Areas of Research Interest

July 2018
Foreword by Chief Executive and Keeper of The National Archives

Research is at the heart of what we do at The National Archives. Our institution is the only non-ministerial government department that also functions as an Independent Research Organisation, where we have the capability and capacity to undertake our own research and receive UK Research and Innovation (UKRI) funding for research projects.

As our strategic plan Archives Inspire outlines, we are committed to advancing knowledge through exemplary academic liaison and outstanding interdisciplinary research. Our staff are currently engaged in collaborative projects on the cutting edge of physical and digital record preservation, heritage and data science and historical scholarship. It is through our areas of research interest that we hope to highlight and share with academics, funders and the broader research community the important research questions we are focusing on from 2018-2023, to open up new research partnerships and collaborations.

We recognise that the challenges faced by archives across the country are broad and require interdisciplinary solutions. In particular, the shift to digital requires new skills, a diversified workforce and technological innovation. We aim to bring together the skills of the historian, archivist, conservator, digital humanist and computer scientist (to name but a few), so that, collectively, we can contribute to multiple fields of knowledge, transform archival practice and maximise the societal benefit of archives and their kaleidoscopic collections.

Jeff James, Chief Executive and Keeper of The National Archives
Who we are

The National Archives is a non-ministerial government department and the official archive and publisher for the UK Government, and for England and Wales. Its sponsoring department is the Department for Digital, Culture, Media & Sport.

We are expert advisers in information and records management and are a cultural, academic and heritage organisation. We fulfil a leadership role for the archives sector in England, working in partnership to encourage sustainability and innovation and secure the future of physical and digital records.

As an Independent Research Organisation, we are eligible for UK Research and Innovation funding across the seven research councils. We undertake cutting-edge, high quality research, which seeks to innovate our practice and unlock the potential of our collections to reach new audiences in new ways.

Our research priorities

We have developed five cross-cutting, interdisciplinary themes, which define our priorities for research. These themes align with our business plan, Archives Inspire 2015-19; our Digital Strategy; our Research Strategy; and our vision for the archives sector, Archives Unlocked.

Our research priorities indicate how we intend to address some of the biggest opportunities and challenges we face as an archive, particularly the shift to digital.

We are seeking to explore our priority themes in collaboration with academic and research communities across different sectors and disciplines, both nationally and internationally. We can offer many benefits to our partners, including our wide-ranging interests and specialisms from historical research and conservation to digital innovation.

Our five core research themes are:

- Rethinking the record
- Risk, uncertainty and trust
- Openness, access and use
- People, place and rule
- Impact, value and affect
Rethinking the record

We are fundamentally interested in the nature of records, both physical and digital. Our research explores how records and recordkeeping are evolving in the digital age, and how we can best carry out our responsibilities towards the records we hold.

Potential research questions

- How can we utilise emergent technologies to improve our recordkeeping practice?
- How are the roles and responsibilities of recordkeeping institutions evolving alongside technologies such as machine learning, and what are the ethical implications of this?
- How can we most successfully build digital capacity and resilience in the archives sector?
- What new insights emerge from drawing together methods from conservation science, history and archival science to analyse the materiality of the record?
- How are the current legal frameworks adapting to the complex nature of the digital record?

Core research challenges

Records as data

We are looking for ways to unlock the content of physical records by making them available as aggregated datasets. With archives stretching over 1,000 years in a variety of tangible formats, new computational techniques will enable us to work with our records in new ways and trace patterns within and across our collections.

Managing complex digital records

We need to conduct research into preserving and providing access to new record formats, as many of the records transferred to us from government are now born-digital and come in a variety of formats, from high definition video to executable code. The uncertain and unbounded nature of new forms of records, such as those derived from machine learning systems, is causing us to rethink how we preserve evidence of these systems, and what is the ‘public record’ that we are preserving.
Digital recordkeeping at scale

We would like to explore how techniques such as machine learning and natural language processing can help us to deal with an increasing influx of digital records in the future. Whilst archivists have traditionally used painstaking manual processes for tasks such as selection and sensitivity review, this approach is unsustainable for large volumes of digital records with little structure. Digital recordkeeping at scale requires us to rethink our practices and embrace emerging technologies and computational methods.

Risk, uncertainty and trust

Records and data are being managed, edited and transferred in new ways. We must uncover new technologies and tools to manage the risks of recordkeeping and guarantee the authenticity of the digital record.

Potential research questions

• How can we effectively deal with ambiguity and uncertainty in and around our collections?
• What new systems and technologies might help us meet the challenges of safeguarding digital records and data in ways that engender public trust?
• How can we develop statistical models that help us understand and quantify the likely impact of preservation actions and invest resources to greatest effect?
• How might we reimagine the economic model for archiving across the archives sector, which is underpinned by the notion of trust as an asset?
• How might an analysis through the lens of risk help different types of archive to manage their rights and responsibilities around the record?

Core research challenges

Risk modelling for physical and digital archives

We would like to examine how predictive risk modelling can inform the decisions we take on the preservation of our collections. Harnessing both conservation and digital expertise, we would like to develop a model that balances the cost and benefits of different preservation options. In addition to this, risk modelling has the potential to help us decide whether a record can be made accessible based on legal, social and ethical constraints.
Making links across uncertain data
We aim to create new routes of navigation through our collections by linking different records based on the probability that their content is related. Due to the ambiguities that are found within our historic data, we must develop probabilistic methods that mean we can provide a user with related records based on an expression of confidence rather than a definite truth.

Managing uncertain record descriptions
We seek to explore ways in which we can automatically create descriptions for our digital records, rather than manually write the metadata. This raises new questions on how we can assure the quality of automatically generated descriptions, and help our users engage with and interrogate uncertain descriptions.

Maintaining public trust in the record
We would like to understand how technologies such as distributed ledger can be used to guarantee that the born-digital records we archive today are the same ones we release to the public in the future. As technology advances and formats become obsolete, the original record will not be the same as the one presented to the user. However, we need to guarantee that whilst the format of the record has changed, its contents have not been tampered with.

Openness, access and use
We are committed to making our collections widely accessible. With increasing volumes of digital records and changing user expectations, we will find innovative ways to present our collections and engage more people with them.

Potential research questions

- How can archive services design and present online access systems to meet the changing needs and expectations of users?
- How can new techniques such as visualisation and data mining deliver new insights into our records for our users?
- How can we create new discovery and navigation routes into our collections and how does this tie into questions of representation, privilege and power?
- How can we move archival practice forward to encompass pluralism?
- As born-digital records and datasets become more commonplace in archive collections, how will the skills of the researcher and the archivist need to evolve?
• What new processes, methods and tools can we develop to ensure digital records remain accessible over time?
• What participation, learning and engagement opportunities can we offer around our collections to reach new audiences?

Core research challenges

Enhancing representation and diversity in the archive

We aim to highlight the range of individuals and communities represented in our records, and to encourage more people to use them in different ways. Archives, like many cultural organisations, are striving to reach and represent more diverse communities. In our research, we will explore the make-up of the archives workforce and the audiences we engage with to embrace a pluralistic vision for the sector.

Developing research skills and tools for access

We need to be able to understand the current and future skillsets of our researchers. This understanding will influence the way we design our data delivery systems, research tools and research services. New approaches to service delivery will require new research tools: for instance, the provision of archival material as aggregated data will require new kinds of tools for quantitative analysis and the manipulation of data at scale.

New ways of presenting digital records

We will do research to underpin our new presentation system for digital records. There are many challenges surrounding the presentation of digital records, from how to present multiple versions of records to providing adequate pointers for closed or redacted versions. Our research will help us understand how to present digital records appropriately and securely within legal, commercial and technical constraints, as well as incorporating user requirements.

People, place and rule

As the archive of the UK Government and official publisher of UK legislation, we are in a unique position to chart state transformations, sovereignty and social reform over time. Our research on individuals and government, nation and society, aims to illuminate the past and inform contemporary debate.
Potential research questions

- What do archives tell us about the evolution of local and national government and the rule of law?
- What agency and voice does the individual have within the records of government or the state?
- What does the record tell us about geographical power structures and how physical and theoretical boundaries have been established and challenged over time?
- How do our records support understanding of processes of centralisation, globalisation and modern diplomatic relations?
- How are legal frameworks adapting and how do they need to adapt to shifts in the way people access the record?

Core research challenges

Placing the record in context

We need to explore the relationship between our records and the context of their creation, arrangement and ongoing use. Understanding the administrative structures of a record’s creation enables us to understand its historical origins and to assess its purpose and impact. This will enable us to connect seemingly isolated collections and draw patterns across our records and those held in the UK and beyond.

Recovering the individual within state discourse

We will uncover the lived experience of citizens who engaged with the state and reveal how ordinary people navigated official processes, made their voices heard and influenced social change. The individual’s voice is often lost within the sweeping apparatus of state and the vast legal record, and research is essential to unearth the human response to law and policy.

Contested borders and spaces

We want to examine the connection between people and land and how boundaries, both physical and imagined, have been established. Records enable us to map the evolution of social, legal and political spaces over time, on a truly global scale. At a time when borders and rights are being challenged and reshaped around the world, our records have great relevance for contemporary discourse and international debate.
Impact, value and affect

The role of archives is increasingly under scrutiny. We must find new ways of demonstrating the cultural, social, financial and psychological impact that archives have on people and society.

Potential research questions

• How can we reveal hidden histories and a diversity of subcultures to ensure the greatest possible representation and reach of archives?
• How can we develop the sustainability of archives for future generations?
• How can the economic, financial and social benefits of archives be quantified?
• How are the mechanisms and policies of heritage protection, such as export licensing, evolving in the new hybrid cultural and technical environment?
• How are digital records appraised both for significance and for market valuations? Does value reside in the rights rather than in the data?
• What physiological and psychological responses may occur when people access archives and how may this contribute to the development of archival ethics?

Core research challenges

Evidencing and demonstrating the value of archives
We will conduct research to establish an evidence-based approach to impact for archives to aid sustainability and accountability across the sector. This requires exploration of the most effective measurements, both qualitative and quantitative, that archives can use to evidence the impact of their work.

Impact on culture, heritage and national identity
We aim to evidence how archives can help unearth forgotten pasts, strengthen individual identity and wellbeing and enhance our cultural and national heritage. By developing new recordkeeping practice and public engagement programmes, the archive sector has the potential to connect more people to our wider collective memory, whilst also more broadly influencing both national practice and policy.

The experience of the archive
We will examine the user’s experience of archives and their physical and sensory responses to collections. We will explore new practices and ethics for the socially responsible use of
archives, particularly around sensitive records. We will also explore the role of the archivist, how they represent and react to affect, and how the records affect archivists themselves.

**Envisioning new business models for archives**
We will explore new financial and organisational models to enable the archive sector to confront the digital challenge and be sustainable for the future. We are particularly interested in the potential of digital infrastructures that could allow archives to collaborate, such as distributed ledger technology.

**Contact Us**
If you would like to know more about our research and academic collaboration or are interested in working with us on our research priorities, please contact our research team: research@nationalarchives.gov.uk

Follow us on Twitter: @UkNatArcRes