that are, in your...

31:30

P07: Oh, it's um... sorry.

31:38

P07: The index is thematic but it gives you a reference to what year
those items will be located in and then the page, the relevant page for it.
So, see if I'm trying to look at this particular, housing, building loans on housing,
so I go to the twenty- 1926 volume, at page 48.

32:04

R: Okay, but do you have to go through each...
When you get a volume of the minutes and reports out?
Do you have to go through each theme you're interested in?
Because there might be more than one theme in the volume?

32:18

P07: Yeah. Yeah. Because it's I mean, it's kept chronologically through the years.
So what I do each time I look at the volumes I look through-
So this is say a 19', I'm looking at 1919. So I'll look at I'll find the-
all the 1919 stuff that I- that I'm trying to look at.

And then that's how I cross-reference it.

32:48

R: Yeah. Do the volumes ever cover more than one year?

P07: Yeah. So this is from 1919 to 1921, the one that I'm looking at before the one that I was looking at before was 1915 to 1918.

33:03

R: Oh okay. So you'll go across the themes for- you'll go year by year through this volume, across the themes, not the themes across the years.

33:13

P07: Yeah. Exactly. I just find that easier because, I mean, the volumes themselves are pretty, like - it's not as easy to manage. Because if you have to go through the years and I'll have to unbox it or, you know, whatever, or even in the same volume if I have to go back and forth, it's just like kind of annoying because it's, it's heavy and it's, yeah.

33:36

R: Do you find it easier as well if you keep it sort of chronological.

33:38

P07: Yeah. Yeah. I mean, just because that's the way the documents are structured. Right now, I mean, obviously, ideally I wouldn't want to do that because it sometimes, it messes up with my- the ideas in my head. But physically, practically, is just easier to do that- to do it that way.

34:00

R: Then I guess when you write the thesis or come to analysis. That's when you go into a more thematic sort of-

34:05

P07: Yeah. So I'll have to sort it out later on I think.

34:09

P07: I mean, I try to make notes when I can. But there's only so much that you can do, because I'm, I am... I mean, I'm limited by time. As all PhD projects are. So what I'm doing right now is just try to go through the material

to see if it's relevant. And I foresee myself looking at

34:25 narrowing that down later on.

34:43

P07: If that makes sense, I don't know sorry.

I mean, I'm, I'm barely awake right now, I'm so sorry.

34:47

R: Yeah, no it's fine, I have to ask lots of questions, just so I don't assume anything.

34:51

P07: Yeah yeah, I understand.

(34:54-35:04 – P07 goes back to volume; confirms to self what year it is.)

(35:05-35:54 – pause.)

(35:55-36:56 – P07 closes volume and leaves; goes back to regular seat to collect more book supports.)

(36:56-37:32 – P07 returns with different book supports and works out a better arrangement for supporting the volumes.)

(37:32-38:51 – pause.)

38:52

R: So is this the same again? Just something of relevance?

38:55

P07: Yes, yeah.

39:02

P07: I mean I'm doing this is so I don't- I won't forget, because I-

the first time I- during my first visit I forgot to do this and then when I got back

it just- [was a mess

39:11

R: [Trying to match] things up.

39:13

P07: Yeah, yeah trying to match things to the actual collection was just like-

took a lot of time.

(39:20-39:49 – pause.)

39:49

R: We've done about 40 minutes, I've got a few, like more generalist questions.
So if that's a good point to stop and ask you those then we can maybe wrap up?

39:58

P07: Ok.

39:59

R: So I was wondering, when you... um yeah,
so when you were locating things to start with, things that were useful,
did you go through the online catalogue,
did you have any input from the archivists
or other people that helped find things,

40:20 how did you identify the stuff that was here?

40.24

P07: I looked at the catalogue and I used my keywords to search for relevant files,
rather than entries in the catalogue. But like I said, the way, um...
The way these volumes are catalogued here at the National Archives,
the descriptions are very sparse. So it- say, in the catalogue itself, it will just be-
say that it's different. It would just be this, it would just be the headings.

40:54 Which doesn't really tell me what's inside? And for these sort of-
these sets of volumes, I was lucky enough to have the accompanying index for it,
which is, also. Yeah, but for some of the stuff that I was looking at earlier,
things like the annual reports, wouldn't have that. So for those items,
I only look at what I think are relevant years? For my project?

41:25 Because the land registrations themselves were published
or were instated in specific years. And I wouldn't be-
I mean, I wouldn't have the time to go through the entire,
period from- not every year! That would just take too much time.
So that's how I narrowed those things down? For this,

41:49 the index has been helpful just to- yeah.

41:53

R: So in the catalogue, when you get sort of the title

which is federated Malay states, what are you finding with the keywords,
was it like a geographical thing? Or is it the date range, that's bringing it up?

42:05

P07: Oh, sorry. Yeah. So, my initial keywords were really just on land and housing.
But, by looking at all the other different types of documents that I've gone through,
maybe the last few weeks? I found that some of the more interesting things
are captured in the official minutes of meetings.
And I found that through a different type of document, which are the gazettes.

42:41 The gazettes, they're the government gazettes for the federated Malay states,
publishes everything that the government at the time,
(obviously) publishes everything that they've done in the year.
And I looked at that just to- and I looked at those types of documents
to just have a sense of what was published.

43:07 And that's how I, that's how I got to this type of documents.
I wouldn't be able to know that there might be some relevant land or housing things,
in these type of documents from the catalogues themselves, if that makes sense.

43:25

R: You've started out with ones that came from the keywords
and then they've referred to other documents?

43:30

P07: Yeah =

R: = So you've kind of followed that [trail

43:31

P07: [Yeah], yeah. Exactly, yeah.

43:34

R: Interesting.

43:37

R: So probably a very quick question, is this-
do you have a history background, is this largely a history project or politics?

43:45

P07: My background is actually math and economics.

Math and economics, I don't have a history background.

But... um, I've been looking at housing and land for the past three, four years, before I started my PhD, so I have some background knowledge there.

I mean, just because I'm Malaysian. So the,

44:08 the historical aspect is something that I'm vaguely familiar with,

I mean that's how I recognise the government names, or the year,

or the structure that was that was present back in the colonial days,

but I don't have a history backgr- I mean, I'm not trained as a historian.

44:30

R: But, but is it a history...PhD.

44:32

P07: It's not a- it's a land economy PhD.

(44:35-44:41 – R and P07 joke about relation between subjects.)

44:42

P07: But I am- I am taking an unconventional method,

at looking at land and housing policy. It's more, my project is I think,

much more multi-disciplinary than typical economics or politics projects might be?

Because I'm trying to look at la- current land and housing markets,

and regulations, through their historical trajectory

45:07 that they've developed over time.

45:10

R: Yeah, so I was going to say is the historical just one section

of what will be your final project?

45:15

P07: It's- I'm looking at the evolution of institutions.

So my primary frame of analysis is really instituti- post-colonial institutions?

Post-colonial institutions and how they affect markets today.

So it's like- the focus of the project is really land mark-

access to land markets, like current land markets?

45:41 But because of my conceptual framework, I am taking a historical view

to argue that things that are embedded,
the structural and institutional constraints are embedded in
the way that markets function today? Have a historical baggage to them.

Um... then yeah. Does that make sense?

46:10

R: Yeah. Sounds really interesting.

46:12

R: So the, you mentioned with your keywords,
and the general topic was shaped by, by your background and you being Malay.
Would you say that that's- is a lot of that tacit knowledge
that you've picked up from your background,
or from, is that sort of like, is that just, I don't know,

46:32 the equivalent of here you'd know about the Gunpowder Plot,
because you get taught it at such a young age.

46:37

P07: Um, errr... I mean, not really, it's really, it came about really through my work
as a researcher, I mean I was a researcher before I started my PhD.
And my research was primarily focused on housing policy
and I was really looking at land maybe as part of housing rather than on its own?
But it became very- it became very apparent to me when I was doing that work
47:06 that a lot of the structural constraints in the housing market in Malaysia
has to do with the way rights are assigned to property?
So it's really- that's how I developed my project.
Just by being interested in that line of thinking.

47:31

P07: But- the historical and the conceptual framework
came about during my first year, the first year of my PhD.
I think I had some sense of- I mean, I think I had an idea
that it might be interesting to look at it that way.
But it really sort of- became I think more concrete
after looking at the theoretical frameworks that I might want to work with.

48:00

R: Ok, yeah.

48:02

R: So the PhD project is something presumably you've-
It's one that you've proposed for yourself?

48:07

P07: Yeah.

48:08

R: Yeah. Okay. And how did you find that that's...
so you proposed that for land economy, for a PhD?
So you find that- where you're doing it shapes it
or because you've got a background in economics,
you still feel that your topic is largely shaped by yourself.

48:26

P07: Umm... the land, the land economy department at [REDACTED]
is separate from the economics department. And they take I think,
a much more multi- or interdisciplinary take on policy?
Than say like a traditional economics department would take
so if I had gone to a different sort of department,

48:49 I think my project would be quite different-
I mean if I had gone to a different university or different department
it would be entirely different, because obviously
there's a lot of different ways to look at land markets.

49:00

P07: So I think being in that particular department shaped it-
I mean helped- allowed me to shape it the way that I'm shaping it now. Yeah.

49:21

(R concludes interview.)

Sample Transcript (Study 2 – P04)

[00.02-00.50 not transcribed; background information]

00.51

P04: and [2s] well before,

you know when I was youngster I was quite interested in genealogy.

so I thought I'd. take that up. as another. interest

you know to- just to keep my mind active.

1.02 and um, it's it's developed into, the study of the name.

and I discovered that er there's a. a large number of manuscript sources in the TNA.

that relate to. the name, erm. it just so happened that. in the 16th and 17th-

or the 15th 16th 17th, erm century (that)

1.26 people called [REDACTED] owned quite a lot of territory down in hertfordshire mainly.

yorkshire and hertfordshire. and so there's quite a lot of er material.

and um. a lot of this was was catalogued.

so. in the early days when I used to go down to tna maybe 20 er- 20 odd years ago

1.45 I used to get photocopies of stuff. and I've got a great-

I don't know if y- can you see me?

01.51

I: yes yeah I can

01.53

P04: (and) behind me there's this great um. [3s] filing cabinet

which is full of. old photocopies. from kew. um. some of them are too big, to-

you know some of the huge great documents you know

and I've got those in sort of cardboard rolls like this one here. um very old.

2.17 but then, um. shall I say, I don't know how long ago. probably less than 10 years ago. um.

the TNA made it possible for you to take photographs.

which completely revolutionised er um my my work.

a it was much cheaper because these photo- photocopying was expensive

2.35 and b. um. you could do much more,

you know you could just. in a day or two down at kew

you could just spend the day quickly photographing.

lots and lots (of unlimited) material

2.46 and then just. er download the photos er later
and. and start looking at them over the months, you know,
or the weeks er that followed.
so it became fantastically. more easy, when. photographing was allowed.
er and cheaper.

3.02

P04: so- um. but in in in recent years. in the last maybe three years. I've-
I. found out about a thing called the bernau index.
which was um compiled last century. um by someone in the society of genealogists
and what it was. is, it's an index of deponents

3.26 you know people who. deposed in a particular chancery case.
so um this bernau index isn't actually, available at tna.
it's available at the society of genealogists and also I discovered it's available on,
you know you heard of family search,

3.43 it's a- the. it's- yeah you know what that is do you. [family search-
03:48

I: [yeah is that]
is that the one that's run by um. the latter day saints?

03:52

P04: yeah. that's right. so extr- amazingly. they've got this whole index. online,
but you have to go into one of their centres and er
anyway. I went into one of their centres,
and I downloaded all the index cards that related to this name. and um. and then it's a-

4.11 it's it's quite a convoluted method of converting the index entry into a tna reference.
04.18

I: right yeah

04.19

P04: yep. yeah. um. but um. there's a document that helps you do that
and and I. I managed to, convert them mainly to. a tna reference.
and ah none of these are catalogued. er according to name. at the tna.

so there's so there's no way I could find out.

4.37 by any other means. that these depositions. are there?

4.43

P04: anyhow once you get the tna. reference. for the document. um.

then you can. you know order that. and and go and collect it from the. from the desk.

and these depositions are usually in. in two, quite large boxes. each,

well. each, section. I mean there's 100s of them. but each section is two boxes

5.07 so you. you get the- one of the boxes. and you start looking through these documents

which probab- a lot of them haven't even been looked at

since the- since the- you know. er I don't know 18th centu-

oh of course, bernau would have had to have gone through them

5.20 and he's just quickly- or his. his um assistants have just quickly noted down.

ah the. the initials of the ca- case so let's say it's bloggs versus jones.

um the case will be under b. as the plaintiff.

so um. you get this, this these boxes up

5.42 which are all to do with. cases to do with b. for that particular.

er. probably term you know michaelmas hilary. and so on.

the particular term of the year. are you with- are you with me

05.55

I: yeah

05.56

P04: yeah yeah yeah.

and um and you you go through these things and they're all- they're on paper.

[2s] except the interrogatories I- I don't know if you-

the interrogatories are the questions that the deponents are asked.

06.09

I: okay

06.10

P04: yeah. they're they're often on a on a piece of parchment.

but the rest of it's on paper. and they're folded up into a little folder

and you you go through these boxes looking for. the case bloggs.

on the right hand- top of the right hand corner.

6.24 and when you find the case you then. open. the bit of paper.

and in there are a series of depo- depositions.

and one or two of them may be. for the person you're looking for.

06.36

I: right

06.37

P04: so that's the process. and then. um. I photograph them.

it's much easier to photograph paper actually than it is parchment.

06.46

I: yeah.

06.47

P04: because it folds yeah. so um that's basically the process

and er. and when I come back, I try and decipher them.

[06:55-07.56 not transcribed; participant confirming dates of documents and focus of interest]

07.57

I: and the other thing I was. going to ask about your process

is um, how often do you find you go dow-

I mean obviously. covid will have had an impact

but kind of, pre-covid how often would you have gone down

and have you had a chance to go down since

08:11

P04: no I used to go [2s] maybe three, sometimes four but er you know,

[2s] on average about three times a year. [3s]

but since COVID I'm afraid I haven't. and. so it's become-

I'm getting a bit old now. ((laughs)) so it's quite an effort

but um. I'm in contact with some people who can. do some photography for me.

[08:37-08.56 not transcribed; discussing individuals who do photography]

[08:57-09:31 not transcribed; organizing image sharing for next part of interview]

09.32

I: yeah, and so just, it's a- kind of-
you may think there's not that much to say about this
I mean I can see that you've kind of got the two screens there in this in this view
but. if there's anything kind of. you want to tell me about how this relates to your process,
9.45 I can kind of see the, transcript on the one si- well not the transcript.
the document on the one side and the transcript on the other, erm.
is this. like. well. just kind of how this relates to how you work I guess

10:00

P04: yeah. um. so on the left is one of these pieces of paper. one of these depositions.
and this one that I put up there is actually by. this person [REDACTED] himself.
and the- and the bit on the right was. yeah wh-
I wasn't exactly sure what was going to happen.

10.20 so this is just sort of brief description of what the document is
it's not actually a transcription.

[10.24-10.51 not transcribed; P04 describes how they chose their task for today]

10.52

P04: so I thought I thought what I'd do when you're actually, observing me.
is get up a similar one. which I've already worked on but what I'll do is I'll.
I'll go through it and sort of check, to make sure my transcription is correct.

11.05

I: [yeah
P04: [which I have to do- which I have to do anyway
it's quite-

11.07

I: [sure yeah
P04: [the process] the process is quite it's quite involved.

first of all. you get this picture up and you have a look at it.

and it looks like Egyptian hieroglyphs to start with

((laughs))

11.17

I: yeah

11.18

P04: but eventually. you begin to, understand the quirks of this particular scribe.

and words start emerging, you know and then. and you know

you start seeing names of people. and. and various other things.

and and um. so first of all I would take a scan through the thing

11.37 and and see what I can just see immediately.

and then, and then I start er. actually going. down to it

and um. and trying to. write down some of the things. not necessarily-

what I used to do. was I used to try and do it letter by letter. right the way through.

11.55 um which you get the thing exact- exactly right.

and you have to do that with certain bits

because certain bits, takes a while to understand what they really are

and until you start writing them down you don't. really understand them

12.08 because they're all- not not only you know weird script but the spelling,

and some of the words are. archaic, you know.

so sometimes you don't originally you don't initially understand what what's going on.

so. but what I do now, is I read it through a couple of times.

12.25 and then I actually dictate. into siri you know

12.30

I: oh yeah

12.31

P04: yeah. um. and I do a first run. and um. and wh- I try and modernise it.

so instead of saying things like, this deponents sayeth.

I'll say you know this deponent says. such and such.

12.48

I: [sure

P04: [and uh] yeah. and um. so so I go through it and I get a very. initial rough copy.

and then I start going through it a bit more closely.

um. still, nowadays. er keeping it modernised you know

I don't try. so much anymore to get back to the original. writing

13.11 although if there's something that's really significant that I'm going to quote.

then I do get the original spelling and and=

13.20

I: [yeah

P04: =[uh things] but but I try and get it. so they're relatively easy to read.

[13.24-14.43 not transcribed; P04 describing contents of document]

14:44

I: I was just gonna ask just um while we're still looking at your-

I'll move on to the second photo in a minute.

but erm in terms of kind of the work you've just described there.

is there any, other sources you'd pull up kind of on the computer. virtually

14.57 as you're working. or does it just tend to be,

document on one screen and the text that you're kind of editing on the other

15:04

P04: no no I do pull up a- [2s] one thing I do. always

is is try and investigate the. complainant. and the and the defendant.

so I had a quick look on the t- in the tna catalogue. for. these two characters

hobson and parker. and. I found the actual chancery case. which is a C... um...

15.32 well I- I'll have to look it up. but it's there.

so if I wanted to. go back to the actual. complaint. and the answer.

I could then go go get get a photograph from Kew.

which would have the actual. um case you know.

15.48 these are just the- these are the depositions taken in the country as they call them.

[2s]

15.53

I: right

15.54

P04: yeah. so um. this is um the. the judge and the jury. asking for witnesses.

16.02

I: okay

16.04

P04: and depositions. they're often a lot more interesting,
because the cases themselves are full of formulaic language
so you can get a huge, huge document
which. is only sort of three or four lines are really the thing you're after.

16.21 so. um. what am I saying so so I find the Chancery case
which is always, useful to to have. because um. you know [3s]
if necessary if it turns out to be a really interesting case,
I would try and get pictures of the actual case. um, and they aren't online.

16:42

I: sure. so you would have to go in person or send someone to take photos

16:46

P04: exactly. then in the. the case of this one also,
I'm investigating the plaintiff and the defendant.
and I look on the catalogue and. there's one one of them has a a will.
up there. so I I I downloaded that and had a look at that=

17.04

I: oh right=

P04: =[briefly

I: =[yeah.

17.05

P04: because um. since covid started they've made ah. the prob 11 wills free?
you know which is a fantastic resource. absolutely brilliant.
so. you can find out so much. um just sitting. you know hundreds of miles away.

about al- about all these individuals ah through their wills.

17.25

I: yeah.

17.26

P04: it just so happened that. this was a squabble about money between two characters
and. so from my point of view, there was nothing really more of interest in the will.
but it only only took me a quarter of an hour to check that.

17.40

I: okay. great. um I'm just gonna move on to the next one now.
because um. I also wouldn't mind looking at kind of your virtual setup=

17.48

P04: yeah yeah ((laughs when image of files appears on screen))

17.49

I: =before ah we take short break.
yes. so. you have a lot of files. ((P04 laughs)).
and I was wondering whether all of these relate to um
the personal project you're talking today

17.58 or whether this is just kind of like. your work generally
because of course you used to be an academic ,
and whether there's. kind of a mixture of files. shown here.

18:07

P04: no I- sad to say it's all part of this project ((laughs))

18:10

I: right, so this is a- this is like a life's produc- you said it was what 20 years ago?
that you'd been going down to- some of them were from was it?

[2s]

18:20

P04: yeah I uh started going down to kew down to kew regularly about 1998 I think.
um and a lot a lot of these things are, paper documents.

the the actual. uh photocopies are in that filing cabinet there. which you can just see the top of.

and there are hundreds of photocopies in there. cost me a lot of money, ((laughs))

18.42 and as I said. next to my desk are these two rolls

and just. some of these documents were too big to fit in that ah. cabinet
so I have them in cardboard rolls.

[18:52-20.40 not transcribed; questions about large documents]

20:41

P04: so. so um with these files then. is there any kind of- I don-

obviously we can't really cover them all. but um.

so that- you mentioned they were lots of paper documents really
is that. more like notes and other files?

[2s]

20:57

P04: yeah it is really. um [2s] so. what have we got. um.

[P04 has got up and selected a file from the shelf]

I've no idea what I'm gonna produce out of this but um

[7s]

21:16

P04: this one, [3s] don't know if you know Hertfordshire

but er. [2s] this particular sheriff. um.

he, he came from the area around Hitchin. Letchworth Hitchin,

and um. I've done a lot of work. there, on the manorial documents and-

21.39 of Hitchin and the ownership of land down there.

21.42

P04: so a lot of it's on paper [2s] um. and uh. [3s]

[P03 is skimming through papers in the box file]

and um old. various documents that I've.

I've transcribed, and photographed, and. and letters I've written.

[4s] this- that particular that- this particular box file is all about. Hitchin er documents.

22.07 some of it. you know. bit irrelevant. but

[4s] the other- the other boxes are to some extent by counties. so. um.

these. these people owned land uh... in a number of different counties.

Bedfordshire, Hertfordshire, Essex, and uh the boxes are mainly divided up into counties.

[22.39-22.48 not transcribed; P04 clarifying research focus]

22:49

I: yeah, so those are um.

with the different county records, is that all come from the national archives

or do you have other archives mixed in with those

22:57

P04: oh no no. there's a lot of, local archives I've (I've visited). so. so hitchin.

um there's a- the hertfordshire archives and local studies.

has quite a lot of documents which- the manorial documents I mentioned.

you know the- kew has the manorial register. which is a really useful. ah. site.

23.21 and that directs you. to where various. manorial documents are held.

and in the case of um. hertfordshire they're largely held in this archive in. in hertford.

ah so so I've done a lot of work with that- and other places they-

Suffolk I've- and uh. other county. archives I've-

23.46 you know I'm in contact with and done things with and. and been-

and written to various people. so I keep all these notes.

[23.52-24.35 not transcribed; discussion about genealogy]

24:36

P04: my trusty- my trusty oxford dictionary is=

24.38

I: [yes

P04: =[pro]bably the book, book I look at uh most often,

24:42

I: is that for like the archaic words and

24.44

P04: yeah

24.45

I: yeah=

24.46

P04: yeah

I: =I was just gonna ask

because I can see that on the on the small shelves next to the filing cabinets

you've maybe got a couple of secondary texts there?=
24.53

P04: [yes

I: =[um are] they related to what you're doing as well?

24:55

P04: yes. yes they are. yeah. so there's ah [3s] various things here.

so there's a- a history of a couple of villages in yorkshire

which w- are associated with this. this family. they came from yorkshire.

there's a book on. land law. book on the english manor, erm. various things.

25.21 handbook of, handbook of dates, they're really quite difficult dates

because things are in- a lot of these documents are done by regnal year.

[25:32-25.47 not transcribed; clarifying with P04 what regnal year is]

25:48

P04: so that's what- that's what. that's what this bit of paper is. because I look at that a lot

that's. that's a little photocopy of er when the reigns started and finished.

so elizabeth's reign and so on. um.

the guy that I'm dealing with was the sheriff during during Mary's reign.

26.10

I: oh right yeah

26.11

P04: yeah. and er as you- well know, halfway through-
well shortly after she became queen, she married. philip of spain.
so. this, this really makes the regnal years really quite confusing.

26.27

I: yeah

26.28

P04: because first of all you've got mary and then you've got- they put philip first.
and then you've got philip and mary. and um. you know one started one year
and then. the other thing started the next year. so.
you get quite a complicated system of how these people dated these documents.

26.44

I: yeah

26.46

P04: and this book is called the handbook of dates which, I was advised to get.

[P04 is holding a book up to camera]

but it's so complicated! you have to spend at least a week studying it.

so now what I do ((laughs)) I found a trick,

er there's an online converter. and you just open the website,

27.08 shove in. year two of Mary and Philip's reign and you get. the dates.

so er you get the actual date.

[27.17-28.48 not transcribed; setting up screen-share to view P04's virtual organisation of files]

28:49

P04: yeah [2s] so I'm going down here. to a thing called files. [2s]
and um- yep. so there's a lot of various things here.

and various- you know there's yorkshire. wills.

northeast various um other- and hertfordshire-

29.23

I: yeah

29.24

P04: you see that? ok Hertfordshire is probably, where I've done most of my work-
you know the county that I've done most of my work in.

29.23

I: sure

29.24

P04: so the the first- I don't know if you can see that the first sorry=

[P04 is indicating various folders on screen as we are speaking]

29.29

I: [yeah

P04: =[the first-] that's, the man I've been talking about this sheriff.

██████████ of letchworth. then below that I've got a thing called herts tax,
so in there, I've done a lot of work on [3s] 16th century tax of hertfordshire.
and here again. these are all at the tna, and I've [gone (and gone in)-

29:57

I: [oh ok so these are like]- yeah. those look like the record numbers

30.01

P04: yeah.

30.02

I: sorry if you wouldn't mind going back on the one you just-
the file we just had open

[30.05-31.25 not transcribed; description of the content of a document]

31:27

I: yeah so the, the reference numbers=

31.29

P04: yes. yeah

31.30

I: =I'm quite interested in.

so those are individual. files. or folders at the archive

and then you have. um. the records that make up that file? that have- so it's quite.

kind of the organisation's kind of quite linked to how it is in the archive is it.

sorry that was really badly phrased.

[While I've been speaking P04 has opened another folder, containing individual image files of archival records]

31:52

P04: well. um. so. I have- I've done it by. by year.

and if you type in. er hitchin. 1556. tax. um. you might fairly quickly come upon it

but if you know the catalogue number which is e 179.

32.17

I: yeah

32.18

P04: you'll very quickly- if you type that into the cata-

you know the, the shelf number box. you'll pretty quickly come up with um.

for 1556 for instance. pretty pretty quickly come up with this.

this is actually not an e 179. this one's an e 315.

but. but um most of them. this is a particularly enjoyable one.

32.41

I: yeah

32.42

P04: but um. some some some of them are really quite difficult.

so the 1524 one. which I showed you. is um.

[P04 opens an individual image file, which shows a blurry image of a medieval-looking document. Some of the blurring appears to be due to the photography; in other places the material is discoloured and the ink may have faded]

some of it's really quite difficult to decipher. this-

32.55

I: oo yes

32.56

P04: yeah it's really. um hard work

[33.00-33.33 not transcribed; P03 providing further details about the content of this document]

33.34

I: I did notice with your kind of like top-level files. um.
they seem t- to vary quite a lot in how they're organised
like there's obviously quite a lot that's by location.
it seems to be some that are maybe thematic? um.

33.48

P04: yeah

33.49

I: and then I- or of individuals. as well

[3s]

33:54

P04: yeah I mean the whole question of filing um is is. is um [3s]
you know you're- and cross-referencing.
so I have a mixture of places people, and categories as you say,
so herts wills. for instance. has all sorts of different people from different times.

34.16 but um edward, son of [REDACTED] of lynch-
letchworth is simply about, that sheriff's son.

34.24

I: yeah

34.25

P04: so in there there will be some. tna references, some people's names, and some cases
so I'm afraid [2s] I could probably. do it more. um systematically,

but, whatever you do you have to cross reference because=

34.43

I: yeah

34.44

P04: =one thing leads to another into an incon- interconnects with something else.
so you've got to work out the most obvious. way to categorise things really.
and sometimes it's by a place and sometimes it's by uh. a name.

35:00

I: do you ever find that it um- do you ever copy documents between two locations
or do you just kind of once you've got somewhere
you're happy you can remember where it is,
that's where it stays?

[2s]

35:12

P04: w- well the advantage of. online over paper. is that you can do search.
so I can just quickly search for um [2s] yeah anything.
and and it'll bring up, all the documents.
so. so where you store them isn't so crucial

[35:33-36.02 not transcribed; transition to observation]

[36.03 5 minute break taken; recording paused for the duration of this]

[36.04-37.18 not transcribed; setting up screen share for observation]

37:19

P04: so just to- I wo- I won't go on. I'll try not to go on. an-
but I just- very brief background. so, um.

[P04 holds up a large piece of paper to camera]

this is a um one of these famous photocopies that I got from tna, a long time ago.
and it's, it's the will of that sheriff. and he died in 1558.

37.39 but, but, the curious thing was. that the will wasn't proved until 1588.
and I never really, understood that.

um. but gradually, as I did some research,
I thought there was something was going on here.
and. um. I suspected that the eldest son. um. was up to no good
and- but I didn't quite know what it was.
because he eventually became an outlaw
((laughs)) so you have the sheriff and the Outlaw.

38.10

I: yeah

38.11

P04: but but anyhow, um. I came up- I was looking through this burnout index.
and I just noticed, a case. from 1588. for a certain [REDACTED]
and um. against a richard bardolph. and I thought-
well it was actually just the [REDACTED]'s name in the bernau bernau index.

38.32 so I thought, well, I don't know what that might be.
so let's let's get the deposition so, I ordered them up and
and I photocopied them, sorry, photographed them myself.
and then it's only when I started you know, transcribing them
that I realised that this was explaining the whole problem of the of the will of the sheriff.

[38.55-40.09 not transcribed; P04 going into detail about contents of the document]

[40:10-41.44 not transcribed; question about the context of research project]

[Visible on screen are two windows. On the left is a typewritten transcription in Word; on the right,
an image of a manuscript page in Paint]

41:45

P04: so um [3s] I have this [3s] thing here so [3s] I will er [4s]
it's. it's quite a laborious process you know, having to hop,

from. a manuscript to, a typewritten transcript
and sometimes you scribble things down on paper. but er.
((reading from manuscript/typescript)) john [REDACTED] of stow longa in the county of

[8s – P04 reading aloud quietly]

42:29

P04: so the writing in red, is that something that you're not sure of what it says,
or is that like a note that you've put in for yourself?

42:37

P04: yeah it's it's a note for me actually. so I put um.
square. square brackets are usually notes.

42:45

I: oh okay

42:46

P04: yeah. yeah

42:47

I: and and what's the things in in red. so it's notes, but is it um-

42:53

P04: further down. it's actually to draw my attention to it. it's um. so, er [4s]
these things- these depositions they always give the age.
and it's always, of so many years or thereabouts.
and in this case, it doesn't quite tally with the. the ages of him and his brother.
so they're not, always exact.

43:19

P04: okay. and and and, sorry. [I will let you carry on in a second=

43:23

P04: [No no, no. No no, go.

43:24

I: =with the red writing is-
so that could be, um. anything that you want to draw yourself attention to

like a word you're not sure if it's correct, or a note that seems significant?

43:35

P04: yes. exactly. so [2s]

you know a few lines down I've got the thing, examination firme. see that?

43.44

I: e[rm]=

P04: [in re]

I: =[yes.]

43.45

P04: [in red.] yeah yeah yeah. so, I wasn't sure about that.

what is an examination firme. and um

I had- I have a colleague I sometimes contact and.

he explained it was a it was a certain type of court case.

so uh. that was why it was in red. I could- I can I can get rid of that really.

[6s – P04 highlights relevant text and changes it from red to black. Moves further down the transcript]

44:15

P04: and um. sometimes they're, they're- I'll see if I can work that one out. [6s]

er. where are we. got a whole lot of extra things here now. erm

[4s – P04 locates and opens folder. Continues browsing images while we are talking]

44:34

I: are they just all the different folders you might need to refer to

44:37

P04: yes. I'm going on to a different page now so. page three.

[P04 opens an image from the folder, again in Paint]

44.42

P04: er this is ah- one of the drawbacks.

sometimes the photographs are a bit blurred in the-
and you can go cro- cross-eyed trying to work them out.

[4s] and. so what's this then. inter 35

[8s – P04 scrolling on image to centre on the screen, resizes to fit text within view]

45.03

P04: there's quite a lot of resizing that keeps on- you have to keep on doing.

[7s – P04 scrolling up and down image]

45:13

P04: where are we, page three [3s]

what I'm trying to do now is [2s] the break between

just above page four which is in angle brackets is the name of a file. [2s] an image.

45:31

I: ah sorry. where am I looking

45:33

P04: if you look on my transcription=

45.34

I: oh yes!

45.35

P04: =there's a thing that says C 24. 189

 versus rich- rich- rich- page four.

so that is an image. so just above it, um there's something in red.

and um. that is on page three. so I've just found page three.

and I'm going to see if I can work out what. what that thing was

45.58

I: sure

[45.59-46.34 P04 reading through document. Looking back and forth between transcript and image of the manuscript. Occasionally repositions manuscript in viewer to see another section (whole line doesn't appear to fit on page)]

46:35

P04: (is it) sometimes you get, involved in tiny little things
which [3s] are often not terribly relevant
but you can never really tell if they are or not, until you work, until you work them out.
[I mean

46:49

I: [so this-] you're currently just looking for this little
this little word in red, near the bottom of the page is it,

46:54

P04: yeah I've found it. [2s] so I just need to think about it again.
[2s] um [5s] if I enlarge it a bit.

[47.08-47.32 P04 looking at the document again. Zooms in much more closely on the text this time.
Hovers cursor underneath the word they are trying to figure out]

47.33

P04: yeah.

[10s]

47.44

P04: I-I [2s] I could be wrong but I think actually that is er
[11s]
I'll. I'll leave a. question mark. as though- ((laughs))
as though, anyone's ever going to look at this I don't know but ah.
um. just in case some other crazy person will look. will look at this in the future.

48.14 he'll see or she will. see that I er wasn't fully sure whether that was right.
but I mean, that makes sense. ((reading from transcription)) he would need
have the reading of will will himself he would. he would.
I think that's- it doesn't really look like need but [...]

48.38 I think the overall meaning of the sentence is such

that it's really not worth spending too much time on it.

48.44

I: [sure

P04: [so] yeah yeah

[48:46-49.03 not transcribed]

49:04

I: so with your notes on the left hand side.

um will you have one, one word document for the whole file that you're looking at
which is obviously composed of multiple images here.

49.16

P04: yes [...] yeah.

49.19

I: and yeah ((overlapping speech))

sorry I was gonna say, if you were encountering this in the archive,
would this be um like one long document or one file with multiple pages in it?

[...]

49:31

P04: it's it's this thing that I mentioned at the beginning.

you get them in the box and they're paper. this is paper.

and so... each page is actually folded in half.

so you will see the crease. um there's the crease in the middle.

49.50 and they're all folded together. in an outside document which has the case name [...]

[P04 goes into folder with images to open another example]

so there it is. open it. this is the this is [REDACTED] versus bardolph.

and if you can imagine that's- and it has the date at the bottom.

which is the the regnal regnal date. in elizabeth's reign.

50.19 and er that is the sort of outer cover, if you like, of all these other pages inside.

so in this case, they're about they're about 14 pages of different different depositions.
does that make sense?

50:33

I: yes. yeah, it does. so, yeah.

so you're only interested in one deposition that's within that. presumably.

50:39

P04: no, no [no=

50:41

I: [no?] all [of them

P04: =[they were] they were all fascinating.

[50:43-52:26 not transcribed; P04 detailing contents of the document]

52:27

I: it's a little family drama, but all perfectly preserved and captured.

52:30

P04: yeah. so there were various um depositions here.

some of them of servants in the household,

what happened and. er you know what what what did they know about the situation

it's all really quite revealing. and it's all done in this first-

it's a first person account. but they talk about it in the third person

52:51 so. they say you know this deponent says that such and such is up,

you know he saw or she saw this and she she saw that.

um. so it's all very direct. it's amazing actually,

because it's all antiquated language you really feel as though you're there

[53:09-53:24 not transcribed; clarification question]

53:25

P04: so what- it just so happens that this page is a bit blurred

which. is always a bit of a problem. so here we go.

[53.31-53.59 P04 reading through document; comparing transcript with manuscript]

54:00

P04: yeah okay so that's fine that's correct.

[P04 changes another section of the transcription in red back to black]

so I can change that now. (right.)

[54.06-54.30 P03 comparing transcription with manuscript. Confirms another word highlighted in red in the transcript and change text to black]

54.31

I: um the- I can see that there's a sort of half line in bold there. does that have any significance?

[...]

54:43

P04: um. yeah bold isn't [...] something dubious like- red is usually something dubious and bold is something significant. so this is where it says that a copy was made for the mother and and one for the eldest son. so its just- yeah.

[55.03-55.25 P03 comparing transcription with image of original document]

55:26

P04: yeah. so I don't know. you can only see- you can't see me touching this screen can you?

55.34

I: no.

55.34

P04: no no no. so I'm [...] the crease here. you can see the crease,

55.41

I: mm-hm?

55.42

P04: yeah. so 1 2 3 4 lines up from- four or five. there's two words at the end.
and er it wasn't really- it's quite cryptic. but it says seven days.
so I wasn't quite sure about that. but looking at it now. it is seven. ((laughs))
so. um. that's just. you know these copies were made within seven days.

56:15

I: do you find sometimes that when you kind of. goes-
you've got this process you've described. of um. verbally transcribing it,
then going through and kind of doing a full. run through and then going back.

56.28 do you find that sometimes the final stage of sort of as we are here,
kind of going back and looking at the details.
are there [...] words that you're like really struggling with before
that you're kind of like no of course it's that and they they're quite.
you know the distance has sort of made it quite obvious.

[...]

56:45

P04: yes. because [...] even when you become quite familiar with the particular script,
and the scribe and so on, it's quite difficult sometimes to read through quickly.
it's easier- it's much quicker to read through typescript. because you can get a sense-
you can get a sense of the whole paragraph much more easily.

57.04

I: sure yeah yeah.

P04: so once you've. got it in some sort of printed form
um you do see the context and sometimes individual words, oh that's what it means.
whereas where you're staring at it word by word. sometimes.
for one reason or another, it's not so clear.
but the prob- one of the problems of of dictating, is that.
because the the language is a bit archaic

even though if you- even though you try and. modernise it as you're dictating,
the word order and so on is not sort of natural word order that you have. nowadays
and so siri sometimes translates it as re- rubbish. so. sometimes it's counterproductive.

57:53

I: yeah, I was gonna ask with with siri. is it that just as a um [...]
as you're dictating it are you just making a wor- a voice file.
or does it transcribe it for you. as you're talking

58:09

P04: it does it transcribes it yeah

58.11

I: oh that- yeah that is good

58:13

P04: and so that's- that then produces this copy on the left does it
that you then go back in and flesh it out and tidy up

58:21

P04: that's right. (and it's) very rough. but often- well it's-
I do it because it does save time. because I'm not a very quick typist.
and I can't touch type I have to look unfortunately.
so, if someone could touch type. they could just look at the original and start typing.
but unfortunately I'm not that good at typing
so I have to. look away from the actual thing and type and then look back and look at type.
so it's really- you lose your your place. it's- the whole thing of dictating is a little bit easier.

58.59

I: yeah

59.00

P04: yeah

[5s]

59:06

P04: so ah [...] you know originally, you know the picture I sent you was this thing.

[P04 opens the image they are talking about on screen]

and uh it's really- yeah I would have to read this.

look at this for some time. before I could even start dictating it.

because it's particularly cursive. um. and they use a lot of abbreviations and stuff. [...]

so this says just, you know if I dictate it. if I was dictating it into siri, it says

((reading from original manuscript)) [REDACTED] of letchworth

in the county of hertford esquire, of the age of 46 years,

sworn and examined the 18th day of may

in the second and third year of the reigns of our sovereign lords and lady-

lord and lady king philip and queen mary

[01.00.17-01.00.30 long pause as P04 attempts to work out what the next bit says]

1:00:31

P04: so, the next thing [...] oh! ah [...] the [...]

oh [...] oh yes. from something the deposition by virtue of his oath

[6s]

1:01:07

P04: the... the [...] he. he supposeth that robert hobson and roger parker [...]

anyway. this is what I thought. you know. after a while. I will get there,

but it's. going to take- it would take a long time if I was doing this for you.

you know I'm going to have to read through this several times

before I even begin to dictate it.

because there's some words you just [...] take ages to work out what they are ((laughs))

1:01:52

I: yeah. (I'm) just thinking this like, if you had to do this

whilst you're on a research trip to kew like=

01.01.59

P04: exactly. yeah.

01.02.00

I: =you'd be able to you know get through so-
you wouldn't be able to get through enough documents
to be able to do this kind of research.
you would have to- as you did photocopy it, or take a photograph

1:02:11

I: you'd have to spend. a month down at kew and go in every day yes.
it's completely- it would be impossible really for me to do this without photocop- photos.
yeah.

[...]

01.02.28

P04: and then even [...] sometimes there are lines crossed out as you can see, here and [...]
sometimes it's quite interesting. you know to work out what had been crossed out and
corrected.
not always but sometimes. you just don't know-
you just never know until you've- until you've got there.

1:02:56

P04: so there we have it. and this at the bottom, you see the bottom?

1.03.01

I: yeah

1.03.02

P04: yeah [...] I can be 100% sure that this is the deposition of this character.
because that's his signature there. it says per me. per me [REDACTED].
that's that's his signature there.
and I've found that on numerous other documents.

[6s]

01.03.29

P04: do I go- do you want me to carry on? (shall) I go back to this?

1:03:32

I: yeah. yeah. yeah. just carry on. as you were, just going going through this one.

[7s – P03 scrolling rapidly through transcription]

01.03.42

I: oh sorry what was the um- I can see a few more. colour coding here.

if you just go up slightly? we uh-

there was a there was sort of a green link that looked like maybe it was to a-

1.03.53

P04: [oh that

I: [a website] or a reference?

1:03:55

P04: oh yeah. yeah. well I [...] you know for my sins I have a website.

1:04:04

I: oh okay so this is your website?

01.04.06

P04: yeah so I put various stuff up on the website.

1.04.09

I: yeah.

1.04.10

P04: and um this, this page. um. which page is it- it's page five. I can get it up if you like.

we go on to another deposition by another son.

1.04.23

I: right.

1.04.24

P04: and this was interesting actually because I didn't know what had happened to this particular son

and he he turns up in Whitby, so he he happens to be in Whitby at this time.

and uh. so I've just put that in there, partly for my own reference

because (it's a) quick reference to go see what I've already said about that for now.

1.04.46

I: yeah

1.04.47

P04: and as I say if anyone. is crazy enough to ever look at this stuff in the future
they may be able to find more information
if that website has been preserved on the wayback machine.

1.05.00

I: yeah.

[4s]

1:05:06

P04: so that's what that is. gre- green. actually that's a thing it sounds silly,
but that is one colour code that means something- always means the same thing for me.
so gr-green means that it's on my website.

1:05:20

I: okay. yeah

1:05:23

P04: so I haven't put this- these depositions.
I haven't put any of them up on the website. at the moment.
because I still haven't, you know, finally. got all the words sorted out

[...]

1:05:44

I: and the ah- there was some blue as well I was wonde[ring=

1.05.46

P04: [ah]

1.05.47

I: =what that related to

1.05.47

P04: yeah.

[...]

1:06.00

P04: ah [2s] I have- there's a character I know who's a real expert in these sort of things.
um he's- he's actually a lati- a latin um scholar
and so when some of these documents. go into latin, my school boy latin is dangerous.
you know because it's not sufficient sufficiently good enough.
so I usually ask him but he's not only- because he's a- he knows the latin
he knows all the legal latin and so on.
so he knows a lot about the early court procedures and things.

1.06.36

I: I see.

1.06.37

P04: so that there it just says that [...] there was a case prior to this one.
on the same topic that was held in the king's bench. this this one here is common pleas,
I don't (know if) you- in the various courts, there was, there was the king's bench,
and there was a common pleas and the king's bench was more for criminal cases.

1.07.02

I: right?

1.07.03

P04: and the common bench was more for um. things that couldn't be proved in chancery
but but it's not exactly that. but they were both down in westminster
and they were different courts. and this one makes a reference to a king's bench case
on the same. same thing. a couple of years earlier.
and so I contacted my colleague, to say,
could we could we track down. this kings bench case.
you've heard of A A L T? it's an incredible site, made largely by america-
an american professor on 1000s and 1000s of documents in the tna.

1.07.46

I: right

1.07.48

P04: A A L T. if you type in A A L T you'll soon find it.

but it- it has hundreds- 1000s and 1000s of documents, it doesn't have these depositions.

but it does have a king's bench section. but these aren't indexed either.

there are some ancient indexes. you know handwritten manuscript indexes.

1.08.13 but you have to know what you're doing. with those ones.

but he- you know. it was just, the blue there means contact David,

to see if he can track down. this king's bench case.

[1.08.25-1.09.13 not transcribed; further details about another example P04 declined to comment on]

01.09.14

P04: but these these other ones here in red, are again, there was a word there

which actually I just looked it up. it's an old word arbitrement. I don't know if you can see it

1.09.26

yeah.

1.09.27

P04: yeah. so, yeah I hadn't hadn't come across it.

and in this Oxford Dictionary, it's ah late mediaeval word for an arbitration [...]

so [...]

so red basically means I need to do something about it,

either correct it, look it up, or sometimes it's an interpretation that needs ah confirming.

[8s]

01.10.10

P04: so there's- page seven there's something. ah, let's get page seven up

[8s – P04 opens up another image, as the transcript has run onto another page]

01.10.25

P04: it's quite a long process because, you're in in tna,
and you spend hours photo- photoing as much as you can.
and then then you go back, and sometimes, for one reason or another,
you haven't made excellent notes of what you've done.

01.10.43

I: sure, yeah.

01.10.44

P04: yeah, so sometimes it's quite difficult to-
you know, the first thing is to get all the. the images sorted out and named [...] in in a decent
way.
anyway, so at the bottom at the bottom of this page seven [...]
(there's) something in red here.

[01.11.04-01.11.27 P04 looking up something highlighted in red. Reads the wider paragraph through
in the transcript, following with the cursor]

01.11.28

P04: yeah, so I don't know if you can see, if I make it a bit bigger.

1:11:34

I: oh yeah

01.11.34

P04: strange thing here. is a legal. a legal comment.
so there's. some arbitration needed on the fact
whether. someone could sell these lands that were owned by the sheriff.

1:11:56 and mentioned in the will, because the eldest son had taken the will away.

so some of the lands were left to the younger sons, so could they, could they get rid of
them?

you know even though they haven't got the will?

and um, so. whoever it was here who's talking, I can't remember now.

1.12.15 he gave his opinion. at this trial that was in the king's bench.

((quoting from document)) taking his hold and author. by the Rikeless case [...]

set down in littletons tenor. [...] tenor. I- I think it's tenor.

but um [...] you know this is a fairly obscure reference to a certain case in common law.

1:12:52

I: yeah, it's like a precedent.

01.12.43

P04: yeah that's right. exactly yeah. so that's in red for me to try and work out

but [...] I never have done it it's

1:13:03

I: I was gonna say, is that something you would try and pursue?

[...]

1:13:10

P04: I have done in various [...] on some other occasions.

this one struck me as being [...] a little bit- you know spending-

how long do you spend on these things=

01.13.25

I: [yeah

P04: =[(over sm-)] small details. and er [...] I dec- I haven't followed this one up I'm afraid.

there probably was a book called littletons tenor or something which was used.

and I haven't even- I didn't didn't ask my friend David on that one.

don't (want to ask him) too many things.

[1:13:50-01.14.13 not transcribed; moving into wrap-up questions]

01.14.14

I: um yeah so I was just gonna ask, firstly.

I'm curious, like, how long ago did you kind of collect these images

or is kind of a typical time for you to collect the images and then to begin

kind of just transcribing them and working on them?

1:14:28

P04: um I'll go and- this particular one I can probably find out fairly quickly.

[18s – P04 scrolls up to top of document? Visible at top of Word document are summary detail about the document including TNA reference, description and summary. May be from TNA catalogue]

I'll tell you what I'll go to the date of- so. [...] (let's get some)

[P04 opens properties of the image file to check when it was taken]

so this one was 2018 september. and and I was still working then.

so. I would have come back and probably would have taken the, you know because of the other things I was doing.

I probably didn't get these. these particular pictures named for maybe a month.

because because I had a whole load of them and I just would go through them slowly.

this may not have this may not have been the first one I did, I don't know.

so sometime in 2018. and then, you know, as soon as I had time,

around the chri- perhaps christmas holidays or something,

I would have spent time deciphering them.

now it's- (it) can be much more immediate, really.

1:15:56

I: yeah. okay. so that's kind of where you start with is just like

going through naming them all and making sure they're all. in the right files and=

01.16.05

P04: yes.

01.16.06

I: =with the right codes.

01.16.08

P04: yes that's right yes.

[01.16.10-1.25.10 not transcribed; wrapping up interview and discussion of remuneration]

Transcripts of Excerpts For Video Analysis

Key: **bold** = speech; text = screenshare; *italics* = main (web) camera; *blue italics* = second camera

P01

Clip 1 (38:55-39:52)

Open on screen is a Word document. This contains a number of photographic records, pre-selected by P01 from a museum archives, with each image on an individual page. Under each image P01 has already added the accession number for each image, a unique identifier that labels the record within the museum's collection. At the beginning of this clip, P01 is focused on the first image in the file. This takes up most of the screen: some text beneath the image is also visible, though this crops the top of the image from view.

Screenshare	Main Camera
1	<i>P01 resting one hand on chin while scrolling through document with the other (2s)</i>
2 adjusts the screen slightly before beginning to type	<i>moves to place both hands below the level of the camera's view</i>
3 writes 'Desc:'	
4 adjusts the screen	
5	<i>looks directly at the screen (2s)</i>
6 begins to write a brief description of the image on screen, beginning with the person pictured (8s)	
7	<i>gaze drops lower on the screen</i>
8 pause (2s)	<i>gaze moves to centre of screen and back down (2s)</i>
9 continues to describe the image, beginning with the building behind the person (3s)	
10 pause (2s)	
11 writes 'Adornment:'	
12 pause (2s)	
13 proceeds to describe the adornment the person is wearing (22s)	<i>gaze repeatedly flicks between centre of screen and back down</i>
14	
15 stops	
16	<i>gaze moves to centre of screen and is held (3s)</i>
17 describes items the person is holding (5s)	<i>lowers gaze again</i>
18	<i>gaze moves to centre of screen and back down (2s)</i>
19 stops	<i>leans slightly forwards</i>
20	<i>leans further forward and rests chin on one hand</i>

Clip 2 (42:46-43:21)

A few minutes after the end of the first clip, P01 continued working with the record. At the beginning of this second clip there are multiple windows visible on the screen. The primary focus of P01's activities during this observation – the Word document containing photographic records – remains at the front. Behind this, two further windows are visible. To the right is P01's "master copy" of key museum artefacts central to their work; behind this is a full-screen window of a PDF file that was visible before.

Screenshare	Main Camera
1 scrolls down the Word document (4s)	
2 writes out a species name next to the accession number	
3 highlights species name and italicises this	
4 describes the artefact as it appears in the photograph and the attributes of the wearer on the same line as the species name and accession number (8s)	
5	<i>leans forward and rests hand on chin</i>
6 navigates to the top of the word document	
7 navigates back to the text below the image	
8 continues description of the image (10s)	
9	<i>leans forward and rests chin on hand</i>

P03

Clip 1 (01:01:06-01:02:45)

Prior to our session, P03 had undertaken an initial search and "sift" for records in the British Newspaper Archive relating to an upcoming paper they were planning on the history of South Asian communities in Glasgow. Here, they return to an article that had previously caught their eye for its potential relevance to their topic. At the beginning of this clip, a digitised page from a broadsheet newspaper takes up the full screen. It is divided into multiple columns: P03 has zoomed in on one of these to focus on a particular article.

Speech	Screenshare	Main Camera
1 so here we go this is referencing uh		
2		<i>narrows eyes slightly</i>
3	follows text with cursor, pausing on 2 nd 3 rd and 5 th lines of text (3s)	
4	navigates to top of page and minimises window, switching to a Word document that had been open in the background	
5 tch		
6		<i>drops left shoulder; P03's shoulders are now level</i>
7	begins typing summary of the document (24s)	

8	stops typing	
9	navigates part-way through text just written and adds single clarifying word (5s)	
10	continues with main summary of article (2s)	
11	tshu	
12	navigates to the article	
13	adjusts view of article on screen	
14	begins following text with cursor (2s)	
15	scrolls a little further down the article	
16	navigates cursor to beginning of a clause on screen	
17	adjusts view slightly	
18	minimises window displaying article, revealing their notes on screen	
19		<i>slightly nods head</i>
20	resumes note-taking, summarising contents of article (11s)	
21		<i>narrows eyes briefly whilst looking at the screen</i>
22	navigates back in text has just written and adds a word in () for clarification (5s)	
23	navigates to end of text	
24		<i>quickly flicks eyebrows up and down</i>
25	resumes summary of article (6s)	
26	pause (2s)	
27	navigates back to broadsheet	
28		<i>shifts in chair, leaning away from the screen</i>

Clip 2 (14:25-15.45)

During a 2nd observation, P03 continued to assemble resources for an upcoming article they were writing with a colleague. Having already reviewed their notes on secondary sources earlier in our session they sought to add to these from the newspaper records they had downloaded from The British Newspaper Archive. In this clip, they locate an article they had identified as relevant during our previous session and add this to the mixture of notes on primary and secondary sources they have been compiling in a Word document.

	Speech	Screenshare	Main Camera
1		zooms further out on the page	
2	tch		
3	and now you have the problem of finding the article itself		
4		scrolls up the page slowly	
5	right		
6		zooms in on a particular article	
7		pause	
8		moves cursor on paragraph and pauses	
9		moves cursor to another line and briefly tracks the end of a sentence	
10		pause (18s)	<i>brings right hand up and rests face on fist</i>
11			<i>lowers hand</i>
12		moves cursor to the right, then to the top right of the article	
13		navigates to the search bar and types in 'snipping tool' (8s)	
14			<i>raises left hand and rests face</i>
15		opens snipping tool app	
16	tch	relocates window for snipping tool	
17	right what im	starts new snip	
18	gonna do for quickness	draws box around the article using the snipping tool	<i>lowers hand</i>
19	i wouldn't usually do this but actually i do occasionally		
20	it's more so with images and stuff like that		
21		takes the 'snip' which appears as an image within the snipping tool window	
22	i'll maybe just copy and i'll just paste it into this		

23	file	navigates to notes in a word document which has apparently been open in the background
24		scrolls down to the bottom of the notes
25	and then what i've	
26	got is it's handy and i can see it	pastes the snip as an image within the word document
27	and I'm not digging about again for it	

P04

Clip 1 (46:59-47:52)

Several windows are open on P04's screen. The foreground shows two windows, roughly splitting the screen half-and-half. On the left is a Word document, displaying P04's typewritten transcript. Some words are highlighted in red, others in bold, and near the bottom of the window a reference in <> brackets and in bold breaks up the text: P04 explains that this is a reference to one of their images. As the images follow a convention demonstrated by most participation – that each page of the record is captured as a single image – this also reflects the page break in the record.

On the right is an image of a manuscript page, open in Paint. In the header it is possible to read the name of the image file, which follows the format of the line in bold on the Word document. This window appears to be roughly central on the width of the image, but showing only the bottom half of the page. Behind these two main windows are visible more Word documents and more Paint files.

P04 has been trying to go back through the manuscript to double-check their transcription. In this clip, they examine two words in the manuscript that are highlighted in red in their transcript – this indicates that P04 is not sure they are correct. At the start of the clip these have been located in the image of the record and P04 is attempting to work out what the words are.

	Speech	Screenshare	Main Camera
1	um		<i>looks between the transcript on the left and the image on the right (7s)</i>
2	if I enlarge it a bit		<i>shifts attention to the image on the right</i>
3		zooms in on the record	
4		scrolls down the text on the image, using the sidebar (2s)	
5		releases sidebar and hovers cursor underneath the first of the two unidentified words (3s)	
6		shifts cursor between the first and second words	
7		moves cursor from image of record to the typewritten transcript	<i>shifts attention to the transcript on the left</i>
8		begins tracking transcript from the end of the line before the unidentified words	<i>raises left hand and rests on face</i>

9		moves cursor back to the unidentified words on the image	<i>shifts attention to the manuscript on the right</i>
10	yeah		
11	pause (10s)		<i>leans back in chair</i>
12	ah ah		
13	I could be wrong but I think	moves cursor back to the unidentified words on the transcript	<i>shifts attention to the transcript on the left</i>
14	actually that is er		
15		begins to edit text on transcript	

Clip 2 (04:55-07:01)

In our previous session, P04 had mentioned that they produced these transcripts by dictation, using their phone to record themselves reading out the documents direct-to-text. I was intrigued by this behaviour and so requested that we follow-up with a second observation to examine this activity.

At the beginning of the clip, P04 is partway through transcribing a manuscript record by dictation. They hold their phone in their left hand close to their face. Their right hand maintains their selection of the slider at the bottom of the window in which they have the record open. This allows them to move back and forth across the page as they read the line.

	Speech	Screenshare	Main Camera
1		moves the slider to the far left of the screen	
2	eleven		
3	he does not know that	begins to move the slider from left to right	
4	he does not know		<i>reaches head forwards</i>
5	that. the now defendant did at any time make		<i>nods slightly and leans head back again</i>
6	pause (6s)		
7		pauses side-to-side movement of screen but continues to hold slider (5s)	
8			<i>leans well towards the screen</i>
9	it appear	resumes the side-to-side movement, slowly at first	<i>leans back slightly but remains closer to the screen</i>
10	pause (4s)		
11	upon account		
12	unto the said	reaches the far right hand side of the frame and ceases side-to-side movement	
13	christopher nuce that he	returns slider to the far left, not quite reaching the side of the frame	<i>looks to the left of the screen</i>
14	the said christopher did or	resumes side-to-side movement towards right	

15	pause (4s)		
16		pauses side-to-side	
		movement of screen but	
		continues to hold slider (4s)	
17	say		
18	unto him the defendant.	resumes side-to-side	
		movement to the right	
19	pause (4s)		
20	sorry that he or said		<i>looks slightly to the left and</i>
			<i>stretches neck forwards</i>
21	pause (4s)		<i>leans well towards the screen</i>
22	blank blank unto this	moves screen slightly back	
	defendant the sum of 100	towards the left	
	and 4 score and 13		
23	pause	reaches right hand side of	
		the frame	
24		moves back towards left	<i>looks towards the left hand</i>
		hand side of frame	<i>side of the frame</i>
25	pounds or thereabouts		

P06

Clip 1 (1:16:18-1:17:28)

During our session, P06 sought to add archival materials from two sources – The National Archives and the archives of a private individual – to a visualisation tool developed by the research project they worked for. They did this by selecting classification of materials from pre-set menus, as well as copying text from both sets of archival records into a free-text description box.

P06 has the visualisation tool open at the beginning of this clip: this fills most of the screen. At various points during the clip they bring to the fore a Word document, which contains a version of the record they are working from. This version enables them to copy and paste the record into the system with ease.

Speech	Screenshare	Main Camera
1	selects source materials from pre-set drop-down box	
2	opens a version of the record in word	
3	selects the archival reference code from near the top of the document	
4	pastes reference code into the source details	
5	selects document name from pre-set drop-down box	<i>leans towards the screen</i>
6	selects speaker from pre-set drop-down box	
7	selects 'Add Event' on the system	

8	what's gonna get more	navigates to top bar of the window	
9	messy is when they start to	pulls window to one side revealing copy of record in a Word document on the left of the screen	<i>turns towards the left hand side of the screen</i>
10		selects window showing record as a Word document, bringing this to the front	<i>leans towards the screen on the left hand side</i>
11	interact with each other		<i>leans further towards the screen on the left hand side</i>
12	at the moment I think they're just basically all	scrolling down through document to next section	
13	presenting their own hypothesis		<i>leans slightly away from the screen</i>
14		pauses partway through the document	
15			<i>leans towards the screen on the left hand side</i>

P07

Clip 1 (01:04:15-01:06:08)

In this clip, P07 is expanding on notes that they have taken in the archives. They have two windows open on screen. On the left are their notes, written in a Word document as a series of bullet points. The bullet points appear to represent individual records within the file, although only some have been given item reference codes. The bullet points are arranged under a heading that gives the archival reference for the folder and a short description of the file. At the end of the line, capitalised in red lettering, P07 has added 'TO RECHECK'.

On the right hand side are P07's images of archival records. Earlier in the session, they opened all the records from a single folder at once. Using a 'highlighted view', P07 expands the image viewer to fill the screen: this shows the record only on a black background. This tool – combined with the decision to open all the images at once – enables P07 to click through the records in the folder from one image to the next.

	Speech	Screenshare	Main Camera
1	ok. grouping of art		
2		locates the relevant bullet point in their notes and adds curved brackets to the end of the line	
3		adds more detail to their summary of the contents of the record	
4			<i>leans slightly and looks to right hand side of screen</i>
5		continues adding detail within the curved brackets, including who the letter is from and the date	

6		<i>looks to right hand side of screen</i>
7	selects the window showing the records which now overlaps the notes in Word	<i>rests face in left hand</i>
8	enters the highlighted view of the records	
9	moves on to next page	
10	reorientates record from horizontal to vertical	
11	re-enters the highlighted view of the record	
12	slowly scrolls down the page (6s)	
13	zooms out of the record until the whole page is visible	
14	moves on to next page	
15	reorientates record from horizontal to vertical	
16	pause (3s)	
17	begins slowly scrolling down the page (4s)	
18	reaches bottom of the page	
19	pause (7s)	
20	zooms out of the record until the whole page is visible	
21	moves on to next page	
22	reorientates record from horizontal to vertical	
23	zooms in to the record	
24	begins slowly scrolling down the page (2s)	
25	stops partway down the page	
26	tracks the text of one paragraph with cursor (5s)	
27	resumes scrolling down the page (2s)	
28	pause (5s)	
29	resumes scrolling down the page	
30		<i>frowns and leans towards screen</i>
31	tracks final few lines of the page with cursor	
32		<i>leans away from screen</i>
33	here there is another reference to the press	
34	she is quite keen on knowing about press	<i>leans forward with left hand on face</i>

P09

Clip 1 (51:58-53:30)

P09 is reviewing archival records previously collected for another project. In this instance, P09's folder reflects a multi-page archival document. Comprised of individual images – one per page – P09 opens each image one at a time and reads through the page in its entirety.

At the beginning of the clip, P09 has one such image open. This shows a double-page spread: P09 has zoomed in so that the full width of the right hand page is visible. On the second video stream, we can see a sheet of plain A4 paper with some handwritten notes at the top, taken by P09 earlier in the session.

Three video streams were used to record this session. In addition to the screen-share and stream from the inbuilt video camera, which captured P09's screen and the participant respectively, a third stream from P09's mobile phone was used to capture their note-taking on paper: this final stream is shown in blue.

	Screenshare	Main Camera	Second Camera
1	using the slider on the right hand side scrolls down the image of the record (10s)	<i>eyes widen slightly</i>	
2	reaches about halfway down the page and returns to the top		
3	reaches the top of the page again		
4	pauses at the top of the page		
5		<i>turns to right and down as they begin to take notes</i>	<i>moves right hand onto paper and begins taking notes</i>
6		<i>looks up at the record on the screen</i>	
7		<i>looks down at the notepaper</i>	
8		<i>looks up at the record on the screen</i>	
9			<i>removes right hand from notepaper</i>
10	uses the slider to scroll slightly further down the page (2s)		
11			<i>moves right hand onto paper and begins taking notes on a new line</i>
12		<i>looks down at the notepaper</i>	
13		<i>looks back at the record on screen</i>	
14			<i>removes right hand from notepaper</i>
15	(3s)		

16	resumes scrolling down the page using the slider	
17	continues scrolling more slowly	
18	pause (2s)	
19	continues scrolling faster	
20	pause (3s)	<i>narrows eyes slightly</i>
21		<i>frowns</i>
22	continues scrolling quickly	
23	reaches bottom of the page	
24		<i>sits back in chair</i>
25	closes document	
26	opens next page in folder	
27		<i>leans forward</i>

P10

Clip 1 (51:25-52:31)

P10 is setting up for the observation. Their folders are ordered chronologically by year; within the year '1981' are a series of folders that have been given archival reference codes. Opening one of these, we see on screen a series of individual images, each one a photograph of a page from the archives. At the top of the folder is a PDF file that has been given the same name as the folder.

On the second screen, the layout of P10's desk is visible. Closest to the camera is P10's mouse and keyboard, the former of which is partially visible. Their left hand rests on the mouse with a pen tucked within their hand. Immediately to the left is a blank notebook turned to a fresh page; beyond this, an open ring-binder of papers released from FOI requests. On top of this are two mobile phones.

Speech	Screenshare
1 if I just	
2 right ok. I shall get	
3	clicks on folder to open
4 going	
5	opens the pdf file of the archival folder
6	pdf viewer opens in front of the folder view
7	minimises the folder in the background
8 right ok so I've opened the pdf	
9 of	centres the pdf viewer on the screen
10 uk aid to grenada file	
11 just gonna make it the right size oo	attempts to expand the viewer but skips to partway through the pdf document
12 so I can read it	scrolls back up to the top of the document
13	expands the pdf viewer – document resizes automatically
14 there we go	scrolls past the cover page of the document to the first record
15 ah right	
16 ok so usually	pauses on the first record in the file

Coding Schemas

Each of the two coding schema were produced as a refinement of activities identified through total coding. Coding was used to assist in the development and identification of activities. However, neither schema presented for Study 1 or 2 represents a final coding schema as the activities were further developed through exploration of excerpts from the transcripts during writing.

Study 1

In-depth reading

	Analysing or interpreting
	Building contextual knowledge
	Reading things through
	Relating
	To wider context
	To existing information
	To other records

Scanning

	Scanning the record
	Scanning the file
	Things jumping out
	Selecting according to researcher's interests

Gathering

	Considering future access
	Recording context
	Unrelated to current project

Organising

	According to archival structure
	According to researcher's interests
	Referencing and use
	Temporary organising

Study 2

Storing archival material facilitates performance

	archival arrangement is not useful
	archival reference code is retained
	arrangement facilitates performance
	digital tools make categorisation less necessary
	establishing chronological order aids interpretation
	items are duplicated between folders
	keeping collections of materials distinct supports conceptual understanding
	materials grouped according to project or job
	naming of research materials
	organisation varies according to researcher's needs
	rearranging materials to support interpretation
	records often stored according to archival arrangement
	working through the file in order

Altering the format to facilitate (ways of) knowing

	adding additional levels of granularity in the record
	adding structure (categorising annotating or marking up information)
	altering the format transforms the record

	assembling or reuniting the file in a new format
	changing format enables the record to be read in context
	creating ease when looking through (or working with) records
	digitisation disrupts the record or file
	limitations of tools (requires researcher's knowledge to interpret)
	researcher's interpretation of the record affects how it is reproduced
Creating new artefacts as a fixed point to work from	
	categorisation varies according to need
	colour-coding
	fixing the activation from the record
	creating a comprehensive, personalised resource
	multiple sources used to gain a complete picture
	research artefacts function as a fixed point to work from
	further lines of enquiry to be explored
	linking to pre-existing knowledge
	physical artefacts support or extend the performance
	processing information from the record
	extracting what you need from the record
	fluidity or transiency of research materials
	knowledge is built gradually and iteratively (fleshing things out)
	summarising content of the record (brings in line with researchers interests)
	things I'm interested in
	working document acts as central focus for research ideas
	writing to support processing of information

APPENDIX 4

Study 1: Recruitment Materials

Poster



Working with archives?

Take part in our research study and receive a £10 gift voucher for your time.

We are researching how people make meaning when they interact with archives and would like to observe users during their visit to the archives. We are interested in observing a broad range of activities, which might include but is not limited to:

- Using Discovery to locate records
- Photographing physical records
- Reading, writing, and note-taking
- Downloading and manipulating digital datasets

The study will involve being observed by a researcher while you carry out your regular activities in the archive, followed by a short interview.

Participation will take 1hr. In appreciation for your time you will receive a £10 gift voucher.

Am I eligible to take part? If you are using The National Archives and are over the age of 18, you're eligible to take part.

When and where will the observation take place? At The National Archives, on a choice of dates in November or December.

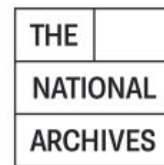
How do I take part, or request more information? If you are interested in taking part, please contact Alex Leigh for further information at: alexandra.leigh@city.ac.uk

Supervisors: Dr Stephann Makri – stephann.makri.1@city.ac.uk; Sarra Hamdi – sarra.hamdi@nationalarchives.gov.uk

This study has been reviewed by, and received ethics clearance by the Computer Science Research Ethics Committee, City, University of London.

If you have any concerns about any aspect of this study, please speak to a member of the research team. If you would like to complain about this study, please contact the Secretary to Senate Research Ethics Committee on 020 7040 3040 or via email at anna.ramberg.1@city.ac.uk

City, University of London is the data controller for the personal data collected for this research project. If you have any concerns about data protection for this project please contact City's Information Compliance Team at dataprotection@city.ac.uk



RESEARCH STUDY: TODAY

Are you working with archives today?

Take part in our research study and receive £10 for your time.

The study will involve being observed by a researcher while you carry out your regular activities in the archive, followed by a short interview. Participation will take 1hr.

If you are interested in taking part, please contact Alex Leigh for further information at:

alexandra.leigh@city.ac.uk

We will be running further study dates in November and December, so if you would like to participate, please get in touch.

Supervisors: Dr Stephann Makri – stephann.makri.1@city.ac.uk; Sarra Hamdi – sarra.hamdi@nationalarchives.gov.uk

This study has been reviewed by, and received ethics clearance by the Computer Science Research Ethics Committee, City, University of London.

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TNA Blog Post Text

Call for participants: making meaning in archives.

How do you make meaning in archives? Take part in a research study with The National Archives and City, University of London, on how users creating meaning when using archives.

What: Making Meaning in Archives

Where: The National Archives, Kew

When: Various dates in November and December 2019

Digital technology is profoundly changing what it means to be an archives. Increased online access has widened audiences to new users and created fresh opportunities for existing researchers. Yet while the means of interacting with archives has changed, archival processes have remained centred around paper-based record management practices.

As a PhD student, I am investigating what this digital shift means for how The National Archives' users access and interpret archival information. My project seeks to explore how user's understandings of archives – including both physical and digital records – shape and are shaped by users' interactions with archives. By better understanding these interactions, I hope to influence the design of archival systems that will be designed around the user, rather than the record. This ties in with ongoing work that is being carried out by The National Archives' digital archives team, [such as user-centric modelling](#).

This first stage of my research seeks to understand how users create meaning during their use of archives. It is hoped that this will establish key areas of interactions where users are creating meaning and how they are incorporating archival information into their existing knowledge. This will help to design further areas of research that will help to build a rich picture of how users work with archives.

I am currently seeking participants to take part in this first stage. Participation would involve being observed carrying out your regular archival activities, whilst describing what you are doing and why. To ensure that future systems cater to everyone, we need to observe as broad a range of archival use as possible – so please do get in touch if you would like to participate!

Activities might include, but are not limited to:

- Using Discovery to locate records
- Photographing physical records
- Reading, writing, and note-taking
- Downloading and manipulating digital data sets

How long will participation take? Participation will take around 1 hour.

When can I take part? Anytime in November or December. If you would like to participate, please get in touch to arrange your choice of study date.

Am I eligible to take part? You are eligible to take part if you are over the age of 18 and conducting research at the National Archives.

How do I take part, or request more information? You can contact me at alexandra.leigh@city.ac.uk

As a thank you for taking part, participants will receive a £10 gift voucher.

TNA Newsletter Text

How do you make meaning from archives?

The National Archives' doctoral student Alex Leigh is conducting a study into how researchers make meaning when interacting with archives. The study intends to observe researchers carrying out their regular activities at The National Archives. Examples of activities include: using Discovery to locate records; photographing physical records; reading, writing, and note-taking; working with digital data sets. However, the study seeks to observe as broad a range of activities as possible, so please get in touch if you would like to participate!

Participation will take approximately 1 hour. In appreciation for your time, you will receive a £10 gift voucher. To take part, you must be over the age of 18 and able to visit The National Archives on your choice of dates in November and December.

To take part or to request more information, please contact Alex at alexandra.leigh@city.ac.uk.

Study 2: Recruitment Materials

Newsletter Text

Call for participants: Archival research 'beyond the archive'

COVID-19 has forced a reconsideration of how we work, live, and study. For those conducting archival research, access to the archives has been limited if available at all. However, this is part of an ongoing trend that has seen archival research increasingly move away from the physical location of the archives. The shift to remote, digital access invites us to re-consider the nature of research in archives and the nature and boundaries of archives themselves.

We are conducting a study that seeks to **understand how humanities researchers interact with archival materials once they have left the physical building**. We are looking for participants to take part in an **observational study**, conducted **remotely** from their own home or workspace, that will identify research practices that users undertake when creating new knowledge from archival materials. We are interested in a broad range of activities, including but not limited to:

- In-depth reading of archival documents;
- Annotating and making notes;
- Working with digital datasets, cleaning and manipulating data;
- Comparison between different archival sources;
- Comparison between primary and secondary materials.

To take part in this study, you must be **currently conducting research with born-digital archival materials**, i.e. primary sources that were originally created in a digital format. You will have **already identified and located materials relevant to your research** that you will be working with. You will be **over 18 years of age** and **have access to a device that supports video-calling on Zoom** (i.e. a desktop, laptop, or tablet with Zoom installed).

Participation will take around 90 mins. As a thank you for taking part in the study, you will be offered a **£40 gift voucher**. You will also be offered the opportunity to take part in the study again at a later date.

If you are interested in taking part, please contact me, Alex Leigh, at alexandra.leigh@city.ac.uk to learn more about the study. This study has been reviewed by and received ethical clearance from the Computer Science Research Ethics Committee, City, University of London. Thank you in advance for your interest.

TNA Blog Post Text

Call for Participants: Beyond the Archive

COVID-19 has forced a reconsideration of how we work, live, and study. For those conducting archival research, access to archives has been limited if available at all. However, this is part of an ongoing trend that has seen archival research increasingly move away from the physical location of the archives.

In my research, I am interested in exploring how the shift to remote, digital access – whether online or through self-digitised materials – invites us to re-consider the nature of research in archives and the boundaries of archives themselves. My project explores how users interact with archives both

within and beyond its physical boundaries. I believe that by understanding the research practices of archival users, we can better design archival systems around the user's needs.

The first stage of my research sought to understand [how users create meaning during their use of archives](#). It established key areas of interaction where users create meaning, but also highlighted how much work takes place off-site. Seeing how users work with archival materials once they have left the archives will enhance our knowledge of archival use and help to build a richer picture of how users interact with archives.

I am currently looking for participants to take part in an observational study, conducted remotely from the user's home or workspace, that will identify research practices that users undertake when creating new knowledge from archival materials. We are interested in a broad range of activities, including but not limited to:

- In-depth reading of archival documents;
- Annotating and making notes;
- Working with digital datasets, cleaning and manipulating data;
- Comparison between different archival sources;
- Comparison between primary and secondary materials.

Am I eligible to take part?

To take part in this study, you should:

- currently be conducting research with archival materials, i.e. primary sources.
- have already identified and located materials relevant to your research that you will be working with.
- be over 18 years of age
- have access to a device that supports video-calling on Zoom (i.e. a desktop, laptop, or tablet with Zoom installed)

How long will participation take?

Participation will take around 90 minutes.

When can I take part?

We will be recruiting throughout November and December, and early 2022. If you would like to participate, please get in touch to arrange your choice of study date.

How to I take part or request more information?

If you are interested in taking part, please contact me, Alex Leigh, at alexandra.leigh@city.ac.uk to learn more about the study. This study has been reviewed by and received ethical clearance from the Computer Science Research Ethics Committee, City, University of London. Thank you in advance for your interest.

As a thank you for taking part in the study, you will be offered a **£40 gift voucher**. You will also be offered the opportunity to take part in the study again at a later date.

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