Revisiting Bearman

Last week I read an article in the Australian Computer Society's magazine, *Information Age*.

The article looks at the value of skeptics in the workplace. It says:

Working with skeptics can be painful. They consume valuable time with question that can seem pointless. Nevertheless, the right kind of skeptics can be highly valuable...

It can be difficult to distinguish between negative and loyal skeptics. The difference often lies in their objectives and motivations. Negative skeptics criticise everything; loyal skeptics scrutinise everything. Where one is mainly interested in finding fault and pointing fingers, the other seeks to clarify and improve project planning and execution. Negative skeptics are often motivated by power or politics, loyal skeptics by a desire to reduce risk and thus help ensure project success. (November 2012, p12)

This article made me think about David Bearman, the ultimate loyal skeptic.

Anne Pederson in her 1995 article 'Empowering Archival Effectiveness' described Bearman as 'a sassy systems analyst'. He was not an archivist but an IT consultant, who developed an appreciation for archives when designing business systems for the Smithsonian. (American Archivist, Vol 58, Fall 1995, 432)

What makes him a skeptic? Because, if you've read Archival Methods, you will know that he questioned everything and wasn't afraid to criticise.

In *Archival Methods* Bearman described his 'a ha' moment, when he realised 'the failings I had been seeing in American archival institutions were not primarily a consequence of bad management, but of the fact that the best methods of the profession were inadequate to the task at hand'.

In Archival Methods, first written in 1986 and then published in 1989, Bearman provided numerous examples to demonstrate that the archival methods of appraisal, description, preservation and access were not just failing, they were fundamentally failing. He argued that for these methods - appraisal, description, preservation and access - the gap between what was being achieved and what actually needed to be done was greater than one order of magnitude (a factor of 10).

Of the immensity of this gap between the capacities of practice and actual business requirements he said that:

While we can strive to improve any given human method, refinements of our methods rarely yield 100% improvements (a mere doubling of output). Order of magnitude improvements of methods (1000% for each order of magnitude) are unheard of without the implementation of fundamentally new tactics, technologies or goals.

A 1000% gap between our requirements and our capacities cannot hold. Bearman the loyal skeptic said archivists had to completely reinvent nearly everything they did and reconceptualise nearly everything they stood for. Bearman's essential argument in Archival Methods is that we need to 'develop effective methods and a valid mission or face professional extinction' (Pederson, 433). In arguments that still have a lot of relevance and
cogency in these straightened times, he said there was no point in asking for more resources because what we were asking these for was fundamentally flawed. Instead a fundamental reinvention was required.

Through the remainder of this paper I will explore more of the problems Bearman identified way back in 1986 and also map what I consider to be their contemporary parallels. By the end of the paper I hope you have a firm idea of the issues that concerned Bearman and how these may have ongoing relevance today.

Please note that by recommending that we revisit Bearman's work today, I am not suggesting that we need to take his word as gospel, nor that we blindly adopt all he advised. Times have changed, much that Bearman recommended has already been implemented and perhaps today many of us would have a different take on some of the issues that he raises. But Bearman was an iconoclast. He had the confidence to tear everything down and completely rebuild based on core base principles. Nothing was sacred, everything was up for grabs.

I think we are again at a professional juncture where we need to be brave, to be iconoclast, we need to put all options on the table. I do believe we have reached a point where we need to be brutally honest about the professional risks we face, and be prepared to do something radical about them. We need to be loyal skeptics of our own institutions, our profession and our practice and Bearman is our ideal role model in this endeavour.

And for a profession that many see as historical, I think we are actually quite poor at understanding our own professional past and applying the lessons that others have learned to our practice. Revisiting Bearman provides us with a gateway to so many professional lessons, experiences and knowledge that should not be forgotten or consigned to some distant past.

And, just quickly, while we have framed this workshop around Bearman and his ideas, we do have to acknowledge the incredible flourishing of professional thought that abounded in the late 1980s and early 1990s, much of it in Australia. Bearman was a catalyst in many ways, but he too was incredibly influenced by the work of Sue McKemmish, by Frank Upward's continuum model and I'm sure Barbara and David will be too modest to acknowledge the significant roles they also played in the professional reinvention that occurred at this time.

But back to Bearman. What specifically did he say way back in 1989? And how does it relate to our situation today?

For those of you who have read them, Archival Methods and Archival Strategies are information rich and filled with content, examples and ideas. In my very brief summary this morning I can't hope the summarise them all and so I have just chosen a few examples that help summarise some of Bearman's key thoughts and ideas.

Appraisal

Slide: Appraisal is broken

Fundamentally, Bearman argued that appraisal was broken. Granted, the form of appraisal he was critiquing at the time was a retrospective, paper based process for determining
which records to keep and which to throw away, but despite this, Bearman’s critiques still have relevance.

To make his arguments about the inadequacy of appraisal methods, Bearman referenced a number of large case studies of appraisal practices to show that, on average, 1 person working for 1 year on a sentencing project would assess 10,000 cubic feet of records.

Slide: 450,000 years

Using this figure as a base, Bearman calculated that using current methods, ‘it would require 450,000 person years to review the 4.5 billion feet of paper records created annually in the United States, to say nothing of the machine readable data, images, sound recordings, video tapes and other media’ created each year. The archival method of appraisal, he argued, was therefore fundamentally unable to deal with the practical realities of the archival operating environment. It could not even vaguely scale to keep pace with record volumes.

Today, what’s our scenario? Even though, as I’m sure Barbara and David will discuss, appraisal processes changed radically after Bearman’s recommendations and after Sue and Frank’s work on continuum-based recordkeeping, appraisal is still a flawed processes.

Today’s appraisal realities are:

We are potentially dealing with even larger data volumes.

Globally, the amount of data created, collected and shared in 2009 was 800,000 petabyte. In 2011 it was 1.8 zettabytes. By 2020 this figure will be 35 zettabytes. One zettabyte is the equivalent to the content of 260,000,000 DVDs. (Sydney Morning Herald, 8 July 2012)

We have more comprehensive tools, but people are struggling to apply them

We always hear this anecdotally, but last year I decided to test it. I identified a small group of agencies that I knew had comprehensive disposal coverage and good recordkeeping policies and rules that in been in place for 5 or more years. I contacted these agencies and asked them if they could send me a list of all their current digital records that had been identified as State archives, or tell me the business systems where these records were currently located and managed. Only 3 of the 15 agencies I contacted were able to report on the location, condition and management frameworks around their high-value archival records, but none of the organisations could report on archival-value records contained in systems other than the corporate electronic document and records management system.

We may have improved our processes for appraising records and developing disposal authorisation, but we still have a long way to go in ensuring that this work actually results in the creation, identification and management of archival value records, particularly in digital business environments.

Many people are still concerned with paper

In another survey at State Records on digital disposal practices, several respondents reported that ‘The digital records can wait, they are not a priority’.
Many people are grappling with vast stores of legacy paper records and so are not actively appraising and managing their digital records because they are still too busy manually sentencing their paper files. This is almost exactly the same scenario that Bearman was critiquing 26 years ago, except that now it's possibly worse because by prioritising their paper, organisations are allowing the digital to fend for itself and digital records cannot necessarily survive on their own.

**Proactive identification of digital archives is necessary if they are going to survive**

The realities of digital data mean that, unless long-term value records are identified at or close to their creation and unless active intervention and management of key records is performed, it is likely that these records will not survive.

Therefore, despite the data volumes, despite the practical difficulties, despite the other priorities it is critical that appraisal is proactively performed. But I do fear that again our professional methods are letting us down.

In another point to note, in relation to appraisal Bearman also argued that 'If our object is ensuring evidence, archivists have made a fundamental error by not concerning themselves with whether adequate records are being created in the first place'. (Archival Strategies, 391)

He also noted that the effect of disposal processes is 'to direct most records management and archival energy into controlling the destruction of the 99% of records which are only of temporary value, rather than into identifying the 1% we want and making efforts to secure them.' (Archival Strategies, 392)

One final appraisal point to note is his comment that 'Records retention regulations seem to increase our paper processing but do little to enhance consciousness of employees about recordkeeping requirements.' (Archival Strategies, 397)

**Preservation**

The next method Bearman discusses is preservation.

Bearman's arguments relate to paper preservation and essentially, his point is that paper, ultimately, will degrade. Spending vast amounts on its preservation is, therefore, a waste. He argues that our preservation methods have 'overlooked the obvious fact that conservation of the original records of contemporary society, comprised as they are of materials that nearly defy preservation, is impractical in the extreme.' (Archival Methods)

In Archival Methods Bearman calculates that 'the costs of storing the 100,000 cubic feet accessioned annually by NARA is $2.5 million, a sum greater than the average annual increase to the NARA budget over the past few years. Clearly even holdings maintenance is unaffordable if permanent retention remains our goal.'

Bearman's view is that an unsustainable method should not be sustained. He reports that NARA itself estimates that only 0.4% of its holdings possess intrinsic value - ie they should be preserved in their original form because this is what confers their value. The remaining 99.6% of NARA's holdings have value because of the information they hold, not because of their physical form. Therefore, Bearman recommends, '99.6% of NARA's holdings should be subject to media transformation, and an equal percentage of new intake should
be transformed upon accessioning.' Back in 1989 he recommended microfilming, today his chosen tactic would likely be digitisation.

In discussing preservation, Bearman says that we have got our mission wrong. Our mission is not to manage paper. It is to protect and maintain evidence. Maintaining a specific format, such as paper, he argues, is not fundamental to our mission. He argues that we should therefore stop requesting unsustainable amounts of money from funding providers to build yet more paper storage facilities, deflecting these sums potentially from more valuable archival projects along the way. We should instead 'transform' paper records, preserving their evidential value through the process and manage these new versions of the records as the archives.

So how have things changed today? Essentially they haven't.

**Funding for paper storage is still actively sought**

Many large archival institutions have funding bids in to secure funds to build new storage facilities that will house future archival transfers. None of these bids has been successful - the failure of the National Archives' latest bid for additional paper storage was in yesterday's Canberra Times - and the prospects for future success are not good.

So we have all the paper problems presented by Bearman. And now we have all the digital preservation challenges as well.

**Preservation is a challenge.**

In the State Records digital disposal survey I discussed earlier, 80% of respondents expressed a lack of confidence in their ability to maintain core business records for more than 10 years.

In another State Records survey on social media use, only 20% of respondents reported that they are capturing some or all of their social media records, even though important business functions like emergency management and community consultation, are moving to those forums. Research in the United States has shown that 10% of social media records disappear, on average, each year. This is an example of the decreasing windows available for preservation actions today and the significant need to be proactive with our management responses.

**Description**

In *Archival Methods*, relation to description, Bearman makes the point that 'Ironically, the extent of our lack of knowledge about archival holdings is hidden by the very inadequacy of our documentation of archival holdings'.

In evaluating descriptive methods, Bearman notes how labour intensive our descriptive methods are. Studies show, he notes, that personal papers take on average, 10 hours per cubic foot of records to describe, corporate records 3.5 hours per cubic foot and university records 3.8 hours. In virtually any archival institution, he argues, 'most description remains to be done. But our methods prevent its completion.'
He says in Archival Methods that if we imagine that all our records are currently beautifully described and if we just need to make sure that all future transfers are beautifully described, in 1989 it would have required 4,000 full time archivists to describe the 400,000 cubic feet of records brought into archival custody in the US that year. And this is just to deal with the new transfers, let alone the vast backlogs that each institution possesses.

Bearman's recommendation to deal with these vast issues is that 'archivists should find, not make, the information in their descriptive systems'. His recommended strategies to increase description by the necessary orders of magnitude are to identify the information we can capture from creation environments and automatically import it into our systems. He says we need to capture administrative information about records both during their active life and post transfer. And, most interestingly, way back in 1989 he said we need to crowd source - we need to 'design means to capture what users learn about records...so that this information can enrich the description of holdings for subsequent users'.

Reflecting some of the descriptive problems we are seeing today, Bearman noted that in the digital environment, 'Archivists need to take very seriously the threat of the disappearance of explicit provenance. If we do not know where a piece of information arose from, or what kinds of activities it supported during its active life in a database environment used by many different persons, we will lose the link between the record and the actions it documents, depriving the archives of their special value as a source of 'evidential' documentation.'

And where are we at with description 26 years down the track?

**Today's scenarios**

- processing backlogs are still a persistent reality
- many digital records are poorly named, managed, created in ad hoc network environments or legacy business system environments where system context and supporting documentation is fragile or is gone or is no longer understood
- broader description requirements necessary to sustain digital records and digital systems are still yet to be effectively developed and implemented

**Access**

I know this summation has already been fairly grim, but Bearman's statements about access are possibly the most depressing sections of Archival Methods.

Public use of our records is what every component of the archival endeavour is for, but Bearman's assessments of our methods here are scathing.

In Archival Methods he states that in our access processes, we learn little from our users. We do not assess how we serve them. We do not assess how we can continue to serve them after their research is completed. We think it reasonable to have control systems so impenetrable that it takes a trained professional to use them.

He links access back to education and states that 'If the electronic record of tomorrow is going to survive long beyond its creation, users will need to become more conscious of archives and what it means to make an appraisal decision...Just as we once taught students to write business letters with 'Dear Sirs' as a salutation, we will need to educate
an entire society to address electronic mail envelopes with header information that will be critical both to transmission and to ultimate retention.'

Noting that information is the only resource increased by use, Bearman identifies that we need to develop ways to facilitate and capture different forms of use, and to also become 'archives without walls', making our resources widely available in ways that best facilitate their use.

**Today's scenarios**

And today there are still many challenges in these areas:

- awareness of our users is still not adequate
- access to our core business information - our archival control systems - is still often mediated and challenging
- digitisation and broad access to collections by diverse and open means is still very limited

**Mission**

Throughout *Archival Methods*, Bearman critiques the archivist's mission. He criticises identification 'heritage' and in 'the future' in statements about the role of archives and notes instead that 'to claim a social role, to demand our share of resources, we need to point not to the needs of the indeterminate future and the nostalgia of the unappreciated past, but to the immediate requirements of today. These are the requirements for accountability, for applicable knowledge and for cultural connectivity.'

**Conclusion**

Why didn't we listen to Bearman the first time around?

As David and Barbara will demonstrate in a minute, actually, we did. But, as I think we can see, we didn't listen quite hard enough.

In commentary on Bearman's work in the mid 1990s it was noted that the main responses to Bearman were reflecting on the application of his work to digital recordkeeping.

While the components of his arguments that apply to digital recordkeeping are incredibly significant, I think when he wrote *Archival Methods* and then, in 1994, *Archival Strategies*, the breadth of his recommendations and their application across all areas of archival practice were not sufficiently acknowledged. Bearman could see that all of our methods, whether they were applied to paper or to digital records, were inadequate.

He could see that our methods - appraisal, preservation, description, access - 'had become ends in themselves, rather than the means for achieving some larger, societally-valued objective'. (Pederson, 433) For instance, when we measure our practice, we count the number of disposal authorities issued or researchers through the door, not the number of archives transferred or the number of research enquiries satisfied.

He could also see the digital world on the horizon, a reality that much of archival practice has been slow to acknowledge. Suddenly we have found ourselves in the heart of the
digital business economy with, to use Terry Cook's phrase, electronic records and paper minds. The bulk of each of our holdings is paper and probably still the majority of corporate priorities for many of us in the room relate to paper based records.

But Bearman could see the world was changing. We were busy in our paper towers and didn't realise that mindsets around us were shifting. The world was becoming digital. People began to see limited value in all our paper compared to all the digital resources they could now find. Funding providers began to question our relevance and business models. The world has changed and our professional methods have not sufficiently changed with it.

We forget that our practice needs to be applied in context, and our context is now digital. We are not alone in this - newspapers, libraries and many other institutions are similarly trying to find their place in the digital economy.

We need to reinvent our archival methods to redress the issues that still exist 26 years after Bearman first identified them and to carry archives forward as accessible, evidential, powerful records, through the 21st century and beyond.