

## Commentary

# Four Travellers, Two Ways, One Direction: where to now for archival practice?

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*At the invitation of the editor, the author examines and comments on the first four articles in this issue of Archives and Manuscripts. He is critical of elements in each presentation, though for very different reasons; he identifies areas of agreement they share in common; and he ends by calling for action to implement and test the approaches the authors espouse.*

MY REACTION ON FIRST READING these articles was disappointment that they have carried the debate about effective means of dealing with electronic records so little forward from where we have been for some years. Several later readings, however, have left me impressed by the marked unity of purpose they share and the degree to which their protagonists agree, despite their differences. For example, I feel we would all agree with Professor Duranti that 'people should not have to learn different interfaces to non-connected systems, etc.', and with Professor Eastwood that 'there are very few properly constructed and controlled electronic recordkeeping systems'. The contradictions within each of the articles are as informative as the disagreements between them. I also ended up concluding that we need to move beyond theory and theorising towards some more empirical approach to the analysis of practice.

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Let me begin by summarising what I have taken to be the nub of the argument in each of the articles. It seems to me that Professor Duranti is basically addressing the fundamental question whether moral and physical defence of the records is possible without custody. Her argument is based on the historical origins and experience of custody in the European tradition as a means of ensuring the authenticity of records over a long time. Her conclusion is that such a defence is not possible without custody. Taking a slightly different tack, Professor Eastwood comes to the same conclusion and argues against the proposition that archivists can be effective in securing the preservation of reliable and authentic electronic records by auditing the agencies in whose tender mercies they may be left. He finds his supporting arguments not in the ancient lineage of historical tradition and experience but in the essential requirements of a democratic society to have 'an authentic and adequate account of public actions', a requirement which gives to archivists a vital role in support of a democratic virtue.

Frank Upward's article I find difficult to do justice to, as I am aware that we are here dealing only with a part of his presentation. I will venture one comment, however: I do find the tendency to concentrate on defining the name of concepts and perceptions as rather a type of neo-Platonism which does not progress matters much. Rather like Moliere's *Bourgeois Gentilhomme*, who was astonished to find that he had been speaking 'prose' all his life, I find it a little disconcerting to learn that those bearing the 'post-custodial' label have apparently merely been manifesting their 'loss of faith in progress'. When I was a university student, this sort of argument was called 'coming the raw prawn'—which being freely translated means 'I don't believe you'. I should have thought on the contrary, that the 'post-custodialists' in this case have vehemently affirmed their faith in progress, in the ability both of technological advance to improve matters and of mankind to adapt creatively to the changes induced by technology. His article does remind us, however, of the role of theory in any professional pursuit: it serves not only to systematise the current state of knowledge and to provide a common language of discourse, but to indicate lacunae where fruitful future experimentation and empirical research may add to the body of knowledge. By contrast, Greg O'Shea and David Roberts' paper is firmly grounded in practice and argues, a trifle impatiently I suspect, that the 'digital world' must be taken on its own terms and dealt with accordingly. They summarise the positions of their respective organisations and explain how they arose and where they are intended to lead. This is the new orthodoxy. I do not think they effectively confront the question Professor Duranti has raised in her article.

I find much in all of the articles which is convincingly argued, but as one immediately involved in trying to deal with the creation and management of electronic records in a practical operation, I still doubt that they carry the debate to a fruitful outcome which practitioners will be able to implement or use to decide upon a course of action.

Let us consider the arguments of the so-called 'custodialists'. (I mean this term as a convenient short-hand for those supporting the custodial path for archives: I suspect that name-calling of this type, however, can obscure as much as it clarifies. Perhaps we should call these the 'iconodules', in contrast to the 'iconoclasts' who have proposed the change in custodial practices for archives!)

I am not convinced by Professor Duranti's argument deriving contemporary significance of the custodial regime from Roman law. It seems to me that her evidence indicates that this tradition, far from being long-established from antiquity, was much more contested in various historical periods and much less consistently applied even when it was accepted than she asserts. She argues that records gain their value as evidence because their business function while in the agency endows them with 'reliability' and they gain 'authenticity' by being transferred physically to the custody of a third party, the archives.

But the evidence is that this 'authentication' can be itself both a weak reed and a two-edged sword (how's that for a mixed metaphor!). Take the weak reed: one must ask just how any archives would ever be in a position to authenticate that the content of a record is a true and accurate representation of the transaction of which it purports to be evidence? How could this ever have been true, in the tabularium of republican Rome, as much as in the bits and bytes of a modern information system? I suspect that the most any custodial archives will commit itself to, is to assert that the record it holds is the record it was given—the truth, accuracy, reliability and authenticity of the record are matters to be tested with the forensic tools of diplomatic, as Professor Duranti's other articles have so effectively reminded us.

Authentication as a function of archives presents further problems from the point of view of those who see archives as ensuring accountability in democratic government. Here is the two-edged sword: there is abundant evidence that the authentication process of having charters enrolled in the archives of the state was itself a fertile field for creative forgery—forgery which was without exception intended to abrogate the rights of some (usually the least powerful) and enhance the rights of others (usually the more powerful). The celebrated cases of the Donation of Constantine and the Protocols of the

Elders of Zion are matched by countless lesser cases in the archives of Europe and England.<sup>1</sup> Indeed, the very tools of diplomatic analysis developed in the European tradition precisely in order to provide independent means to assess the validity of records, regardless of their custody. Certainly an unbroken custodial regime carries with it an implication of authenticity, but it is not of itself sufficient to satisfy the requirements of diplomatic proof of authenticity.

Professor Duranti has demonstrated that over many periods of history in Europe, custody has been used as a tool to establish and preserve the authenticity of records. But if the evidence of various historical periods shows that custody was not either sufficient in itself to give surety of authenticity, or consistently accepted enough to constitute an unbroken practice, what is left of the argument that we need imposing physical buildings in powerfully significant spaces in order to maintain the authority of archives to authenticate records as evidence? All this argument does is bring us back to where we were ten years ago—it does not address the problems presented by the failure of the custodial model in relation to preserving long-term access to electronic records.

That said, however, I agree with Professor Duranti that the problem of ensuring authenticity is a major challenge in the recent moves to find alternatives to custody as a means of ensuring preservation and authenticity of electronic records over long periods of time. We need to continue the age-long struggle to find acceptable ways to ensure authenticity—alternatives which in an electronic context will provide the same degree of assurance about authenticity as custody provided traditionally—recognising that that was always a contingent assurance.

Terry Eastwood's invitation to consider that David Bearman, notable on two continents for his provocative challenges to convention, was 'wrong on every count' in his 1991 article is almost too seductive to resist. But manfully resisting less charitable emotions, I still find the arguments presented to prove this proposition unconvincing. I accept that Bearman was probably a bit out on the edge in 1991 in arguing for a pro-active involvement of archivists in the management of records in electronic systems, but I see that myself as a part of the state of the debate at that time, arising from the need to put a clear and unequivocal position in contrast to the then reigning conventional wisdom and practice. Five years later the conventional wisdom, if there is one, has surely turned around and virtually all areas of the profession have accepted that the custodial model has failed to secure either preservation, accessibility or authenticity for electronic records. I suspect that much of Bearman's avoidance of conventional terms used by archivists in 1991 was meant to

deliver a shock to jolt the debate off the rails of complacency and towards a more direct consideration of the issues raised by electronic records. Certainly his later writings have clearly shown that he agrees with Professor Eastwood about the inadequacy of many modern information systems from the point of view of establishing reliable and authentic records in the first place. But his complaint about that seems to me to lead necessarily back to the sort of cure which DB advocated—the pro-active involvement of archivists in the construction and definition, as well as management of recordkeeping systems within the electronic environment.

I must confess here to a certain heresy which Professor Eastwood also finds objectionable (and Bearman does too, I think!). I do believe that archivists have skills and can bring insights which are valuable to the management of 'data collections'. I am not convinced by the widespread distinction between 'data' and 'applications' which is common in much of the archival literature about electronic records. 'Data', after all, has all the hallmarks we require of a record—it must have context, structure, content, and be reliable and authentic—otherwise it is not data, but just numbers or symbols randomly recorded. The data resulting from a particular geophysical survey constitute part of the records of that survey, and they gain their meaning and significance from the context in which they have been created and managed. Without this they are not data at all, nor are they part of the record. Preserving access to and managing such data collections is not an unworthy or socially reprehensible task, and it is one to which archivists can contribute significantly through their particular set of skills deriving from archival science.

The distinction between 'data' and 'applications' also seems to me to be basically misconceived as it relates to what we may call functional or business records. What we are seeking to preserve into the future in the electronic case is an electronic version of a transactional record which we can see as deriving from or being needed for execution of a business function. In almost every case, in a properly designed electronic recordkeeping system—one which would satisfy the requirements of both the Pittsburgh school and the British Columbia school for reliability and authenticity—such a functional record would be satisfied by a report from the system composed of the prescribed data elements (including the time stamp). It is almost impossible to conceive of the circumstances in which such a RECORD (i.e. fixed-in-time-representation-of-a-transaction) would need to be an inter-actively produced report from the system, rather than a file written to a storage device (such as a tape or disk). Professor Eastwood is right to remind us that 'manipulability' cannot be a part of 'recordness'. It should therefore be quite a straightforward

matter to define such record-type reports based on business functions in the electronic system. In my experience in the Australian Archives' current systems re-development project, it is a straightforward matter—although the functional recordkeeping requirements of Pittsburgh and the British Columbia IDEF specifications only help in defining the data elements once you have decided that you have a business need for the record—they do not help you decide whether you have that need in the first place. If the records are therefore to be reports from the system, I do not see that distinguishing between the data and the applications will be of much help in ensuring continued access to those records in the long-term. In this I suspect that I part company not only with Eastwood and Bearman but also with O'Shea and Roberts.

The O'Shea/Roberts paper may be seen as the most recent explanation of the origins of the non-custodial approach to dealing with the long-term preservation of electronic records. It is interesting to note the degree to which practical experience in dealing with electronic records in a custodial model has influenced the development of this policy position. The management of petroleum data in the Commonwealth of Australia has left its mark—two of the three people in the policy team which originally developed the Australian Archives position on electronic records had been directly involved in petroleum data issues, as were Roberts and O'Shea themselves.<sup>2</sup> But this was not the only influence—the Archives Director of Disposal, Ian Pritchard returned from an overseas trip in 1988 convinced by all he had seen in North America that the custodial model had failed for electronic records. Although I come from the same stable, I do have doubts about some of the arguments advanced by our co-authors.

They have chosen to emphasise the distinction between the 'physicality' of traditional records and the digital nature of electronic records. I do not think that can be seriously sustained as an argument. No matter what form it comes in, it is in the very nature of a record that it must have some physical manifestation—if it does not, it is not a record but just your mental image of something. It is just not true to say that 'in a digital world, the physical arrangement of records is meaningless'. Certainly, in terms of how it may manifest itself to a user, the physical details may not be significant, just as the particular brand of paper on which a document is written may be meaningless to another user. But to the archivist none of these matters is without significance for long-term preservation of accessibility.

Furthermore, the nature of electronic systems, and especially of those which would be capable of producing true, reliable and authentic records of the type we are concerned with here, is that they absolutely must have all the

appropriate data elements precisely placed, both logically and physically within the structure which the application knows how to operate. If any small part of this elaborate set of requirements is not met, then the system does not work and the record is not what it purports to be. File allocation tables do not exist on computer disks for purely convenience purposes. Management regimes for the long-term preservation of access to electronic records, whether they require transfer of custody or not, must take into account the physical aspects of electronic records as much as the intellectual ones.

In this respect I also think that the celebrated PROFS case in the USA is often either misrepresented or misunderstood. The point about the significance of the PROFS records was that they *were* created with all the attendant data elements which enabled the normal forensic rules of diplomatic to be applied to them to determine their reliability and authenticity. Certainly this was unintentional—but it was not accidental! The words ‘well done’ in this case (mere data, I remind you) gained their significance from the context in which they were recorded—and by whom they were recorded. No random action of any electronic system could ever produce such a result.

On another aspect, I am sceptical about the degree to which archivists can pin their faith on the establishment of standards to secure the long-term preservation of electronic records. Certainly the acceptance of relevant technical standards must help towards this end, but it will be only of threshold significance; standards hold no cure for the dreaded ‘undocumented features of the software’ (aka bugs). First of all, the pace of change, even within standards, is such that ensuring their application in all electronic systems will be a formidable task. Secondly, there seems to me to be a natural tendency of market forces to act against the adoption of standards in this type of activity. In this respect it is salutary to be reminded by Professor Eastwood of the different time-spans over which archivists have an interest in being actively involved in the management of records. I personally do not believe that any nation will be able or care to afford to preserve a specific body of electronic records in full electronic form for more than a generation or two. I strongly suspect that most electronic records will not be worth preserving even that long.

I think that it is possible in this area, as in so many, to adopt an extreme position which does not lend itself to practical implementation, however intellectually rigorous it may be. My understanding is that the Australian Archives position on electronic records is very much a contingent one, dependent on the circumstances of each case. It does not envisage that all records which may have been created in electronic form will deserve to be

preserved eternally in that form—indeed it expects that most will be able to be preserved in a more stable (reliable and authentic) form and re-digitised later, if need be. It expects that it will be the exceptions that are to be preserved in agency systems, and it accepts that there will need to be special measures to ensure reliability and authenticity for them. Furthermore, it accepts that any of these arrangements will only be able to be sustained for a certain amount of time.

So where do these articles and my quibbles with them leave us? I think we do need to get on and get some practical experience in doing the types of things which these writers have identified as essential to progress:

- helping to define and develop electronic recordkeeping systems (Eastwood) which will satisfy requirements for reliable and authentic records, and
- devising means to ensure the authenticity of electronic records over time (Duranti/O'Shea) which take account of both the intellectual and physical manifestations of records, while
- enabling the profession to continue to develop its underlying knowledge-base and theory further, through a common understanding and terminology (Upward).

I doubt that more refinement of the names we call each other, or of the names we call our arguments, will progress matters much.

## Endnotes

1. See M.T. Clanchy, *From Memory to Written Record; England 1066–1307*, Blackwell Publishers, 1993, *passim*.
2. The team was Dagmar Parer, Steve Stuckey and Stephen Ellis. The latter two both served as Regional Director in the Archives NSW office when petroleum data issues dominated. Both O'Shea and Roberts also served there, Roberts at one time as 'machine-readable records officer'! Evidence of the impact of the experience on Steve Stuckey can be gleaned from his 'The Good Oil for Australia' in *Keeping Data: Papers from a Workshop on Appraising Computer-based Records, 10–12 October 1990*, eds Barbara Reed and David Roberts, Australian Council of Archives and the Australian Society of Archivists, 1991, pp. 95–104.