

Reinventing the Archive in a Virtual Environment: Australians and the Non-Custodial Management of Electronic Records

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ABSTRACT Australian archivists and records managers have been among the foremost international advocates of 'distributed' or 'post-custodial' management of electronic records. Ten years ago there was widespread acceptance of their view that those creating digital records would continue to manage them as archives, once they had ceased to use them in the day-to-day conduct of affairs. But in March 2000 the National Archives of Australia abandoned its commitment to distributed management. This paper considers some of the arguments that have been deployed in these debates and explores what happened to the expectations of those who championed distributed, rather than traditional custodial, management.

Custodial management of a physical artefact by an independent keeper has been fundamental to the archival mission. It is no accident that the principal officer of England's Public Record Office (PRO) has been styled 'the Keeper of Public Records', or that this nomenclature has been perpetuated in Australia at the Public Record Office Victoria (PROV). Neither is it surprising that the foremost twentieth century advocate of archival custody should have been a PRO Keeper, Sir Hilary Jenkinson. In his *Manual of Archive Administration*, first published in 1922, revised in 1937, and regularly reprinted thereafter, Jenkinson defined archives as 'documents that are set aside for preservation in official custody'. Custody was critical to what he called 'Archive quality', which depended on records appraised as having continuing value as archives being managed by 'an unblemished line of responsible custodians', whose 'primary duties' were the 'physical and moral defence' of the archives in their care.¹

The proliferation of networked personal computing in the 1990s prompted some American commentators to question whether this style of custodial management was appropriate in a virtual environment. Australian archivists were among the earliest participants in this debate, advocating 'post-custodial' or 'distributed' management of electronic records: a stance they insisted was consistent with Australian practice and compatible with Australian contributions to archival theory. Instead of transferring their continuing value digital records to an archive, records creating agencies would manage their own archives indefinitely. This represented a radical change in function for archivists. Effectively they would cease to be 'keepers', who only got involved when records were no longer of use in the everyday conduct of business or affairs. Instead they would work collaboratively with other information

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specialists, including records managers and information technology professionals, to analyse information management requirements, design appropriate systems, and estimate and oversee the management of risks involved in keeping or destroying information. In doing so they would reinvent themselves as 'recordkeepers', who would be interested in the management of records throughout what Americans called their 'lifecycle', and what Australian advocates of distributed management increasingly preferred to describe as the 'records continuum'. As recordkeepers they would now be responsible for setting recordkeeping standards and monitoring whether agencies were complying with them. It was a seductive vision which, during the mid-1990s, was translated into policy by the then Australian Archives, now the National Archives of Australia (NAA). It maintained that the best way to ensure proper maintenance of, and accessibility to, electronic records was through the agencies that created and/or controlled them, operating in compliance with standards established by the National Archives.

Advocates of Distributed Management

The earliest and most outspoken critic of archival custody in the virtual environment was an American, David Bearman. Bearman was a museum professional who, prior to establishing a Pittsburgh-based consultancy company Archives & Museum Informatics in 1986, had been Deputy Director of the Office of Resource Management at the Smithsonian Institution in Washington. His critique had four elements:

- archivists as keepers were poorly positioned in relation to key personnel who allocated resources and managed risk in organisations,
- the image of the archivist as keeper was 'unprofessional'; to senior managers it conjured up visions of so much old stuff of merely antiquarian interest,
- the on-going costs of managing digital records were beyond the resources of most archival programs, whereas many agencies had sufficient resources and 'would be glad to care for their own records', and
- continuing management of digital records by creators would ensure that the full functionality and accessibility of the original was preserved.

Bearman's critique was conceived in a corporate framework. His case hinged on two assumptions. Firstly, corporate records' creators would have an investment in the on-going management of records that they required to conduct their business. Secondly, their concern to retain commercial advantage would ensure that records were secured and protected from corruption or unauthorised alteration.²

Australian archivists were quick to embrace the post- or non-custodial vision, with the University of Queensland's archivist, Glenda Acland, admonishing colleagues at a seminar on 'keeping data' in October 1990 to

transform themselves from 'undertakers' to 'auditors'. Acland was in the process of establishing an integrated record keeping operation that combined the university's records management and archival functions in a single organisational unit under her control. She was eager to extend her remit to embrace not only paper records but also the virtual record keeping domain, so her advocacy is perfectly comprehensible.³ What makes her paper particularly interesting is that she declares herself at the outset to be a Jenkinsonian, but reverses his priority by placing 'the *moral* defence of *virtual* records' ahead of their 'physical defence', urging colleagues to 'concentrate less on embracing physical custody at all costs' and more on employing the Australian series system of archival control to manage the digital environment. Her paper noted that 'difficulties with multiple or variable provenance which may be presented in computer systems', and which appeared to be 'a consistent problem area raised in North American archival literature in recent years', were 'easily catered for' in the Commonwealth Records Series (CRS) system, developed by Peter Scott, and in use at NAA.⁴

Acland had previously worked at NAA, as had Monash University's Sue McKemmish, who quickly took up this challenge and set about demonstrating how Bearman's critique could be accommodated within what she hailed as the distinctively 'Australian experience'. McKemmish and her colleague Frank Upward had recently set up a new master's degree program in archives and records management at Monash University, and had hosted Bearman in 1992, during the second of what thereafter became annual visits to Australia. Acland meanwhile guest edited a special electronic recordkeeping issue of the journal *Archives and Manuscripts*, which contained a review by McKemmish and Upward of 'post-custodial discourse' that ambitiously set out 'to place a bookmark in the archival testament'.⁵ But McKemmish's most intellectually sophisticated synthesis appeared in a monograph celebrating NAA's 50th anniversary, and used the theories of Jacques Derrida to question whether records 'are ever actual'. She predicted that the archival profession in future would not be concerned with the 'curatorship of physical objects', but rather with issues of 'moral defence': that is, the elucidation of conceptual relationships between creating structures, animating functions, and the resulting (virtual) records. 'Australian archivists', she declared,

have been quietly grappling with these conceptual relationships since Peter Scott rejected the *record group* as an inappropriately physical way of preserving and representing records in their contexts of creation... The object of Scott's quest was a system that could reconstruct recordkeeping systems in their legal, functional and organisational contexts at any given point in time, a system that was capable of generating for users multiple views 'on paper' or 'on the screen' of a complex reality that has always been conceptual rather than physical.⁶

According to McKemmish, Australian Archives' precursor, the Commonwealth Archives Office (CAO), had not been bogged down with the

baggage of 'old records' (as its Northern hemisphere counterparts had been), but had concerned itself exclusively with modern records across what Upward described as the 'recordkeeping continuum, ie in relation to recordkeeping processes from the time of records creation'. NAA therefore was able to 'support its programs of intervention in relation to current recordkeeping processes in Commonwealth agencies, as well as its programs for managing records already in its repositories'.

McKemmish and Upward's claims were greeted with scepticism by a well-informed Canadian critic Terry Eastwood, an archival educator at the University of British Columbia (UBC), who had visited Australia in 1989. Eastwood commented that while he 'would never suggest that the quest for the records continuum, like that for Lewis Carroll's snark, is only for dreamers and visionaries, in the context of this volume [in which McKemmish and Upward's essays appeared] the search is more for the idea than for evidence of its embodiment'. Much as he applauded McKemmish's conviction that 'the Australian experience' positioned archivists most advantageously in a distributed management environment, Eastwood cautioned that the history of the past 50 years suggested that few people inside and outside of government appreciated records or welcomed a lead in their management from the recordkeeping community.⁷

These criticisms notwithstanding, NAA had already reached what George Nichols, its director-general, called 'the culmination of the development stage' of its distributed management strategy. In November 1994 it hosted an international conference in Canberra to share experiences with European and North American colleagues, and to outline its own approach to preserving long-term access to the Commonwealth's electronic records. As Steve Stuckey, Assistant Director-General responsible for Standards and Access, told delegates, the cornerstone of the strategy was the preparation and promulgation of records creation, identification, and management standards... consistent across the administration of the Commonwealth Government'. These standards would then provide the framework for individual agencies' management plans, which would be drawn up with 'guidance' and 'advice' from staff at the archives and which would ensure that electronic records remained 'secure and fully usable while they are in current use' and 'secure and accessible while they are in the secondary stage of their lives'.

More problematic was what Stuckey called 'the tertiary use stage – that of research'. A pilot appraisal study of a major Commonwealth agency (the Department of Immigration and Ethnic Affairs) suggested that the proportion of electronic records requiring continuing retention in electronic formats for what Jenkinson would have described as 'secondary' or research use was 'very small – perhaps one percent' of all the electronic records created. Stuckey canvassed two options for these records: either to transfer them to NAA custody and convert them to a common 'archival' format, or to retain them 'in

a live environment' in the care of the agency which created or currently controlled them. NAA, he pointed out, had decided on the second option. It recognised, however, that there would be 'rare' instances in which the archives might have to take electronic records into custody and 'provide access to them for an indefinite time'. To warrant such action the records would have to satisfy a 'combination' of four 'factors':

- the records would need to be retained in an electronic form to enhance their value,
- this could not be retained by transferring the records to another format,
- they would need to be records created from a defunct agency (for example from a major committee of inquiry like a Royal Commission), and
- they would need to be the records that the Australian Archives [NAA] is the only custodial institution placed to service (that is, they would not be better placed with a collecting institution such as a social science data archive).⁸

Critics of Distributed Management

Australian archivists by and large embraced this attempt to give effect to Bearman's vision with unqualified enthusiasm. Undoubtedly the 'seductive' economic argument was important, as that indefatigable Canadian critic Terry Eastwood pointed out. If Australia's best-resourced archive was opting for this kind of cost-shifting, and transforming itself into a standards-setting and auditing agency, what hope was there for smaller, less affluent players other than to follow in its footsteps? Yet, as Eastwood noted in a 1996 article, it was highly questionable whether there is any economic sense at all in Bearman's solution. There is no denying the cost and no denying that many archives do not currently possess the wherewithal to preserve electronic records, but the post-custodial cure would be worse than the disease. Supposedly weak institutions would become weaker still, and, no doubt, as thoroughly detested as all auditors are... Bearman's proposition would not aggrandise the archives position, financially or otherwise, but diminish it.⁹

Eastwood then proceeded to deal with the other key principles articulated in Bearman's claim that custody was 'an indefensible bastion' in the digital age. Tackling the argument that the archivist's role was 'unprofessional', he suggested that for keepers to take paper records into custody, but to leave digital records in the hands of creating or controlling agencies, was itself 'unprofessional' because it complicated (and possibly vitiated) attempts to establish relationships between records in different formats and thereby compromised the archivist's moral defence of the records in his care.¹⁰

Eastwood's strongest fire was directed at the corporate environment in which Bearman's case was conceived. Contrary to Bearman, he argued that preserving records as archives was not first, foremost and in principle about

regulating corporate information resources in the interests of risk management. Rather, it was about preserving 'an adequate and authentic memory of affairs for both primary and secondary users'. Archives accordingly were preserved in the short term to satisfy the public accountability of officers and agencies of administration and government, and in the long term to satisfy 'what might be called historical accountability, the need of a society to know of its traditions, accomplishments and failures'.¹¹ Another Canadian critic, Tom Nesmith, had already queried whether the Monash recordkeeping theorists were inclined to construe accountability too narrowly, by concentrating on short term or immediate uses of exclusively transactional records at the expense of their historical or cultural values.¹² He did not speculate about the reasons, but one wonders whether the environment at Monash, Australia's earliest and most self-consciously corporatised university, may have disposed them more favourably to a corporate mindset underpinned by what advocates like Bearman were eager to present as the imperatives of economic rationalism.

But it was one of Eastwood's UBC colleagues, Luciana Duranti, who emerged as the most outspoken champion of the linkage between accountability and custodial management. Duranti visited Australia in October 1995, and at several largely attended seminars contended that the accuracy, authenticity and reliability of records could 'never be guaranteed while the records remain[ed] in the hands of those who [were] held accountable through them'. Duranti was a former state archivist in the State Archives of Rome, and took the Justinian Code (which codified Roman law and jurisprudence) as the starting point for her argument about the archive as 'a physical place of custody'. An archive for Romans was a secure place under public control where records were deposited, so that they remained uncorrupted, provided trustworthy evidence, and served as the continuing memory of that to which they attested. Central to Duranti's case was the concept of the archival 'threshold'. Passage across the threshold was a one-way journey. At the threshold, professional keepers (remote from the records creators) established the provenance of the records, defined their relationship to other records already in custody, and transferred the physical artefacts to a secure repository.¹³

The utility of Duranti's resort to historical precedent was questioned by Stephen Ellis. Himself an historian, and Director of NAA's Systems Integration Project, Ellis noted that Duranti's own evidence suggested that the custodial tradition which derived from Roman law had been much contested on a number of occasions in the intervening period. Moreover, there was other evidence to suggest that transfer to archival custody did not automatically guarantee the authenticity of what was being transferred, as the 'celebrated cases of the Donation of Constantine and the Protocols of the Elders of Zion' demonstrated. The assurance of authenticity that custody provided was thus 'a contingent assurance'. Ellis nevertheless agreed with Duranti that progress in the management of electronic records as archives was dependent on 'devising

means to ensure the authenticity of electronic records over time... which [took] account of both the intellectual and physical manifestations of records'.¹⁴ In the meantime, he cautioned against adopting 'an extreme position which does not lend itself to practical implementation, however intellectually rigorous it may be'. Appearing to retreat from Stuckey's 1994 statement, Ellis remarked he was 'sceptical about the degree to which archivists can pin their faith on standards to secure the long-term preservation of electronic records'. His 'understanding' was that NAA's current position on electronic records was 'very much a contingent one, dependent on the circumstances of each case'. It did not envisage that all electronic records 'will deserve to be preserved eternally in that form' and it 'will be the exceptions that are to be preserved in agency systems'.¹⁵

However, Ellis's article carried a disclaimer that it embodied 'personal views not necessarily shared by his employer'. It is plausible to conjecture that his fundamentally pragmatic approach to issues - on which much of the running had been made in strictly theoretical terms by educators rather than practitioners - reflected views which, by the end of 1996, were gaining currency within NAA, or views which were being urged on senior NAA executives by more forward-looking officers like Ellis himself. In the absence of any other publicly available evidence it is quite conceivable that both may have been the case.

It also is plausible to conjecture about whether international thinking may have played some part in this outcome. The report of the American Research Libraries Group's Task Force on Archiving Digital Information, which had been published at the beginning of May 1996, accepted that information creators, providers or owners should have 'initial responsibility for archiving their digital information', but recognised that with agencies for which information management was not a core function this responsibility would be discharged most reliably through partnership, or subcontracting to, a 'certified digital archives'. This commonsense position was further hedged with the recommendation that certified digital archives should have 'the right and duty to exercise an aggressive rescue function as a fail-safe mechanism'. 'No distributed system of digital archives', the report concluded,

will afford effective protection of electronic information unless it provides for a powerful rescue function allowing one agency acting in the long-term public interest of protecting the cultural record, to override another's neglect or active interest in abandoning or destroying parts of that record.¹⁶

That this position was as yet not invariably accepted in Australia can be inferred from the objections of Keith Parrott, Director of NAA's Documentation Standards Project. In 1995, on behalf of Australia's Towards Federation 2001 Management of Material in Electronic Format Working Party, he objected to the inclusion of the 'fail-safe mechanism' in the American Task

Force's draft report, and instead 'suggested strengthening existing structures of cooperation and coordination'.¹⁷

However, NAA's corporate stance had shifted sufficiently by March 2000 for it to announce that it had abandoned 'the distributed custody model', which it had adopted for most of the 1990s, in favour of custodial management of 'digital records of archival (that is, long-term) value'.¹⁸ This 'significant shift' in policy was followed by the initiation of an Agency to Researcher Digital Preservation Project aimed at preserving continuing value records in XML-based archival data formats.¹⁹ In taking this step, NAA was drawing on international and Australian experience, including the PROV's Victorian Electronic Records Strategy (VERS) project, which had been instigated in 1996 with funding from the Victorian Government's Microeconomic Reform Fund.²⁰ Preservation projects in the library sector also suggested that long-term archival management of electronic records needed to address inter-related technical, procedural, administrative, organisational and policy issues. As such it required 'a large commitment of resources up-front' and was beyond the means, as well as the expertise, of many records creating agencies.²¹

Distributed Management and After

The present paper has been a modest attempt to recapture the lineaments of the 1990s Australian debate about the non-custodial management of electronic records appraised as having archival value. It has not sought to provide a detailed or comprehensive review of 'post-custodial discourse' for the very good reason that a start on this has already been made elsewhere.²² Nor has it sought to trace in any depth attempts by public archival authorities – aside from NAA – to give effect to the distributed or non-custodial vision originally articulated by Bearman and so persuasively accommodated within Australian archival theory by Acland, McKemmish and Upward. To Canadian critics like Eastwood, the fiscal implications of Bearman's vision seemed to be an important reason for its widespread appeal. But the attraction was surely broader. Bearman's vision provided a coherent, ready-made template that a mostly under-resourced and strongly culturally-oriented profession could use to make sense of its place in the unfamiliar territory of cyberspace.

In retrospect, it seems unlikely that Bearman's vision would have gained such widespread attention and acceptance without astute publicising on the part of the Monash recordkeeping theorists. Their intellectually satisfying synthesis sufficed to attract unprecedentedly sustained international interest of a kind that pioneer Australian archival thinkers like Scott had never achieved, despite his writing on the Australian series system being published in the flagship journal of the Society of American Archivists. Among Australian practitioners, however, McKemmish and Upward's efforts to mark out a distinctively Australian theory *and* practice struck an even more responsive chord. While their writing was replete with the trappings of critical theory and post-

modernity, their search for a distinctively Australian experience located it very much in the dominant nationalist tradition of mainstream Australian historiography with which many members of the archival profession had worked or grown up.

If foreign observers generally failed to make that connection, the more acute like Eastwood (who had the benefit of first-hand knowledge of Australia) did perceive the partial character of what was being touted as a genuinely shared national tradition. The Canadian National Archives' 'decidedly custodial and cultural tradition of "total archives"' seemed to him to offer a salutary comparison, not least because there was 'nothing like a common, systematised Canadian approach to its realisation'. He consequently wondered whether NAA and its precursor, the CAO, had ever meaningfully extended 'the reach of archival authority... across... government offices the land over', and questioned whether it was realistic to suggest that CAO had succeeded in disseminating 'common, systematised' Australian practices based on a native theoretical discourse.²³ By way of illustration, the largest of the state archival authorities, the then Archives Office of New South Wales (AONSW, now State Records NSW), had not at that time implemented the Australian series system and was far more culturally and historically oriented than its federal counterpart. NAA, as McKemmish frankly conceded, put the business needs of agencies ahead of those of secondary ('research') users, while the CRS system gave 'scant attention' to the 'needs of end users to locate and access relevant information'.²⁴

The appeal and the resort to history, that in retrospect appears to have been a critical component in selling distributed management to the archival community, was not extended to scrutiny of the actual experience of distributed management itself. An endnote in Upward and McKemmish's 1994 review of post-custodian discourse remarked that their notion of custody was more akin to the 'guardianship' implicit in 'places of deposit' provisions that already were embodied in the Victorian *Public Records Act*.²⁵ In reality, these provisions had been a dead letter, except for the records of the State Bank.²⁶ AONSW's regional repositories system had been more widely implemented, but has had a chequered and pretty unsatisfactory track record, despite regular monitoring through inspections.²⁷ Claims about past successes with distributed management in Commonwealth agencies thus had more to do with the robustness of paper records and their ability to sustain prolonged neglect, than they did with quality of care or the viability of management regimes based on the setting and monitoring of standards. Where all these claims went awry, when translated to the virtual environment, was in their (quite pardonable) failure to anticipate the decay of storage media and the rapidity of market-driven technological obsolescence: occurrences that in tandem resulted in an extremely limited window of opportunity in which to convert original data formats into archival preservation formats.²⁸

Seen in this light, NAA's 2000 decision to revert to centralised custody of electronic records in a 'digital repository' was a triumph of the practical and the pragmatic over the theoretical and doctrinaire. Subsequent to that decision, audits of recordkeeping in major Commonwealth agencies in 2002 and 2003 by the Australian National Audit Office (ANAO), and the Australian Public Service Commission's *State of the Service Report* issued in 2002, 'revealed a lack of understanding and a high degree of confusion among employees regarding their responsibilities and abilities to manage electronic records' as well as considerable confusion among agency recordkeepers about the requirements of the standard on electronic recordkeeping. NAA's *Digital Recordkeeping Guidelines*, issued in an exposure draft in May 2004, are a direct response to these findings, and an explicit recognition that, in the virtual recordkeeping environment, an early and more interventionist role is crucial.²⁹

Notes

- 1 H Jenkinson *A Manual of Archive Administration* London Percy Lund Humphries 1966 pp8-11, 15-16, 44-123
- 2 D Bearman 'An Indefensible Bastion: Archives as a Repository in an Electronic Age' *Archival Management of Electronic Records* Pittsburgh Archives & Museum Informatics 1991 pp14-24
- 3 'News Notes' *Archives and Manuscripts* vol 17 no 1 1989 p103, vol 22 no 1 1994 pp273-74
- 4 G Acland 'Archivist – Keeper, Undertaker or Auditor' *Archives and Manuscripts* vol 19 no 1 1991 pp9-14
- 5 F Upward and S McKemmish 'Somewhere beyond Custody' *Archives and Manuscripts* vol 22 no 1 1994 p136
- 6 S McKemmish 'Are Records Ever Actual?' in S McKemmish and M Piggott (eds) *The Records Continuum* Clayton Ancora Press 1994 p187
- 7 T Eastwood Review of McKemmish and Piggott in *Archives and Manuscripts* vol 23 no 1 1995 p109
- 8 S Stuckey 'The Australian Archives' Policy on Electronic Records – the Technical Issues' in S Yorke (ed) *Playing for Keeps* Canberra Australian Archives 1995 pp121-30
- 9 T Eastwood 'Should Creating Agencies Keep Electronic Records Indefinitely?' *Archives and Manuscripts* vol 24 no 2 1996 p263
- 10 *Ibid* pp260-61
- 11 *Ibid* pp264-65
- 12 T Nesmith Review of S McKemmish and F Upward (eds) 'Archival Documents: Providing Accountability through Recordkeeping' in *American Archivist* vol 58 no 2 1995 pp224-25
- 13 L Duranti 'Archives as a Place' *Archives and Manuscripts* vol 24 no 2 1996 pp242-55
- 14 S Ellis 'Four Travellers, Two Ways, One Direction: Where to now for Archival Practice?' *Archives and Manuscripts* vol 24 no 2 1996 pp324-25, 329
- 15 *Ibid* pp328-29

- 16 *Preserving Digital Information* Report of the Task Force on Archiving of Digital Information commissioned by the Commission on Preservation and Access and the Research Libraries Group 1 May 1996 pp22-23 at <http://www.rlg.org/legacy/ftpd/pub/archtf/final-report.pdf> [accessed 19 August 2004]
- 17 *Ibid* p48 n14
- 18 H Heslop S Davis and A Wilson *An Approach to the Preservation of Digital Records* ('Green Paper') Canberra NAA 2002 p6 at http://www.naa.gov.au/recordkeeping/er/digital_preservation/Green_Paper.pdf [accessed 19 August 2004]
- 19 <http://www.naa.gov.au/recordkeeping/preservation/digital/summary.html> [accessed 19 August 2004]
- 20 <http://www.prov.vic.gov.au/vers/welcome.htm> [accessed 19 August 2004]
- 21 Heslop et al *An Approach to the Preservation of Digital Records* pp12-13
- 22 Upward and McKemmish 'Somewhere beyond Custody' pp136-49
- 23 Eastwood Review of McKemmish and Piggott pp108-9
- 24 McKemmish 'Are Records Ever Actual' p190; S M McKemmish 'Problems of Providing Reference Services to Commonwealth Records, with Particular Reference to Post-1945 Records' in *Promoting the Better Use of Archives in Australia* Australian Society of Archivists Canberra 1981 p211
- 25 Upward and McKemmish 'Somewhere beyond Custody' p147 n3
- 26 D Boadle 'Origins and Development of the New South Wales Regional Repositories System' *Archives and Manuscripts* vol 23 no 2 1995 p285 n2, p286 n12
- 27 D Boadle 'Academic or Community Resource? Stakeholder Interests and Collection Management at Charles Sturt University Regional Archives, 1973-2003' *Australian Library Journal* vol 52 no 3 2003 p281
- 28 Heslop et al *An Approach to the Preservation of Digital Records* pp5 11
- 29 <http://www.naa.gov.au/recordkeeping/er/guidelines/DigitalRecordkeeping.pdf> [accessed 19 August 2004]