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29 June 2019

Mr David Tune AO PSM
Independent Reviewer
c/o Tune Review Secretariat
National Archives of Australia
Queen Victoria Terrace
Parkes ACT 2600

Email: review@naa.gov.au

Dear Mr. Tune,

Please accept my submission herein, to support your review of the National Archives of Australia (NAA).

I am an independent consultant and scholar based in British Columbia, Canada. Over nearly 35 years as a consultant, I have worked with governments, universities, colleges, professional associations, non-profit organizations and other agencies around the world to offer guidance on a range of records, archives and information management issues, including national, state and local governments in Canada, Bermuda, Trinidad, Hong Kong and elsewhere. I have taught records and archives management in universities in Canada and internationally, and I am a member of several professional associations, including serving on the International Council on Archives, where I serve on the Programme Commission, which is responsible for driving international initiatives in records and archives development.

I am the author of dozens of publications and conference presentations, including prize-winning articles on a variety of archival topics. I received the Society of American Archivists' 2011 Waldo Gifford Leland Award for my textbook *Archives: Principles and Practices*. In my forthcoming book for the general public, *A Matter of Facts: The Value of Evidence in an Information Age*, I make the case that authentic and accurate evidence is crucial to supporting and fostering a society that is respectful, democratic and self-aware.¹

I have had a long association with the Australian archival community. I am an active member of the Australian Society of Archivists, serving on the editorial board of the ASA's journal *Archives and Manuscripts* from 2012—2019. I studied Australian activities in depth for my chapter "The Legacy of Peter Scott from an International Perspective," published in *Arrangement and Description of Archives amid Administrative and Technological Change: Essays and Reflections by and about Peter J Scott*.²

In 2016, I was invited to be the closing keynote speaker at the ASA's annual conference, where I presented my thoughts on the future of archival service in Australia and internationally.³ In 2018, I was invited to Australia again, with financial support from the NAA, to participate in the UNESCO Australian Memory of the World summit and offer my thoughts on the Canadian archival system in relation to archival development in Australia.⁴

As a consultant, I am regularly asked to advise national and state governments and other public institutions on aspects of records and archives care. When researching best practice, I often turn first to the NAA, looking for innovations in Australian practice as examples for my clients and colleagues around the world. I have developed a deep admiration for the thoughtful and innovative approach taken by the NAA and the Australian archival community in many aspects of records and archives management. It was the Australians, through the NAA, who conceived of the concept of a ‘continuum’ of records care, an idea that helped break down the traditional barriers between ‘old’ (archives) and ‘new’ (records).

To support a continuum of care, the Australians introduced the concept of ‘recordkeeping,’ which helped refocus responsibility for documentary evidence – records, archives and data with evidential value – away from ‘after-the-fact’ custodial care toward ‘from the point of creation’ management and oversight. This shift has been critical in Australia and around the world, as recordkeeping professionals struggle to manage the immense volume of evidence being produced in the digital world.

The active involvement of the NAA in the creation of quality documentary evidence – encapsulated in the NAA’s initiative ‘Keep the Knowledge – Make a Record,’ has helped to integrate recordkeeping into the daily work of government officials. I believe that this change in perspective, away from old and static and toward new and dynamic, results not only in improved efficiency and effectiveness in public agencies but also in the creation and protection of authentic and reliable evidence of government actions, transactions and decisions.

The NAA’s robust ‘Information Management Standard’ and the whole-of-government approach taken in ‘Digital Continuity 2020’ are other examples of an integrated approach to evidence management – a model of excellence to be analysed and adapted. Most recently, the NAA has also taken a leadership role in the protection of authentic digital evidence by participating actively in the Archangel Trusted Digital Archives project, which is investigating the potential of artificial intelligence and blockchain technologies to capture and preserve records and data with evidential value.⁵

The NAA has been a leader in Australia and internationally, taking bold strides to change the recordkeeping dynamic and ensure the protection of evidence from the point of creation, so important in an electronic age. But as you are examining in your review, the NAA faces many challenges. Like archival institutions around the world, the NAA struggles to address increased public demand for records and archives in a climate of fiscal restraint. Audiovisual materials will not wait for decades to be reformatted so that the content may be preserved. Digital records will not wait a year, never mind a decade, before they start to deteriorate. The public demands more and more content through the Internet, but digitisation is a tremendously costly and time-consuming process. Only the smallest portion of any national archival collection can or should be scanned for online access. The challenges brought by digital technologies are affecting archival service in Australia and around the world.

The NAA is *the* national institution in Australia responsible for identifying government evidence and ensuring that evidence is protected, with its authenticity intact, for as long as needed, whether a year, a century or forever. This evidence is then made available to the public, in accordance with necessary restrictions to respect personal privacy, national security and so on. Any functions that the NAA performs should begin by acknowledging this core responsibility to identify, locate, protect and make available essential evidence.

In my remarks, I do not wish to focus on specific operational issues. Instead, I would like to address the overarching priorities that the NAA – that any government recordkeeping agency – must address in order to ensure authentic evidence is protected in a digital age. I offer the following specific points:

1. It is essential that government distinguish between information and evidence and recognise the NAA’s role as the national agency responsible for protecting authentic and reliable evidence.

2. In order to protect evidence in a digital age, the NAA must continue to provide recordkeeping guidance and oversight across government; it cannot wait until after records are created, or not, to participate in their care.
3. The need to reformat at-risk materials such as audiovisual archives is essential, but equally important is the responsibility to protect born-digital evidence, which is by its very nature highly mutable and inherently unstable. Staying abreast of new technologies, while recognising that they are tools, not solutions, is essential.
4. The public perception that digitisation is simple, immediate and inevitable is mistaken. Hard choices have to be made between managing analogue and born-digital records and digitising archival documents, and the public needs to respect the ability and responsibility of the NAA to make those decisions, and not to push the institution to the impossible goal of digitising everything.
5. The purpose behind preserving records, archives and other sources of documentary evidence is to ensure they are available to the public. The NAA must continue to play a central role in providing both virtual and physical access to evidence.

1) Distinguishing Information from Evidence

In today's post-truth, post-fact world, we desperately need evidence of actions, transactions and decisions, not just 'information' or 'content' or 'data'. As I explain in *A Matter of Facts*, *data* are some combination of elements of raw content, such as numbers or letters, and *information* is contextualized data, or data infused with layers of meaning. A *record* captures information or data in a fixed medium; it is a 'whole' thing: an email, a report, or a text message. *Evidence* is any source of information that provides demonstrable proof. We cannot say that an email is *only* information, or a photograph is *always* evidence or a database is *just* data. If the source—data element, photograph album, or email message—can be used to provide proof of actions, transactions, or decisions, then it has evidential value.

While the NAA is often tasked with managing 'information,' in fact what the institution really does is protect authentic and reliable evidence. To do this, the NAA begins by distinguishing information from evidence; then ensuring both are managed effectively; and ultimately protecting core evidence so that government can be held to account and people's rights are protected. In your review, I urge you to recognise this distinction between information and evidence and direct your recommendations toward the NAA's core responsibility: to protect sources of documentary evidence so they may stand as unassailable proof.

2) Providing Recordkeeping Guidance and Oversight

Today, news stories abound about the manipulation and destruction of public records and other evidence around the world, which will have grave consequences for democracy. Emails are deleted from computer servers; video recordings are manipulated to deceive viewers; social media content is being weaponised to support disinformation campaigns. Recordkeeping institutions such as the NAA are and should be at the forefront of the battle against such manipulation. The NAA is to be congratulated for its leadership in providing guidance and oversight in the creation of authentic and reliable evidence. In an age when records can be created and deleted in a matter of minutes, such oversight is essential to accountability. The NAA – which is *the* memory institution for Australia's Commonwealth government – must have the resources necessary to sustain this important function.

The NAA must also have the legislative authority not only to capture and preserve evidence but also to require efficient and effective recordkeeping from the beginning. The government as a whole must also implement mechanisms – whether through the NAA or through another body – to hold public officials and government

agencies to account for their actions.

In your review, I encourage you to help ensure the NAA has the resources and authority needed to continue its formal role in government recordkeeping. I also support any action to create and maintain a robust and sustainable legislative and regulatory framework that supports efficient, effective and accountable recordkeeping.

3) Preserving Evidence

It is not enough for an archival agency to collect records; these sources of evidence must be protected so that they remain authentic and accessible for as long as needed, which might well be forever. Particularly urgent in 2019 is the preservation of audiovisual and born-digital evidence. Paper records created in the 19th century are still stable today, but magnetic tape recordings and electronic records can be altered or deleted in an instant: victims of a computer virus, power surge, equipment malfunction or accidental (or intentional) deletion. As noted in the background documents to your review, the lack of equipment to copy audiovisual tapes is perhaps the most frightening preservation challenge facing archival institutions today. The staff at the NAA have the knowledge and skills needed to address this challenge; they need adequate resources to achieve success.

In addressing the challenges of protecting audiovisual and born-digital evidence, however, it is critical to recognise that while the problem may be technological, the solution is not. Technology is simply a tool. There is no magic computerised bullet that will ‘solve’ the challenge of creating, capturing, preserving and making available authentic documentary evidence. It takes human intervention – thoughtful analysis of government requirements, identification of public priorities and development of management strategies, policies and procedures – to ensure that technology can be used to best effect. The NAA brings tremendous professional expertise to the task of digital evidence management; in your review I urge you to consider how the NAA will continue to receive the resources and government support it needs to carry out the vital tasks associated with preserving fragile media materials and capturing and protecting born-digital evidence.

4) The Role of Digitisation

Like archival institutions around the world, the NAA is pressed to digitise existing holdings and create digital collections for remote access. Digitisation is an important component of archival service, but decisions about what to digitise and why work should be based on an honest assessment of risks and benefits. Too often, people think that digitising ‘everything’ – or even a portion of everything – will ‘solve’ a ‘problem.’ Records and archives are not a problem; they are a reality. The ways in which they are captured and protected will keep changing as technology changes. Not everything in an archival institution can or should be digitised. It is imperative that institutions like the NAA look forward more than they look backward, and preserving born-digital evidence is a much greater challenge than digitising boxes of paper records, which may well remain stable for decades to come. In your review, I urge you to ensure the NAA continues to receive the resources needed to achieve success with selective digitisation, but that you look carefully at calls for mass digitisation, which is not a solution to the ongoing responsibility to manage evidence.

5) Providing Public Service

Records and archives are preserved in order to be used. Recorded evidence helps people feel a sense of connection with family, country and world. When people have a sense of identity and community, they might just feel that they have a greater stake in their society. The NAA provides excellent public service, including in-person reference support in its many locations across the country as well as remote and online access to information from and about its holdings. The NAA’s physical presence, in Canberra and in offices around the country, is essential not just for providing ‘answers to questions’ but also for supporting public engagement and for raising awareness of the value of records and archives as sources of documentary memory.

The NAA should continue to receive adequate resources to maintain its physical presence around the country, and to develop exhibits, outreach initiatives and public programmes, which are such valuable tools for engaging the public with their country's story. Archival institutions are not just storage warehouses but places of engagement. They can be a hub for the community, bringing together physically and virtually such diverse groups as genealogists, lawyers, indigenous rights activists, government researchers, historians and the general public. If archives are evidence of us, then all of us will benefit from the opportunity to engage with those sources, and each other, in physical and virtual spaces. In your review, I urge you to support a continued physical presence for the NAA in offices around the world, whether in stand-alone government repositories or in shared facilities with libraries or other information/cultural institutions.

Archives, records and other sources of evidence are not cultural frills. They are touchstones for accountability, identity and memory. They support accountability by serving as objective proof of actions, transactions, decisions and opinions. They provide a sense of identity and community by showing us that ours is not the only time nor only place on earth; that people and communities and societies existed before us. They help foster individual and collective memories by reminding us of lives lived, whether decades ago or yesterday. An institution like the NAA must continue to exist and thrive – as a politically independent agency, that helps to hold government to account, protect the rights of the people and make available the documentary evidence that gives us our memory and identity. As argued by David Ferriero, Archivist of the United States, there is a critical role of government archives like NARA in the United States and the NAA in Australia:

The importance of independent archives at all levels of government is critical to the trust of the country in its history, and the ability of the archives to provide reliable trustworthy evidence of the actions of the past. Every government archivist must be allowed to do his or her job free of political pressure so that the archival record can speak freely, and so the archives can continue to function as the trusted repository of the actions of government.⁶

In my career, I have often articulated my vision for the recordkeeping future; let me do so again here. I want to live in a society that is enlightened, civilized, democratic, respectful, and self-aware. In order to achieve such a society, people need a recorded memory. They need to be able to create a collective consciousness from unfettered access to the evidence of communications, actions, and transactions. Open and easy access to sources of trustworthy evidence helps to support democracy, transparency and accountability, to foster a sense of personal and collective identity and to generate individual and shared memories. Evidence, be it photographs taken yesterday, government records produced last month, or diaries written a century ago, helps people know themselves and their world, remembering themselves and each other with honesty and integrity.

The National Archives of Australia is the leading institution in Australia to help achieve this vision. The NAA already works to develop cutting-edge, sustainable methods for protecting government records and public archives. Ongoing and sustained support for this role is crucial, to ensure Australians continue to have access to authentic and reliable sources of documentary evidence.

With appreciation for your work on behalf of the people of Australia.



Laura Millar

¹ For more on *A Matter of Facts*, see <https://www.alastore.ala.org/content/matter-facts-value-evidence-information-age>.

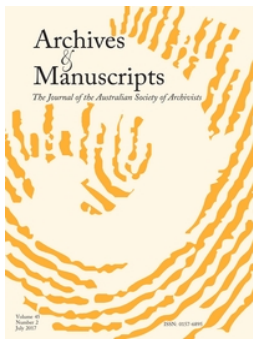
² This book was edited by Adrian Cunningham and published by the Australian Society of Archivists in 2010. An excerpted version of my chapter was published as ‘“An Unnecessary Complication”: International Perspective on Peter Scott’s Series System,’ *Comma* (2013), available at <https://online.liverpooluniversitypress.co.uk/doi/10.3828/comma.2013.1.13>.

³ My speech “On the crest of a wave: Transforming the archival future” was published in *Archives and Manuscripts*. A copy of this article is included with my submission.

⁴ I expanded those remarks into an essay, “Pulling Strings: The Struggle to Document Canadian Society.” This article is available at <https://www.amw.org.au/news/articles/canberra-declaration-towards-representative-national-estate-documentary-heritage>.

⁵ For more on the Archangel initiative, see <https://www.archangel.ac.uk/>.

⁶ See ‘AOTUS David Ferriero’s Archives Month Post: Celebrating American Archives Month,” Council of State Archivists blog, October 25, 2018, <https://www.statearchivists.org/connect/blog/2018/10/aotus-david-ferrieros-archives-month-post>.



On the crest of a wave: transforming the archival future

Laura Millar

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On the crest of a wave: transforming the archival future

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ABSTRACT

The profession of digital archivist is crystallising, fundamentally challenging traditional archival roles. The very nature of digital records also challenges the sustainability of archival systems and collections. Records that used to stay stable for decades in an analogue world now risk being lost or damaged within moments of creation. How should archivists react to these changes? Archivists have to lift ourselves out of our analogue environment and focus more effort on forging a new path, to reposition archives, archival institutions and archival practitioners more strategically for the future. To do this, archivists must resist the temptation to think that we and we alone – as people, as archivists or as today’s archivists as opposed to yesterday’s archivists – can come up with the ultimate solution to the world’s recordkeeping problems. Archivists must keep innovating, absolutely. But we also need to be agile and flexible, remembering that anything we come up with today will be superseded at some point in the future – increasingly, in the very near future. Archivists need to forge links with archives, systems and people in order to come up with approaches to records and archives care that remain usable now and flexible well into the future.

KEYWORDS

Archives; technology; future; profession; advocacy

The 2016 Australian Society of Archivists (ASA) conference, on the theme of ‘Forging Links: People, Systems, Archives’, considered how technology is changing the work of archivists and also changing the ways in which archivists relate to users, records and content. The profession of digital archivist is crystallising, and as that new discipline emerges it fundamentally challenges traditional archival roles. At the same time the very nature of digital records challenges the sustainability of archival systems and collections: records that used to stay stable for decades in an analogue world now risk being lost or damaged within moments of creation. How should archivists react to and act on these changes?

The phrase ‘forging links’ was an excellent metaphor for the Australian conference. To forge links is to build bridges, establish connections and create new and stronger conditions in which to achieve the archival goal – to help society document its actions and transactions, its communications and decisions, so that archivists support and foster three pillars of a civilised society – accountability, identity and memory.

Forging links is critical to fostering change, as archivists address the paradigm shift brought by digital technologies. This paradigm shift is real, and archivists are trying very hard to accommodate it. We have constructed electronic document and records management systems (EDRMS); we have built online descriptive tools; and we are working diligently on innovations in digital preservation. We are also, always, struggling to stay on top of our pre-digital records environment: managing backlogs of paper records; coping with the increasingly severe threat of deteriorating audiovisual recordings; and addressing the intense public pressure to digitise everything.

We should praise and promote the tremendous and often unrecognised effort involved in making the 'old' stuff available. Archivists have, in the last three decades, developed descriptive, preservation and recordkeeping standards, constructed online databases and expanded the reach of our professional associations to address not just historical archives care but the broad sweep of records and archives management. We should not forget these archival successes.

But archivists also have to lift ourselves out of our analogue environment and focus more effort on forging a new path – if we can keep playing with that metaphor – to reposition our world, including archives, archival institutions and archival practitioners, more strategically for the future. To do this, we need to take a step back and remember that we are not sitting on the apex of achievement but on the crest of a wave.

We need to address, and attempt to overcome, a quality in the archival community, one shared with much of humanity, and one that people shed, or should shed, as we get older and wiser. This quality, which can be referred to as 'temporal chauvinism', is the belief that we, in our current environment or profession or generation, are the acme of accomplishments: the latest and greatest. That our creations, inventions and ideas are right and true and best, better than whatever came before.

All generations in all societies suffer from this myopia, one must assume, but it is a condition compounded by the self-importance that can come with becoming a specialist in any profession. Archivists must resist the temptation to think that we and we alone – as people, as archivists or as today's archivists as opposed to yesterday's archivists – can come up with the ultimate solution to the world's recordkeeping problems. We may indeed have improved on the past, but someday someone else will improve on our work. It was ever thus.

More than many other professions, archivists are on the crest of a wave, and so we above all must remember that we are not able to come up with definitive answers. As the world has been turned upside down by digital information technologies, those whose mission is to manage society's documentary evidence are surfing, and occasionally floundering, on this digital wave.

We are no longer at the start, but we are far from the end. And so we must double our efforts to rise above our temporal chauvinism, to remember that anything we come up with today to 'solve' records and archives 'problems' is not going to be the last word. There was a time when union lists were the ultimate solution to description, and, more recently, when EDRMS were the ultimate solution to digital recordkeeping. Now these tools are increasingly seen as 'old school' approaches to modern and ever-changing information management challenges. Archivists must keep innovating, absolutely. But archivists also need to be agile and flexible. We need to realise that anything we come up with today will be superseded at some point in the future – increasingly, in the very near future. Archivists can only do the best we can do with what we have, and we cannot predict what the future will bring.

What we *can* do, and what we perhaps do not do enough, is be more open about the fact that we are not in some mythical, magical, utopian archival universe, where our solutions are the best and greatest and most sustainable. We need to admit, openly and with humility, that the world of archives and records is not magical but messy. Very, very messy. We need the public to understand our predicament, and to support us in our efforts to come up with approaches to records and archives care, knowing that what we invent today may be obsolete tomorrow, but at least it is something where there may have been nothing before.

So where do we need to focus our efforts, to stay on top of that wave? Where do we need to forge links, to improve on what we have done before or to build something new? The three areas that need our efforts are the three areas at the heart of the ASA 2016 conference: People, Systems, Archives. We need to consider each of those in turn, starting with archives – archives the stuff and archives the institution – with the goal of considering not where we have been but, rather, where we might go.

Forging links with archives

Digital technologies have transformed physical documentary evidence into digital, virtual records and data. The explosion of digital tools is also shifting the emphasis away from physical archival institutions towards digital repositories and cloud computing. Archivists know this, and we are continuously looking for ways to respond. But it is not just a one-time shift: analogue to digital. It is a multilayered, continuous evolution: paper to PDF or to MS Word, to database, to JPEG or TIFF file, to the ubiquitous and ill-defined ‘big data.’ Perhaps next will be virtual realities or Vulcan mind melds.

What once was one simple document that fit into an acid-free file folder might now be a hybrid, computer-generated, paper-supported information monster composed of dozens of different and sometimes conflicting file types. Just when records professionals figure out how to capture one technical element – PDF/A versus PDF for instance – someone changes the technology. Often there is no ‘document’ any more. Archivists have to rethink fundamentally our understanding of how to capture the nature of evidence. This is the wave we surf, and we are struggling to stay upright.

This is not just a change in digital technologies or the records they generate, but a change in the ways in which societies communicate and document their communications. There is some doubt that the custodial archival institution will survive the change. It certainly will not survive in its current form.

Archival institutions acquire evidence, but a record or a memory must exist before it can be captured. Archivists have always, necessarily, worked with the past, and so it was, traditionally, rather natural to assume that it was right and proper to wait for events to move from the present to the past before making final decisions about what to keep or not keep.

Once the past is done, archivists have brought materials from the past into a custodial environment. Often, in Canada particularly, this institution was funded in full or part by the public. This custodial approach, and Canada’s inclusive and all-encompassing total archives approach, are not necessarily wrong. But it is important to credit Australian archivists with getting ahead of that custodial wave by coming up with the concept of series-level control and the idea of a continuum, which shifted the focus towards a post-custodial recordkeeping environment. While Australians have been offering radical options to concepts of the archival ‘whole’, North American archival institutions, and others around the world, have

struggled with applying the concept of the *fonds* in an ever-more fragmented and distributed information environment.¹

The fact is, archival institutions cannot wait 25 years to acquire digital records. There may well be no records left to acquire. But equally archival institutions cannot acquire the millions of Instagram images or YouTube videos or Twitter messages whizzing around the globe each day. To create a more sustainable archival environment, archivists need to change the recordkeeping environment. We need to influence the technologies used not only to manage records but also to create them in the first place. Which takes us to the next link in the chain: systems.

Forging links with systems

How should archivists create, adapt and use the information and records systems at our disposal? Here the focus is on technological systems, not social systems, though the latter are also critically important. How can we make sure that all the effort put into developing recordkeeping and archives management tools like document management systems or online descriptive databases is not swept away by the next technological wave?

Too often, archivists, and society, are still using new technologies to replicate old ways of working, rather than using those technologies to transform how we work. This is akin to thinking of a car as a horseless carriage, similar to a horse and buggy, rather than imagining a completely different way of transporting ourselves from Point A to Point B. Leonardo da Vinci conceived of a flying machine in 1485. Orville and Wilbur Wright took flight in Kitty Hawk, North Carolina, in 1903. Personally, I think 418 years is a long time from conception to execution. Archivists need to dream like da Vinci and act like the Wright Brothers, and not be afraid to crash.

When EDRMS were first developed, archivists considered them to be game changers. But it did not take long for at least some EDRMS to become old and tired, often unused by all but the records manager. While records professionals were setting up layers and layers of folders for users and training staff to file their digital records hierarchically, those users were busy tagging their digital documents in SharePoint, conducting business through text messages and Twitter and spending more time on their iPhones than in their offices.²

Similarly, when archivists first developed archival descriptive standards, many thought we had defined, for now and eternity, the boundaries around which archives in custodial care could be defined and described: *fonds*, series, file and item. But others began to think that focusing on series, agents and functions might offer more flexibility in arrangement and description, supporting control even in the absence of custody. Today, archivists wonder if either strategy offers the flexibility we truly need to manage records and data effectively, in a world where crucial documentary evidence is being created and managed in environments well outside of archival custody or control.³

Records and archives professionals risk falling off the wave with EDRMS development and with the creation of descriptive tools. We were doing what we thought was best, and we cannot be faulted for our good intentions, but we were not, I suggest, sufficiently nimble and agile to adapt to necessary change. We did not realise that we were developing replicative, not transformative, technologies and tools, creating mechanisms for managing records and archives in a linear fashion, as paper records and archives had been managed for years. Too often, EDRMS solutions and archival descriptive standards have kept us locked into

outmoded strategies, when what we need instead is to imagine the power that computers offer to create something new: an entirely different way of accessing and managing information and evidence.

In this we can learn important lessons from our colleagues in information technology, who have had to wrestle even more forcefully than we with the tiger of changing technologies. In the early years of the twenty-first century, computer programmers realised the importance of developing software and tools that remained easily adaptable over time. The concepts of 'agile software development' and 'adaptive software development' focused on planning, collaboration and cooperation; the goal when creating a tool was not to come up with a static 'solution' but to create computer systems that supported evolutionary processes. The IT community defined this dynamic process as iterative, change tolerant and mission focused, not product focused.⁴

In fact, many people in the records and archives profession *are* imagining a different future, and one of the ways we can forge links with systems is to give these thinkers the space to be creative, innovative and daring. Some of the current thought leaders in digital archival and records development include the Canadian Peter van Garderen – inventor of the tools Access to Memory or AtoM and Archivematica – who is urging greater decentralisation of archival management in an effort, as he and many others put it, to decolonise the archives.⁵ Another thought-provoking archival thinker is Australian Greg Rolan, whose award-winning article on archival systems interoperability challenges the notion of 'fortress archives,' which he argues are 'monolithic archival control systems [that] continue to position archives as jurisdictional resources that privilege a research-oriented audience.'⁶ Also leading change are groups such as the developers of Australia's Trove, an archival search tool that does not just present descriptive information to users but also allows users to create and share tags and virtual collection lists, building their own context for the content contained within the resource, and the Sydney-based Recordkeeping Roundtable, who are actively looking at contemporary recordkeeping issues, including, for instance, the place of technologies such as Blockchain in records and archives management.⁷

These blue sky thinkers are going to lead records and archives management down exciting new paths. The wider archival community needs to give them the space and support they need to do their work. As David Fricker, Director General of the National Archives of Australia and President of the International Council on Archives, has suggested, the disruption brought by digital technologies opens the door for archival institutions and practitioners to reinvent processes and systems, not just to use tools to replicate old ways of working. We need to embrace and support this change, in our institutions, our universities and our professional spaces.⁸

But as archivists imagine entirely new approaches to our age-old task, we also need to remember that we are never going to create the best, the last, the only, definitive, perfect tool or resource. The idea that any one profession, institution or tool will ever capture and control all the world's recorded information – or even that portion of that vast sum of information that we deem of 'enduring value' – is imprudent at best. Google, for instance, has declared in its mission statement that its goal is 'to organise the world's information and make it universally accessible and useful'. Google's aspiration to harness information is admirable, but the suggestion that Google and Google alone will be the one, best and only fount of all knowledge is narrow-minded and not at all inclusive.

We need to remember that, as the South African archivist Verne Harris has put it, archivists are trying to capture a sliver of a sliver of a sliver.⁹ Knowing our limitations – coming from a place of humility – is what gives archivists, or anyone, the freedom to innovate, because we do not expect to get it right the first time, every time. Today's best solution will be tomorrow's floppy disk drive.

We need to be agile, flexible, bold, daring and yet still human, harnessing our temporal chauvinism in order to keep our balance on the surging wave. We can learn from our IT colleagues about the importance, and benefits, of being honest about our aspirations and our limitations. Understanding the value of open, collaborative and realistic approaches to our work takes us to the third link we need to forge: the link with people. This is the most important link, and the weakest in the archival chain.

Forging links with people

Before we can talk about people, we have to talk about money. Archivists have always complained about being under-appreciated, ignored and neglected. Inevitably, though, this conversation is not really about 'we need more recognition'. Rather, it is about 'we need more money'. Give archival institutions more money and all will be well. So it is necessary to address the money question first, to put that matter in its place before addressing the people question.

The Australian archival community has been vocal in its opposition to threatened and actual budget cuts to archival services, including risks to the future of Trove. Australian archivists are to be commended for their public awareness campaigns, including on Twitter, to raise awareness of the funding issue, and decisions by the Australian government in December 2016 to increase funding for Trove are a testament to the success of these efforts.¹⁰

Archival institutions and the archival community across Canada have also suffered from severe funding problems in the recent past. In 2012, the federal government eliminated the National Archival Development Program, which provided about \$1.5 million per year to archival institutions across the country. The budget of Library and Archives Canada was also cut significantly.¹¹

Some improvements have come in the last couple of years, however. The 2015–16 budget for Library and Archives Canada – which is responsible for the archives of the federal government and for collecting and preserving archives of national significance across all of Canadian society, as well as serving as Canada's national library – is in the neighbourhood of \$90 million, a modest increase over past budgets. Beyond that, Library and Archives Canada now administers a new federal grant program to support archival institutions across the country: a total of \$7.5 million in grant funds is being made available over five years, equivalent to \$1.5 million a year in special project funding spread across nearly one thousand eligible repositories.¹²

This all sounds fine until we hold the numbers up to the light. In the spring of 2016, Canada's then new Liberal Government announced an increase in the budget for the Canadian Broadcasting Corporation (CBC), the national public broadcaster. Upwards of \$675 million were added to the existing budget over five years to modernise and revitalise the organisation, with a particular emphasis on dealing with digital technologies.¹³

One might not necessarily begrudge the CBC its budget, though many Canadians are expressing concerns about the broadcaster's scope and mandate in a YouTube world. But if

one compares a \$675 million funding increase for a national broadcaster with a \$90 million total budget to manage all of the national government's documentary information and evidence or \$1.5 million a year to support some one thousand archival institutions across Canada, it is very difficult, in the end, to declare that there is enough money for Canadian archival operations.

Yes, more money – in recognition of the value of, and time, effort and skills involved with, archival work – would be great. But the real problem here is not the lack of money for archival endeavours. More worrisome than the pitiful dollars available to support archival services is the fact that this funding is premised on an assumption that existing, custodial archival institutions will just tick along, keeping 'old' stuff, and that they will use this new money to help them keep more 'old' stuff. Providing more money for custodial archival operations – more grant programs, higher salaries and so on – may help archivists deal with legacy records, but it will not help the profession, or society, stay on, or get ahead of, the wave of digital information technologies.

What societies around the world need to do, in order to change the financial picture, is change the culture. Archivists in particular need to get society to understand that people today hold in their hands – on their cellphones, their tablets and their cloud-based social media platforms – not only their current digital memory but also their future documentary legacy. Without access to evidence – reliable and authentic documentary facts, not some bizarre set of alternative facts – people cannot understand who they are or where they came from. More crucially, citizens cannot hold the power brokers in society accountable, and societies cannot ensure those in positions of authority respect the rule of law, if people cannot point to reliable, authentic records of decisions made and actions taken. But archival institutions cannot help to protect that evidence on behalf of society, not now or tomorrow or 10 years from now, if people do not understand and appreciate how to manage those records *now*.¹⁴

In 2017, it has become more urgent than ever that society understands the importance of protecting records and archives not just as nice 'old' stuff but, rather, as the documentary essence of democracy. In particular, since the Trump Administration came into power in the United States, there has been growing concern about weak and opaque government recordkeeping practices, including: questions about the use of personal smartphones for official communications; the fact that White House officials have discussed secret military issues in unsecured, public locations; and the rejection of mainstream media – the 'fourth estate' – as an important and independent voice whose job is to challenge established power structures, thereby holding government to account.¹⁵

But while the American political situation is perhaps the highest-profile example of dangerous information environments, it is not the only contender for the charge of wilful and/or ignorant recordkeeping. Archivists need to increase our public role, to demonstrate to society that there is a recordkeeping reality behind WikiLeaks, the Panama Papers, Hillary Clinton's emails and Donald Trump's tweets and audio recordings. We would not know about these various recent headline-grabbing news stories, all with a recordkeeping theme, if someone had not kept a record in the first place – or at least raised the alarm about the destruction or mismanagement of that record.¹⁶

Archivists need to forge links with the public, with users and with society as a whole. We need to change the conversation away from archives as nice, safe and old, towards archives as crucial to democracy and civilisation. The most important action archivists need to take

right now is not curatorial. It is cultural. Members of the archival community need to work, urgently and vigorously, at raising public awareness of the value of documentary evidence. Records creators, records users and society at large, from corporate bosses to schoolchildren, need to understand the value of records and archives and learn how to protect their own archives for accountability, identity and memory. As Anne Gilliland has argued,

We are stuck in singular rather than plural conceptions of archives that prevent us from prioritising linkages across institutions, across content, across digital and non-digital in ways that might enable archives and records agencies to become forces for collective action ... Within our archival fiefdoms and silos, our appraisal policies are designed to support only the records and collective memory needs of a deliberately selective and institutionally resourced 'sliver' (to invoke Verne Harris's metaphor) of human activities and lives within our local and global societies.¹⁷

Archivists talk a lot about public engagement and the need to establish linkages. But, with respect, most of that talk has been amongst ourselves. Archivists need to start talking to the world. We need to look beyond the boundaries of our institutions and the limitations of our systems. We need to get 'out of the box and into the world', as John Hocking, Assistant Secretary General of the United Nations, advised archivists in his powerful keynote speech to the International Congress on Archives in Seoul in September 2016.¹⁸ How can we do that? How can we get out of our box and into the world?

Reduce, reuse, recycle

The archival community can learn a great deal from the vision and model used to change society's understanding of waste, recycling and environmental management. Just as the public (for the most part) understands that our global environment is at risk and that we must and can take steps to protect our precious natural resources, archivists need to get the public to understand that society's documentary memory is at risk, and that urgent and sustained action is needed to achieve real change in how evidence is created, managed, used and preserved in this digital age.

Today, in Canada and in many other parts of the world, recycling is a given. Recycling bins and compost buckets are universal. We teach our children the catchphrase 'reduce, reuse, recycle'. When we see a little triangle on our plastic water bottle, we automatically think 'recycle'. A few decades ago, we would think nothing of tossing scrap paper into the garbage. Now we instinctively look for a recycling bin every time we need to dispose of something.¹⁹

It was not always thus. A half-century ago, recycling was as foreign a concept as the idea that one day people would carry their telephones around in their pockets. This change in our understanding of 'garbage' happened because the visionaries of the recycling movement did four things:

- First, they redefined garbage, creating the concept of recyclables and thereby changing how society thinks about its waste.
- Second, they created mechanisms for making recycling easier, developing technologies and systems from recycling boxes to compost buckets.
- Third, they did not wait for people to come to them and ask how to recycle. They went out to the public and taught them how, when and why to manage garbage differently.

- Fourth, they raised awareness of the importance of recycling, convincing people that ‘it’s good to recycle’ and making people feel they were part of a larger, global movement for social and environmental change.

Now, most of us would not dream of tossing our paper coffee cup on the ground instead of putting it in a recycling bin. (Of course, we have not yet absorbed the idea of not using that paper cup in the first place. The ‘reduce’ part of recycling is the next great change we need to make.) Today, though, when people see that little plastic triangle, it speaks volumes to many of us, as does the deposit we pay on our drink containers, and the line, so common at the bottom of emails from our telephone company or electricity provider, which says ‘before printing, think of the environment’.

Remember, respect, record

Archivists can pursue the same strategy for the protection of records and archives. We can work to create a culture where people understand, implicitly, the importance of the recordkeeping equivalent of reduce, reuse, recycle. The phrase I have suggested is remember, respect, record.

What if, when you received an email from your telephone company, at the bottom of the message was a line of text? But instead of saying ‘before printing, think of the environment’, it said, ‘before deleting, think of the future’. How marvellous would that be?

This fundamental cultural change will help support all the other changes archivists want and need to make: the move to an effective decentralised, post-custodial environment for recordkeeping; the support for the development of innovative and sustainable records systems; the provision of better and more reliable funding for records and archives preservation; and the recognition of the expertise that records professionals bring to managing society’s documentary evidence.

But this is the change that archivists cannot make by ourselves. Records professionals need to work with records creators and records users, and we need to get our message out to the public at large, not just to a small constituency of researchers or lawyers or genealogists. We need to reach out to the public. But in order to do that, we need to reposition ourselves, adopt a strategic path and align ourselves on that wave so that we can keep moving forward, knowing that anything we develop today will need to be reconsidered, over and over again, as time goes by.

Engaging the public

Canadian archivist Richard Valpy, now retired as head of the Northwest Territories Archives in Canada’s arctic, has argued that archivists have not yet demonstrated the relationship between the existence of archival materials and the efforts needed to ensure that those materials are safe, secure and readily available. As Valpy wrote,

Archivists have to do more than just try to convince people that we are useful. We have to *become* useful with the real problems of records and information management in the 21st century. To do this, we need to reach beyond our professional and institutional boundaries and work directly with the public, whose interests we serve.²⁰

Archivists need to forge links with people. But first the profession needs to make changes in archives and in systems. These changes can be broken down into four distinct actions.

Action 1: Redefine archives to meet twenty-first-century realities

First, archivists need to redefine archives, so that records created today are managed effectively from the start, not after the fact. Then, whether those materials come into the physical custody of an archival institution or are captured in a digital storage environment, they can be preserved with their evidential value intact.

Archives are not old. They are not linear. They are not traditional. We need to imagine a different concept of archives.²¹ As part of this redefinition, archivists must become much more proficient in the use of digital recordkeeping technologies. Archivists also need to convince records creators of the importance of establishing quality records care from the beginning – of the need to make good records. Records and archives education needs to be transformed, not just adapted.

The profession also needs to keep forging links with computer science programs, make space for innovative research on digital data management and encourage interdisciplinary studies into how best to manage society's documentary evidence. As argued by Anthea Seles, Digital Transfer Manager at The National Archives in the UK, archivists need to look at ourselves less as custodians of historical records and more as data scientists responsible for the care of evidence.²² We need to redefine ourselves and our services before we can demonstrate the importance of those services to the world.

Action 2: Incorporate recordkeeping requirements into technology

Second, archivists have to keep working ever more closely with the developers of digital technologies, to help build tools that ensure that records are authentic and reliable. That means embedding archival professionals into technology companies – such as Microsoft or IBM or Apple – so that software solutions are built with recordkeeping, privacy, access and archiving by design, not as an afterthought.

We need to help society make good records, not just find better ways to keep what is made. And we need to reduce the volume of records, just as our local coffee shops need to reduce the number of paper cups they distribute, not just recycle the cups they use. We need to ensure that the records created to document an action, transaction or decision are the best evidence. It should not be possible for governments to destroy crucial documentary evidence without being held to account, any more than it should be possible for those in power to present 'alternative facts' and not allow the public to challenge those statements or refute them with 'actual facts'.

As part of this technological role, archivists need to accept that success in digital records management will come from teamwork, not from working in isolation. We need to bring our expertise to those teams and insert ourselves in places we never considered part of our world even a decade ago: information security management, compliance, governance, risk management, business process management and on and on. We cannot know it all or do it all. Let us be humble, open and accommodating, striving to develop adaptive processes, not once-and-forever solutions that in reality will never last 'forever'. If we do not work as part of a team, and fashion technologies to support accountable recordkeeping, not hinder

it, we will remain stuck in our custodial, after-the-fact roles, becoming less and less effective at a time when our services are needed more than ever.

Action 3: Increase the archival role as advisors and consultants

Third, archivists have to expand our services as facilitators, guides and advisors. We need more and more archival consultants who provide services similar to those of lawyers and accountants, working directly with records creators to support quality records creation and management. Waiting to help people with their archives later, but not helping them with their records now, is like suggesting that doctors should wait for patients to develop full-blown diabetes before putting them on a low-carb regime, rather than educating the healthy person about the risks of diabetes so they reduce the risk of developing the condition in the first place.

There is a growing role for the archival consultant, who serves numerous clients from private-sector organisations to governments to communities. This type of archivist can, for instance, develop classification schemes for one client, provide advice on best practice in archival description for another and help construct a strategic plan for yet another. The benefit of such advisory services is that many agencies can get much-needed help with their records or archives management needs without having to bear the employment costs of a full-time records or archives professional. While some would argue the agency *should* bear that cost, the reality is that a community with a population of barely a few thousand people simply does not have the funds to support a permanent archival employee. It is highly likely that more archival work will get done if communities pool their resources and engage a consulting ‘itinerant archivist’ who visits, say, 10 communities over a year. The challenge for the consultant in this situation is to remain as transparent and objective as possible when providing advisory services to multiple clients at the same time. Helping several organisations at once means respecting the needs and priorities of all and looking for balanced solutions when priorities overlap.

Some archivists are engaging more and more with the public, not just as consultants or independent advisors but as ‘activist’ archivists. In the face of serious threats to accountable recordkeeping, some archivists have taken a position that once would have seemed extreme: proactively capturing and copying records and data in the event that those in power decide not to keep them.

For instance, in December 2016 a group of archivists and librarians at the University of Toronto, Canada, worked together to preserve climate data in the event that the incoming Trump Administration chose to delete such evidence. As Sam-Chin Li, one of the participants, noted, ‘Access to government information is so important. It’s really a foundation for a function of democracy. And we’re seeing all those things disappearing in front of our eyes, so how can we stand there not working?’²³

The challenge with archivists reaching beyond our institutional boundaries, or even reaching beyond the scope of consulting and advising, is that we risk diminishing our credibility as objective recordkeepers and being seen as just as political as those in power. While the passion of such guerrilla archivists may be lauded, one has to ask if this kind of extreme advocacy perhaps is a consequence of the fact that we have not yet convinced records creators and the public of the tremendous importance and value of documentary evidence. The short-term benefits of such interventionist archival work may be the protection of evidence,

but the long-term consequences could be unintended and negative. If we continue to rescue archives ourselves without convincing society of their importance, will the public not just assume we will keep doing the work and not bother to become engaged themselves with the critical task of protecting evidence?

Perhaps the most important action, then, is not to redefine archives, create better tools or define recordkeeping roles and responsibilities much more broadly. Perhaps the urgent action now is to convince the public of the critical value of records and archives as sources of facts: true facts, not alternative facts. To do this, the first priority for archival effort will be to change public perceptions about archives.

Action 4: Engage with the public to raise awareness

To achieve success in digital recordkeeping, archivists must engage with the public actively, vigorously and persuasively, to raise awareness about the value of documentary evidence, the role of archives in society and the dangers of assuming that computers will solve all of society's information problems. If the public does not appreciate what archivists are trying to achieve on their behalf, society will not support archival efforts and archivists will not be able to play our part in supporting the preservation of documentary evidence for accountability, identity and memory.

As Canadian archival educator Tom Nesmith argues in his award-winning 2015 *Archivaria* article, we are in an 'archival stage' in the history of knowledge.²⁴ The public does value archives, as seen in the flowering of innumerable genealogy TV shows, the commercial success of Ancestry.com and the intense public interest in many aspects of the past, from the use of records to support DNA analysis and genetic studies to the examination of archives to document changes in climate over time. The users of archival materials today include not just traditional historical researchers or genealogists but also representatives of many other sectors of society, from educators, lawyers, social and physical scientists, to economists, geographers and political activists.

What the archival community needs to do is forge links with *all* these people, especially those outside our usual stakeholder groups, who need and use documentary evidence and who value archival resources but who do not necessarily understand the effort required to preserve it and make it available. We need to get people to see the machinery behind the magic. The world needs to understand that archives do not digitise themselves, that records are not born arranged and described and in good order, and that documents cannot be preserved for posterity if they are not well managed from the point of creation. Archivists need to demonstrate, as Valpy suggests, that there is a direct relationship between the existence of quality archives and the work involved in guaranteeing their existence.

As we forge these links with the public, we will start to change the culture, and we can then start to create a more sustainable future for the archival endeavour: more support, better tools, improved systems. As Valpy argues, and I agree, the missing link in our archival efforts is the voice of the public, the people *outside* the archival community: people who have a stake in accountability, transparency and the documentary heritage of our societies but who are not directly involved in the day-to-day management of archival materials. We need to bring those people into the conversation, and give them a much, much stronger voice, in order to help change the culture around records and archives management.

There is no one way to achieve this goal. We can encourage the creation of stakeholder-driven organisations, as Valpy suggests we do, with his call for the establishment of a Canadian Documentary Heritage Commission: a public-facing advocacy group led not by archivists but by the public.²⁵ Archivists could also insert themselves into the conversations of colleagues and partners – from historians to genealogists, lawyers to scientists – to share our different understandings of records and archives: we can speak at their conferences, publish in their journals, and make active and productive contributions to their social media communications. Archivists can also seek the support of records champions, be they academics, politicians, celebrities or sports figures, to promote the value of archives to society. And we can communicate more directly with the public in popular magazines, fiction- and non-fiction books, and television and radio programs. Where are the short stories, the novels, the films with archives as a thread? Where is our Indiana Jones?

Archivists want and need to foster an environment in which the relationship between the creation of records and the safe care of those records is understood and valued, an environment in which facts are respected, events are remembered and evidence is recorded. We need to acknowledge that there are different perspectives on any issue but that our job is not to decide which version of *truth* to accept but instead to protect documentary evidence so that the *facts* can remain inviolable: available for use now and in the future for myriad reasons, without taint or tarnish. This protection of the facts is at the heart of our job, to help society remember, respect and record.

To achieve this goal, archivists can also undertake practical steps, as individuals, as employees, as members of our professional associations or within the framework of public-facing advocacy efforts. Among the easiest and least controversial actions might be for our associations to develop speakers' bureaus, identifying 'go to' archival experts who can speak to the media on a range of recordkeeping topics. Archivists can also write speaking notes about the importance of archives and records to society and make these prepared speeches available so that members of the profession can use them as the basis for public presentations, to promote the cause of records and archives in particular communities. We need elevator speeches, punchy anecdotes and dramatic case studies.

Our professional associations have a key role to play here. Individual archivists are not always at liberty to speak out publicly without risking conflict with their role as civil servants; many who work in our profession have an obligation to remain neutral in public, at least with respect to issues related to their own work environment. And it is often the case that the strongest and most effective messages come from outside our own institutions. Thus the archival community should look to our national, provincial, state or other associations to take a lead in promoting greater public awareness of records, information and archives and especially to engage the wider public with our mission: to help societies remember and respect their past, present and future by helping them record, capture, preserve and share their documentary evidence.

One of the difficulties with asking archival associations to take a stand, however, is that, like many specialist associations, they have traditionally been reluctant to speak out publicly about issues beyond the purely professional, choosing to focus instead on providing support for the archivist in his or her workplace. When archival programs are cut or staff are laid off, archival associations have played an important role in presenting arguments for reinstating services in order to protect archives and records. But when events happen that present a more existential threat to records and evidence or that endanger freedom of

expression and the open exchange of ideas, professional associations are not always among the first to speak out.

A recent exception occurred in late January 2017, when the Trump Administration in the United States issued its executive order ‘Protecting the Nation from Foreign Terrorist Entry into the United States’, which restricted entry into the United States by individuals from seven Muslim-majority countries (Iran, Iraq, Libya, Somalia, Sudan, Syria and Yemen). The order was issued on 27 January 2017 and the Society of American Archivists, the national association for archival professionals in the United States, issued a statement on the order expressing its opposition to the order. As the statement noted:

Archivists embrace diversity and work actively to ensure that we serve all in society. We oppose actions that discriminate against individuals or threaten individual rights. This ban undermines archivists’ efforts to preserve diverse archives and support the study of our nation’s cultural heritage. It inhibits archivists from enacting and realizing our Core Values, such as access for all, diversity of the profession and the historical record, and the right to privacy. As examples, this executive order may prevent international archival researchers, students, and staff from traveling to and from the United States; subject international archival researchers to intrusive screenings of their private information; intimidate marginalized communities from preserving and sharing their archival records; or disrupt the lives and work of archivists and archival students and faculty who are green card holders.²⁶

Many see this statement as an important acknowledgement not only of the tremendous importance of records and archives to society but also of the negative effect that controls on access to American archival institutions and research facilities can have on scholarship and on people’s lives and work. But it was a statement that was not without controversy, as it seemed to reach well beyond the archivist’s traditionally apolitical role.²⁷

Just as there can be serious consequences, both positive and negative, to the archivist adopting an activist position, so too can there be benefits and drawbacks to asking our professional associations to weigh in on politically charged situations. The better course of action, it seems to me, is to encourage the advocacy efforts promoted by Valpy and others, which would be driven by a concerned public, not only by archivists in their jobs or through their professional associations. Helping to encourage the creation of these public-facing, public-driven advocacy groups is perhaps the best and most important service role that archivists can perform now. We need to convince a handful of champions to lead the charge for accountable recordkeeping, then we need to let them drive the change that we cannot effect by ourselves.

The best way to achieve success then, is going to be to forge links with the public. As part of that relationship, we need to be honest and open about our limitations, making clear that archivists – and society – are riding a wave of change. For too long we have felt that we and we alone are the spokespeople and champions for quality archival care, and that what we do must be the best, most complete, most comprehensive solution. Despite our best intentions, our efforts have not taken us to where we need to be today. It is time for us to ask for help. Being honest, innovative and open, rather than trying to create ‘the best’ solutions every time circumstances change, will help us move in the direction we need to go; the direction we need to convince society to go.

Archivists need to remain agile, nimble and sharp so that we can do our part to help our communities, in Canada, Australia, the United States and around the world, document their actions, transactions, communications and decisions in order to support accountability,

identity and memory. Let us not just forge links but build bridges. Let us not just ride the wave but make some waves of our own.

Endnotes

1. I have written extensively about both the concept of total archives in Canada, the challenges of the *fonds* concept and the origins of the series system in Australia. See particularly the following publications: 'Discharging Our Debt: The Evolution of the Total Archives Concept in English Canada', *Archivaria*, vol. 46, Fall 1998, pp. 103–46; 'The Spirit of Total Archives: Seeking a Sustainable Archival System', *Archivaria*, vol. 47, Spring 1999, pp. 46–65; 'The Death of the Fonds and the Resurrection of Provenance: Archival Context in Space and Time', *Archivaria*, vol. 53, Spring 2002, pp. 1–15 and 'The Legacy of Peter Scott from an International Perspective', in Adrian Cunningham (ed.), *Arrangement and Description of Archives amid Administrative and Technological Change: Essays and Reflections by and about Peter J Scott*, Australian Society of Archivists, Brisbane, 2010, pp. 312–45.
2. One of many interesting studies of the struggles with implementing EDRMS tools is a recent case study by Peta Ifould and Pauline Joseph, 'User Difficulties Working with a Business Classification Scheme: A Case Study', *Records Management Journal*, vol. 26, no. 1, 2016, pp. 21–37.
3. For more on discussions of custodial and post-custodial approaches, see Millar, 'The Death of the Fonds' and Millar 'The Legacy of Peter Scott'. The custodial approach to archival description was standardised through tools such as: Canadian Committee for Archival Description, *Rules for Archival Description* or RAD, Bureau of Canadian Archivists, Ottawa, 1990; the International Council on Archives Committee on Descriptive Standards, *General International Standard Archival Description* or ISAD(G), International Council on Archives (ICA), Ottawa, 1994, 2000; and the Society of American Archives, *DACS: Describing Archives: A Content Standard*, Society of American Archivists, Chicago, 2004, 2013. The Australians developed a function-oriented approach to description, articulated in Australian Society of Archivists Committee on Descriptive Standards, *Describing Archives in Context: A Guide to the Australasian Practice*, Australian Society of Archivists, Canberra, 2007. In 2016, the ICA issued a draft conceptual model for archival description, aimed at reconciling these different approaches: International Council on Archives Experts Group on Archival Description, *Records in Contexts (RiC): A Conceptual Model for Archival Description*, International Council on Archives, Consultation Draft v0.1, September 2016, available at <http://www.ica.org/sites/default/files/RiC-CM-0.1.pdf>, accessed 7 May 2017. It is designed to present what its authors call a 'multidimensional' approach. While the draft model does present a more flexible approach to description, critics of the draft have expressed concern that, while the model might replace the previous 'once-and-done' solutions, it does not include the adaptability needed to ensure it does not fall victim to obsolescence, as society keeps changing the ways in which records and archives are created, preserved, described and used.
4. One of the most accessible recent works on adaptive software development is James A Highsmith, *Adaptive Software Development: A Collaborative Approach to Managing Complex Systems*, Dorset House Publishing, New York, 2013.
5. Peter van Garderen, 'Decentralized Autonomous Collections', 11 April 2016, available at <http://vangarderen.net/about/>, accessed 28 December 2016.
6. See Greg Rolan, 'Towards Archive 2.0: Issues in Archival Systems Interoperability', *Archives and Manuscripts*, vol. 43, no. 1, March 2015, p. 42.
7. The home page for the Trove website is at <http://trove.nla.gov.au/> and information about Trove's origins and operations is summarised at <http://trove.nla.gov.au/general/about>, accessed 28 December 2016. The website for the Recordkeeping Roundtable can be seen at <https://rkroundtable.org/>, accessed 28 December 2016.
8. Fricker has offered his perspective on the disruptive influence of digital technologies on the role and future of archives in many presentations and publications to archivists and

- to the general public. A cogent overview of his ideas can be found in an interview with David Fricker, 'Your Story, Our History', *The CEO Magazine*, September 2015, available at <http://www.theceomagazine.com/business/david-fricker/>, accessed 1 January 2017.
9. See Verne Harris, 'The Archival Sliver: Power, Memory, and Archives in South Africa', *Archival Science*, vol. 2, no. 1, 2002, pp. 63–86.
 10. The story of efforts to raise awareness of the need for sustained funding for Trove is documented most comprehensively in the Twitter feed for Trove at @TroveAustralia and through the hashtag #fundtrove. The news of additional funding for Trove was announced on 19 December 2016 on the ABC news website, under the headline 'National Library of Australia's Trove Service gets \$16.4 Million in Funding in MYEFO Update', available at <http://www.abc.net.au/news/2016-12-20/national-library-of-australia-gets-funding-for-trove-in-myefo/8136738>, accessed 28 December 2016. This headline cites budget numbers in Australian dollars.
 11. The events surrounding budget cuts in Canada are outlined in my 2014 article 'Coming up with Plan B: Considering the Future of Canadian Archives', *Archivaria*, vol. 77, Spring 2014, pp. 103–40. Unless otherwise noted, budget numbers in this article are given in Canadian dollars.
 12. Library and Archives Canada, 'Financial Statements – 2015–16 Departmental Performance Report', available at <http://www.bac-lac.gc.ca/eng/about-us/departmental-performance-reports/departmental-performance-report-2015-2016/Pages/2015-16-financial-statements.aspx>, accessed 28 December 2016; Library and Archives Canada, 'The Documentary Heritage Communities Program (DCHP)', available at <http://www.bac-lac.gc.ca/eng/services/documentary-heritage-communities-program/Pages/dhcp-portal.aspx>, accessed 28 December 2016.
 13. News about the increase in the CBC's budget was highlighted by the broadcasting corporation itself, in the news item by CBC reporter Sandra Abma, 'Government to Invest \$1.9B in the Arts over the Next Five Years – Including \$675 Million for CBC', 22 March 2016, available at <http://www.cbc.ca/news/canada/ottawa/arts-federal-budget-canada-council-heritage-1.3501480>, accessed 28 December 2016.
 14. The phrase 'alternative facts' made its appearance in January 2017, only days after American President Donald Trump's inauguration, when his counsellor Kellyanne Conway was challenged by a member of the press about the size of the crowd at his inauguration. Conway suggested that the facts being presented by the media could be countered by 'alternative facts' presented by White House officials. An analysis of this story was written by Rebecca Sinderbrand, 'How Kellyanne Conway Ushered in the Era of "alternative facts"', *The Washington Post*, 22 January 2017, available at https://www.washingtonpost.com/news/the-fix/wp/2017/01/22/how-kellyanne-conway-ushered-in-the-era-of-alternative-facts/?utm_term=.1cb087528e8d, accessed 20 February 2017.
 15. As of February 2017, the news stories scrutinising Donald Trump's performance as president are coming so thick and fast it is impossible to keep track of them all. One useful overview article is Michael Shear, "'Unbelievable Turmoil': Trump's First Month Leaves Washington Reeling", *New York Times*, 14 February 2017, available at <https://www.nytimes.com/2017/02/14/us/politics/trump-white-house.html>, accessed 20 February 2017.
 16. Each of these contemporary recordkeeping events is documented, with varying levels of authority and accuracy, in a range of popular media sources. Following is a selection of sources that offer some measure of completeness and balance, though it is inevitable, and perhaps ironic, that the interpretation of these news events will change as more and more authoritative documentary sources become available – assuming the archival evidence is preserved and made available. For WikiLeaks, see *We Steal Secrets: The Story of WikiLeaks*, a 2013 documentary written and directed by Alex Gibney. Also useful is a compilation of news stories and editorials from *The New York Times* on the topic, available at <http://www.nytimes.com/topic/organization/wikileaks>, accessed 19 February 2017. The *Guardian* newspaper in the UK outlined the background and context to the Panama Papers leak in Luke Harding, 'What are the Panama Papers? A Guide to History's Biggest Data Leak', 5 April 2016, available at <https://www.theguardian.com/news/2016/apr/03/what-you-need-to-know>

- about-the-panama-papers*>, accessed 19 February 2017. See also the ongoing coverage on the blog of the International Consortium of Investigative Journalists, ‘The Panama Papers: Politicians, Criminals and the Rogue Industry that Hides Their Cash’, available at <<https://panamapapers.icij.org/>>, accessed 19 February 2017. The story of Hillary Clinton’s email controversy was very new at the time of writing in early 2017, but one useful overview is Robert O’Harrow Jr, ‘How Clinton’s Email Scandal Took Root’, *The Washington Post*, 27 March 2016, available at <https://www.washingtonpost.com/investigations/how-clintons-email-scandal-took-root/2016/03/27/ee301168-e162-11e5-846c-10191d1fc4ec_story.html?utm_term=.89a348d263a2>, accessed 19 February 2017. Infelicitous comments made by Donald Trump in conversation with American radio host Billy Bush in 2005 became particularly newsworthy during the American presidential campaign in autumn 2016, see ‘Transcript: Donald Trump’s Comments about Women’, *The New York Times*, 8 October 2016, available at <http://www.nytimes.com/2016/10/08/us/donald-trump-tape-transcript.html?_r=0>, accessed 19 February 2017.
17. Anne J Gilliland, ‘Permeable Binaries, Societal Grand Challenges, and the Roles of the Twenty-first-century Archival and Recordkeeping Profession’, *Archifacts*, 2015, available at <http://escholarship.org/uc/item/90q5538g?query=gilliland>, accessed 25 April 2017. I am grateful to one of the anonymous peer reviewers for directing my attention to this publication.
 18. John Hocking, ‘Out of the Box and Into the World’, International Congress on Archives, Seoul, Korea, 6 September 2016, available at <https://www.facebook.com/notes/ica-international-council-on-archives/out-of-the-box-into-the-world-by-mr-john-hocking/1074699459233504?hc_location=ufi>, accessed 28 December 2016.
 19. The detailed history of the recycling movement has not yet been written, but a useful overview of the evolution of recycling is Carl A Zimring’s *Cash for Your Trash: Scrap Recycling in America*, Rutgers University Press, New Brunswick NJ, 2009.
 20. D Richard Valpy, ‘From Missionaries to Managers: Making the Case for a Canadian Documentary Heritage Commission’, *Archivaria*, vol. 82, Fall 2016, p. 154.
 21. The redefinition of archives is a conversation already underway in Australia. The Australian Society of Archivists conference in Parramatta included a stimulating panel discussion on different definitions of archives, with Michael Jones, Deb Verhoeven and Cassie Findlay, ‘The Ubiquitous Archive: Non-binary Perspectives on Contemporary Humanities Practice’, available at <<https://www.archivists.org.au/learning-publications/2016-conference>>, accessed 28 December 2016.
 22. Seles made these comments in various speeches and on Twitter @archivista13. Also see Anthea Seles, ‘The Transferability of Trusted Digital Repository Standards to an East African Context’, doctoral thesis, Department of Information Studies, University College London, 2016, which was awarded the Digital Preservation Award for ‘the Most Distinguished Student Work in Digital Preservation’ in November 2016.
 23. Nicole Martillaro, ‘U of T Heads “Guerrilla Archiving Event” to Preserve Climate Data Ahead of Trump Presidency’, *CBC News*, 14 December 2016, available at <<http://www.cbc.ca/news/technology/university-toronto-guerrilla-archiving-event-trump-climate-change-1.3896167>>, accessed 19 February 2017.
 24. Tom Nesmith, ‘Toward the Archival Stage in the History of Knowledge’, *Archivaria*, vol. 80, Fall 2015, pp. 119–45.
 25. See Valpy, esp. pp. 156–61.
 26. Society of American Archivists, ‘SAA Statement on Executive Order Restricting Entry into the United States by Individuals from Seven Muslim-majority Countries’, 31 January 2017, available at <<http://www2.archivists.org/statements/saa-statement-on-executive-order-restricting-entry-into-the-united-states-by-individuals->>, accessed 19 February 2017.
 27. Elizabeth Flock, ‘Why These Librarians Are Protesting Trump’s Executive Orders’, PBS Newshour, 13 February 2017, available at <<http://www.pbs.org/newshour/art/librarians-protesting-trumps-executive-orders/>>, accessed 19 February 2017.

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Laura Millar has been a records and archives consultant and independent scholar for over 30 years. She has taught in the fields of information, records and archives management, as well as the fields of editing and publishing, and she is the author of dozens of publications and presentations, including *The Story Behind the Book: Preserving Authors' and Publishers' Archives*, published in Canada by Simon Fraser University's CCSP Press in 2009, and *Archives: Principles and Practices*, published in the United Kingdom by Facet Publishing in 2010, which received the Society of American Archivists' Waldo Leland Gifford Award in 2011. Follow Laura at @millarlaura.