



Memory Institutions in the Digital Environment: Challenges and Opportunities

Luciana Duranti, SLAIS, University of British Columbia

Digital Curation e Cultural Heritage: “

..Nessun dorma.... ”

Milan, Italy, 12 March 2015

Preservation Vs. Curation

What is Preservation?

The whole of the **principles, policies, and strategies** that controls the activities designed to ensure materials' (data, documents, or records) physical and technological **stabilization** and **protection of intellectual content**.

What is Digital Preservation?

The process of maintaining digital materials **during and across different generations of technology** over time, **irrespective of where they are stored**.

What is Curation?

The process of **organizing and maintaining a collection**. It includes **content curation**-- sorting through large amounts of content and presenting it in a meaningful way, and **digital curation**.

What is Digital Curation?

Digital curation involves maintaining, preserving and **adding value** to digital data throughout its lifecycle (no appraisal or acquisition)



Cultural Heritage Vs. Documentary Heritage

Cultural Heritage is the **expression of the ways of living** developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values. Cultural Heritage is often expressed as either **Intangible or Tangible Cultural Heritage** (ICOMOS, 2002).

Documentary heritage: the portion of the tangible cultural heritage that manifests a documentary nature, consisting of **information affixed in a stable way to a medium for purpose of communication** through time or across space. (UNESCO/Jikji Memory of the World Prize, Guidelines for Nominators and Adjudicators, 2009).

My Topic

I will focus on **preservation of documentary heritage in digital form** as a core responsibility of memory institutions

‘Memory Institutions’ in the collective sense

- share common the goals of **preservation** of and provision of **access to documentary heritage**
- Institutions vary significantly in type and scale, but the name “memory institutions” conveys the sense of a **place**
- **Memory Institutions are places of preservation and access**



The Place of Preservation



InterPARES
Trust



The Tabularium of Ancient Rome

- The Tabularium rose on the Capitol hill as the imposing terminal point to the Forum, higher than the Senate, closer to the Courts than any other building, surrounded by the Markets and the Temples, the **point of reference** for anyone walking through the city, and the **beating heart of the *res publica***.
- It preserved the records as well as the legal, jurisprudential, literary, and theatrical writings of Rome
- It contained **evidence** and **memory** of the people for the people. It was a permanent, unforgettable reminder of whom **allegiance** and **accountability** are owed to, and of the achievements of the people of Rome.



Place of Access

ARCHIVES NATIONALES



After the French Revolution

- 25 July 1794 the National Archives of France was created as the **central repository** of public and private documents (including literary manuscripts) produced on the territory of France.
- The founding decree assigned to the French State the responsibility to hold such documents **on behalf of the citizens** of France in order to ensure universal access



Why A Place of Preservation and Access?

- For the **people to be reminded** of their past and their right to evidence of how they were governed and memory
- For the **documents to be controlled and contextualised** and preserve integrity and meaning in a secure place, a bastion

But there is more to it...

- The place of preservation was the *locus* of **recognition** (identification) and **empowerment** (authority)
- At the threshold of the place of preservation, a **trusted third party** authenticates the documents (administrative or literary) and takes responsibility for them thereby **transforming them in sources** (of evidence and memory)



Postcustodialism 1990s

1991 David Bearman – **An Indefensible Bastion**

With electronic material the place of preservation no longer matters because there no longer are:

- the need to protect the **physical integrity** of the records
- the benefit to users of having related materials **accessible** in the same place

In addition

- electronic records should remain in their **native environment** to keep their integrity
- archivists **lacked the variety of expertise** required by the many different proprietary systems put in place by the creators

InterPARES
Trust



Custodialism 1990s

- The primary justification of custody is **historical accountability**: the citizens have a right to access a documentary heritage that is under the control of a **neutral third party that has no stake in tampering with or destroying it or in letting others do so**
- Without the measures taken by a trusted professional to ensure the **protection of the identity and integrity of the material** and to establish on it **intellectual control** by making explicit all contextual information, electronic material does not have much value to its users

Digital World: A Physical Place

- Digital information is **physical** also and resides in very material servers, while at the same time being **ubiquitous**, due to redundancy, which, when intentional, is a key preservation strategy
- It is possible to preserve digital material in one central place: **trusted digital repositories**
- TDRs are **complex technologies** that require professionals with specific and costly qualifications
- There are few “trusted” repositories that are “**trustworthy**”
- Regardless of certification, TDRs appear to be trusted only when they are (or are perceived to be) in a “**place of preservation**” like an archives or a library



The Digital World: New Types of Places

- **Cyberspace**: the 5th dimension – in our mind, a virtual place
- The idea comes from a **refusal to accept the physical** extension of digital information in computer terminals and other machines
- But, “real-virtual dualism is nothing more than a fiction.” (P.J. Rey, The Myth of Cyberspace -- <http://thenewinquiry.com/essays/the-myth-of-cyberspace/>). Rey also states that
- There are **many real places of preservation** that are perceived as the places in between those who provide information and those who access it
- They are **places of separation** rather of communication and learning, unless they can be put under centralised trusted control

Preservation in the Cloud

Memory Institutions are beginning to store their holdings in a variety of Cloud deployments and services, because:

- Many of the digital materials to be preserved already **exist** in the Cloud and transferring them to a TDR is not a simple matter (online transfer can take years and transfer of servers may take several trucks)
- **Access** is possible from any location to anyone who can use a browser
- A trusted digital repository satisfying ISO standards is not **affordable**
- The **knowledge** to deal with information produced by complex technologies is not available among professionals and is very expensive
- Strong **protection** measures are often confused with preservation measures
- As a consequence, the issue of “where” the information **resides** is becoming the primary cloud issue



“Where” In The Cloud?

- The many issues related to **storing** information in the Cloud have been reduced to a question of **trust**, both **technological** and **social** (i.e. based on a fiduciary relationship that relies on reputation, performance, confidence, competence)
- The greatest concern is **location independence**, which is a defining feature of the Cloud in that it allows for highest security and economy
- The information physically resides somewhere, but **where** is not possible to know at any given time, though one may know where a provider’s data centers are



To Whom Does the “Where” of Preservation Matter?

- It matters to governments
- It matters to Cloud providers
- It matters to you and me
- It matters to society at large, regardless of regimes and cultures



Why Does “Where” Matters?

- To governments: **data sovereignty**
- To Cloud providers: loss of **customers**
- To us as individuals: **certainty of our rights**
- To society: evidence and memory
(**authenticity, context, authority**)

But the “where” we are all concerned with is actually the **place of storage**, rather than the place of preservation



What Is Being Done About it?

- **Governments** issue laws and policies: : US, UK, Canada, Australia, India, Brazil, the European Union have geographical location restrictions
- **Cloud Providers** issue Data Residency taxonomies to address such laws and policies, though increasingly the Residency of the Keys are more important than that of the data
- **Information professionals** are divided in post-custodialists and custodialists

New Postcustodialism

- The original postcustodialism was a form of **distributed physical and legal custody** of information, whose care would be left to those who have the highest interest in modifying or destroying what they do not need or could hurt them
- The new postcustodialism requires that centralised **legal custody and intellectual control** reside with a **designated preserver** (e.g. a library or archives), but it delegates **physical custody and technological access provisions** to a **third-party Internet provider**
- New postcustodialists believe in the possibility of **compromises** between legal requirements and economic pressures
- **Examples** of such efforts exist.



A Place In A Library

The Council of Prairie and Pacific University Libraries (**COPPUL**) is piloting a cloud-based preservation service using the Archivemata digital preservation system. The service is offered to COPPUL member institutions that wish to preserve digital holdings but are unable or unwilling to install and manage local Archivemata instances. This service is a joint effort of COPPUL, Artefactual Systems Inc. (Archivemata lead developers) and UBC Library (the cloud storage provider).

COPPUL is responsible for promoting the service, signing up new institutions and seeding the one-time set-up costs; **Artefactual Systems** provides account administration, installation, server administration and user technical support; and **UBC Library** provides fee-based server hosting and digital object storage service.



A Place In An Archives

ArchivesDirect – a collaboration between Artefactual and DuraCloud

- A suite of **digital preservation functions** via an online dashboard
- Archivematica (a product of Artefactual) produces highly standardized and interoperable **Archival Information Packages** (see OAIS)
- These packages will automatically be placed into DuraCloud for long-term **secure archival storage**
- The packages will be **replicated** across Amazon S3 and Glacier storage locations (in the US) and undergo regular **integrity checking**
- ArchivesDirect is built with **open-source software** which is well-documented and freely available.
- All content is stored using **open standards**, and users can download their data at any point without concerns about data lock-in and
- The service can be **run locally** at any time.



What Is Missing?

- The material is **physically** secure and under the proper jurisdiction. The public can trust it. Is it enough?
- Is the location of the servers containing the data the “place” that matters? **Does storage equal preservation?**
- The **places of separation** remain: communication is faster, less taxing, more user friendly, but the wall of impenetrability is becoming thicker. People do not feel that they matter.
- Vint Cerf, the Google Prophet, warned us of the dangers of a “Digital Dark Age” due to the fragility of the material, but is it really the **endurance of the medium** the key to preservation?
- Paraphrasing Rey, the cost of upholding separation is that **we have become disassociated with our society and our past**



The “Place” of Preservation

The concept of place in the digital environment refers to

where the functions of recognition, authentication, legal and intellectual control on the digital material reside, providing it with authority, and transforming it into sources of evidence and memory



Preservation As a Service for Trust (PaaST)

This is why InterPARES Trust is developing a model of **Preservation as a Service for Trust** that every archives or library can require a provider to reproduce

The storage of the material can be in the provider's data centers (as long as they are under the jurisdiction of the country producing the information), but does not need to be in a given institution, as long as the **memory institution is the place where preservation functions are controlled**

Note: To develop a reference baseline InterPARES Trust is using UML (Unified Modeling Language) and working with the Object Management Group (OMG) detailing all the functional requirements that providers must respect.



Place as the Heart of Civic Life

- But central control of preservation and access is not sufficient to overcome separation if it the hub where it happens is not **visible**
- For the institutions of our societies to maintain their *moral accountability in the court of the people*, besides *their legal accountability in a court of law*, and
- For us **to remain associated with our past**, our *collective memory*
- It may be necessary to maintain and build **powerful, imposing repositories** and place them in the **center** of the city, close to the offices of the authority, the public market and the religious sites, so that they return to be **the pulsating heart of civic life**, a point of reference and a symbol, but, mostly, **active participants in the everyday vicissitudes of the common people.**



Vancouver Public Library



InterPARES
Trust



UBC



InterPARES
Trust

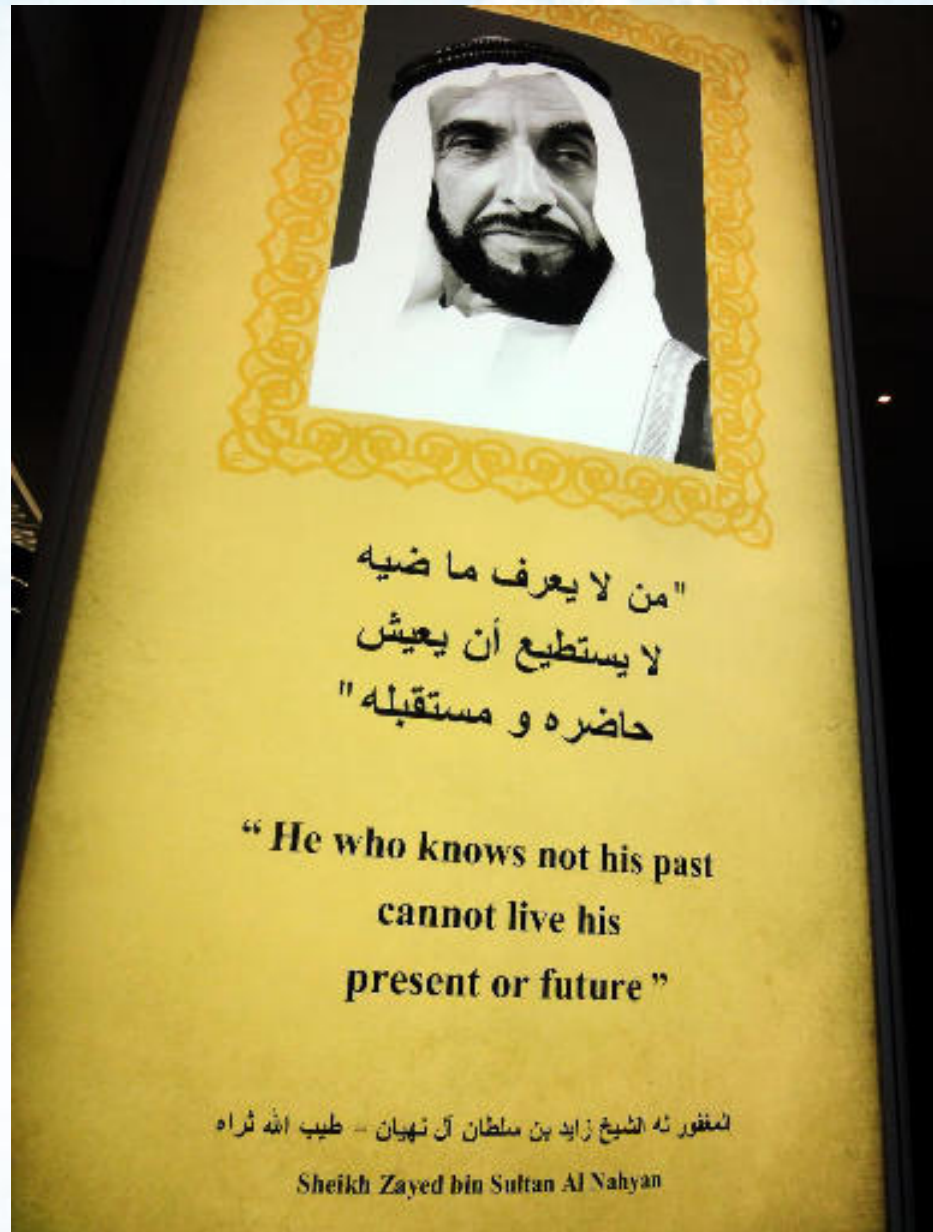


United Arab Emirates

Funded in 1971

They built their National Archives in 2014

The National Library is being built and so are several other “memory institutions”



UAE National Archives



InterPARES
Trust



UAE National Archives



InterPARES
Trust



UAE National Archives



UAE NA Exhibition Entrance



InterPARES
Trust



UAE National Library



InterPARES
Trust



Even in a Digital World the “Place” of Preservation Matters

To Whom?

To our Civilization

Why?

Marx argued that we experience alienation when social structures disrupt established relations by imposing some form of separation.

Data and documents only become knowledge and heritage after being preserved, **recognized, empowered**, shared, absorbed, reflected upon, and passed on to the next generation.

It is possible to preserve and give access, but without recognition and empowerment, nothing else will happen. We as a civilization still need
a place where to share and learn our muniments

InterPARES
Trust



Muniments/Monuments

- Documents about actions and events are also called **muniment**
- The word is derived from *munimentum*, the Latin term for a bastion, a protective monument, and its root is the same as that of monument
- Memory Institutions (monuments) preserving the documents of the past (muniments) may inspire those living today

**Letting society forget this
comes at a great cost**



The Cost of Ignorance



InterPARES
Trust



Paraphrasing Ugo Foscolo

**THOSE WHO WILL
MEMORIALIZE THE PAST
MAKING IT VISIBLE AND
PERVASIVE WILL INSPIRE
CIVIC VALUES IN THE NEW
GENERATIONS**

InterPARES
Trust



Thank you

Luciana.duranti@ubc.ca

www.ciscra.org

www.interparestrust.org

InterPARES
Trust

