The Concept of Record in the Digital Environment: The Theory

Luciana Duranti

InterPARES Project &

School of Library, Archival and Information Studies,

University of British Columbia

InterPARES Purpose

To establish the conceptual underpinning, the parameters, and the method of analysis that will determine the answer to the question of what entity corresponds in any known given environment to the archival definition of the record

Identifiable Characteristics of an Electronic Record

- Fixed form (i.e. its binary content is affixed to a medium so that it remains complete and unaltered, and its message can be rendered with the same documentary form it had when first set aside)
- Unchangeable content
- Explicit linkages to other records within or outside the digital system through a classification code or other unique identifier (archival bond)
- Identifiable context: juridical/administrative, provenancial, procedural, documentary, technological
- Involvement of five persons: author, addressee, writer, creator, originator
- Participation in or support of an action either procedurally or as part of the decision making process

Record Elements, Attributes, Digital Components

- A record element is a constituent part of the record's documentary form. It may be either extrinsic, like a seal, or intrinsic, like the subscription

- A record attribute is a defining characteristic of each given record (i.e. name of author) or of a record element in it (i.e. legend on a seal)

- A record digital component is a digital object that may contain all or part of a record, and/or the related metadata, or more than one record, and that requires specific methods for preservation.

Other Peculiarities

- The relation between a record and a computer file can be one-to-one, one-to-many, many-to-one, or many to many, so a file does not necessarily equal a record

- The same presentation of a record can be created by a variety of digital presentations and vice-versa, from one digital presentation a variety of record presentations can derive, so fixed form does not imply an immutable bit stream

- It is possible to change the way in which a record is contained in a file without changing the record, so form and record do not necessarily coincide

Experiential, Interactive and Dynamic Records

Experiential records are objects the essence of which goes beyond the bits that constitute the object to incorporate the behaviour of the rendering system, or at least the paths followed by its users.

Interactive records are records made and maintained in interactive systems, where each user's entry and input from other system causes a response from or an action by the system

Dynamic records are documents whose content is dependent upon data that vary continuously and are held in several databases and spreadsheets

What Entities Are We Looking At?

- **live** entities, which are either:
  - records in becoming, such as registers, and transactional interactive documents, or
  - potential records, such GIS systems

- **active** entities, set aside (with fixed form and stable content) either:
  - to be used in their final form, with or without functionality, such as data dumps, or
  - to be re-produced, re-enacted or "performed" as needed

Questions

- Is it possible to have a record in fluid form and with undetermined boundaries?

- If not, should an entity with fixed form be generated for the purpose of making a record to be kept in a trusted recordkeeping system and perhaps preserved over the long term?

- If yes, who should make it?

- On the basis of which criteria?

- When in the entity's lifecycle?

Alternatives

- To trade stability of content and fixity of form with the ability to track changes. Record=last instantiation+log of changes+ metadata

- To think of the record as existing in two modes: record in becoming when the object is accessed to add information to it; record when the object is accessed for use. Record=each instantiation accessed for use+metadata

Observations from Arts Case Studies

- The work is the performance
- The score/script is a set of instructions
- Other components: computer codes, patches, synthesiser, video feeds, etc. and the interaction between the performer(s) and all of the above

Hypothetically, we could

- fix the components in a definitive form with one final act of interpretation and representation
- generate a description of all these components and their interaction that allows to re-create the work

What is the Purpose of Preservation?

- To show the work as it was experienced by those who interacted with it when it was created—impossible

- To re-create, re-execute or re-install the work as it was—emulation

- Show various elements of the work—migration of digital part

or better

- To show the documentation of the work and of the interaction between it and the users when the work was created

- To enable a subsequent non-identical performance in which the essence of the work is conveyed, not necessarily its form and behaviour

Documentation of Work and Interactions

- Documents resulting from planning (e.g. sketches)

- Documents resulting from creation of work (hardware and software programs and codes)

- Documents resulting from the execution of the work (e.g. images, graphics, text)

- Documents capturing the major components of the work (e.g. single channel video feeds)

- Documents created to document the work (e.g. interviews, videos, photos, news, e-mails)

Enabling Subsequent Performance: Rhizome ArtBase

- Connected art object: it comprises the description of the work and its components, a thumbnail of the work, keywords and metadata, a link to the URL of the work, the biography of the artist, and his/her certification that this aggregate of parts corresponds to the work and constitutes an adequate representation of it

- Cloned art object: it includes, in addition, an authentic copy of the work preserved in the server of the project

Outcome

- The object captures the essence of the work

- The author/creator is an active participant in preservation

- Authenticity ensured by the involvement of the author/creator in the making of a surrogate reflecting his intentions

- The record nature ensured by the fact that the author/creator makes the surrogate in the course of his business and for the purposes of it

Can We Do the Same With e-Government or e-Science Records?

Identify:

- the boundaries of the digital entity constituting the record which is to be kept for future action or reference in a trusted recordkeeping system

- the essence of such entity, i.e., its constituent parts and digital components to be kept stable as content and fixed as form and linked among themselves,

- its attributes to be manifested in metadata permanently attached to the record

- the necessary accompanying documentation of what is not fully preservable, that is, interactivity, connectivity, and functionality

and

Assemble the stabilized essence of the record, its metadata and system documentation and treat this entity as the record.

Key distinction

- Copies made by the creator in the course of and for the purposes of its business are **records of the creator**

- Copies made by the preserver in the course and for the purposes of archival functions are **authentic copies of the records of the creator**

Hence:

Any alteration of the form of the record made by the creator to be able to keep the record for future action or reference is a record of the creator

Preliminary Reflections

- It is not possible to determine what is a record when the entity examined is live

- It is only possible to determine what systems, according to their administrative functions, should create records (e.g., UBC Student Register)

- A record is the entity that the author/creator sets aside as memory (rather than evidence) of its actions and transactions: to be able to use it as reliable and authentic evidence, we can help on "how", but should not dictate "what"

Preliminary Reflections (cont.)

- Dynamic, interactive and experiential digital objects can only be either potential records or records in becoming while they are live

- If the creator treats them as records, associates them with entities that are records, and does so in the course of activity and for its purposes, these objects will be records when their content will be stabilized and their form fixed

- If the acquisition of stability and fixity occurs at the hand of the creator's trusted custodian (i.e. the records' officer) and for the creator's purposes, that is, to use or refer to them in the course of its activities, the results will be records in all respects
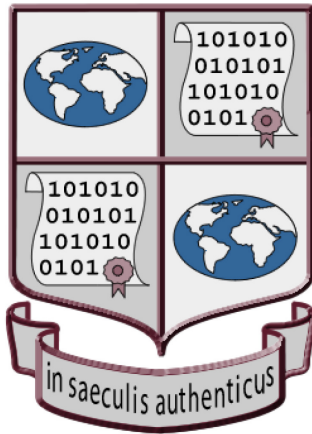
Preliminary Conclusions

- The concept of record is a retrospective one

- After all, record comes from Latin "recordari" and French "record"—to remember—and it is what is left, the sediment, the residue, the trace, the memory of our activities

InterPARES Web Site

www.interpares.org