Putting Museums in the Digital Curation Picture

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about me

- Archivist, US National Archives, 1988-97
- Associate Deputy for Library Services, US Institute of Museum and Library Services (IMLS), 1997-2011
- Faculty, Johns Hopkins University MA in Museum Studies Program, 2011-present; Program Coordinator/Lecturer, Digital Curation Certificate Program, 10/2013-
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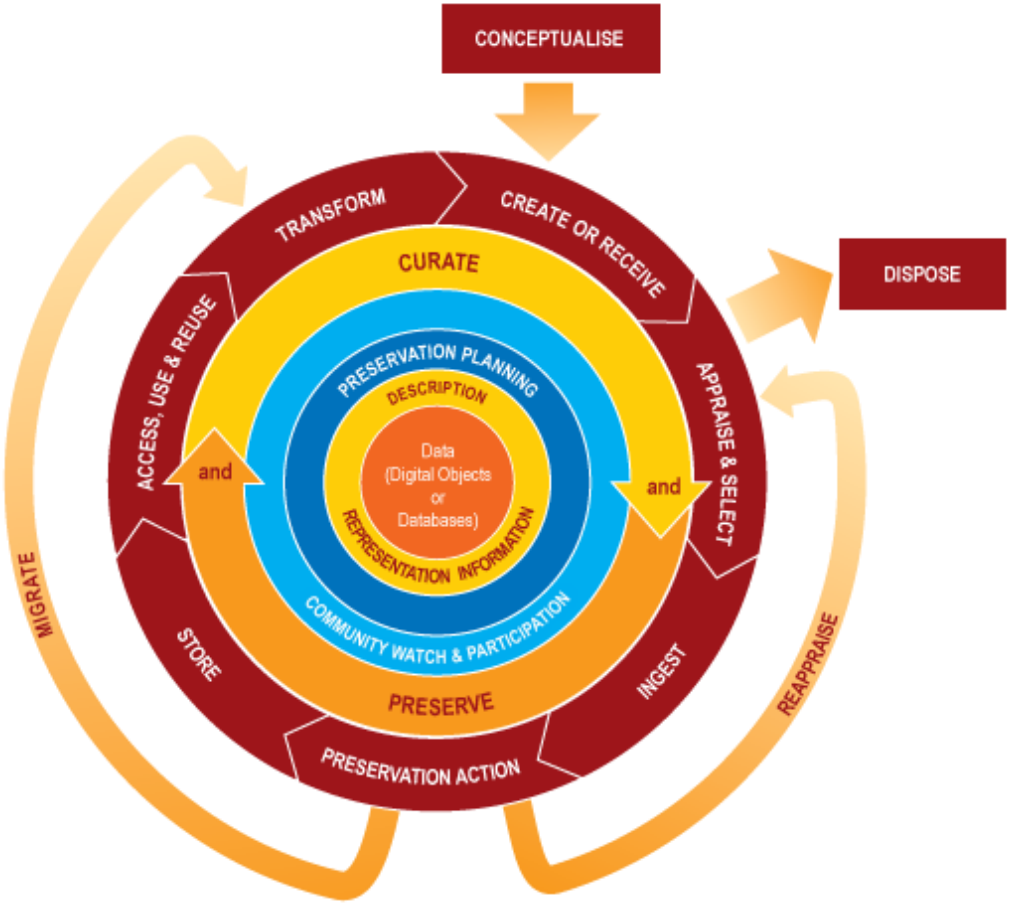
Questions

- What is digital (or data) curation?
- Why should we care?
- How is it practiced?
- How should we teach it?

Digital Curation



the active management of digital assets *over their lifetime*

Life cycle model, Digital Curation Centre: http://www.dcc.ac.uk/

We focus on the beginning of the data life cycle to:

- control the creation process, for both born-digital and digitized assets (or at least get involved in their management as soon as possible)
- promote best practices for documenting authenticity, integrity, and provenance of digital assets
- account for disciplinary differences in documenting content and context
- avoid later regret—if we wait, it may be too late to preserve these assets for re-use

Why: all organizations today have to connect with users online—users want persistent, reliable information

new interest in data reuse
to advance research and maximize investment

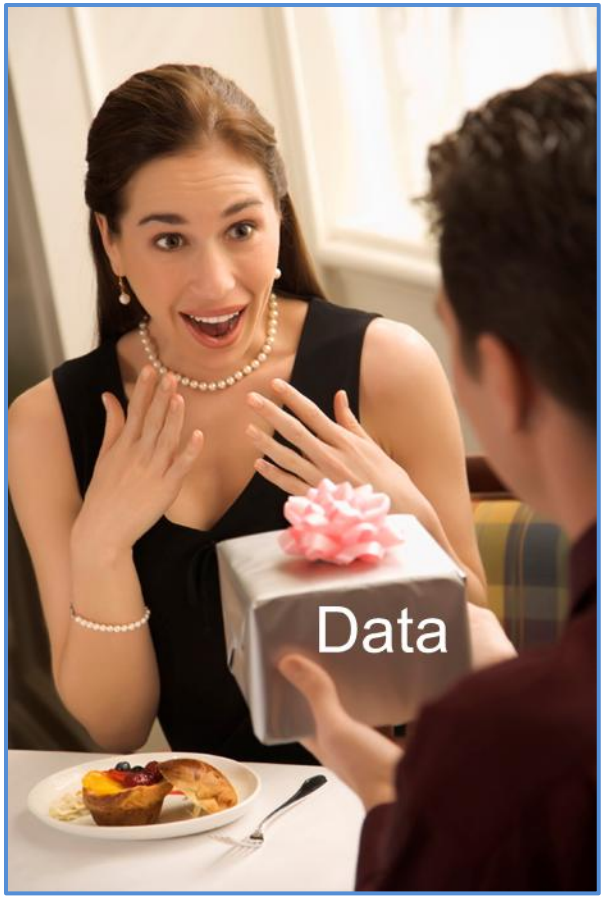
What is Data?

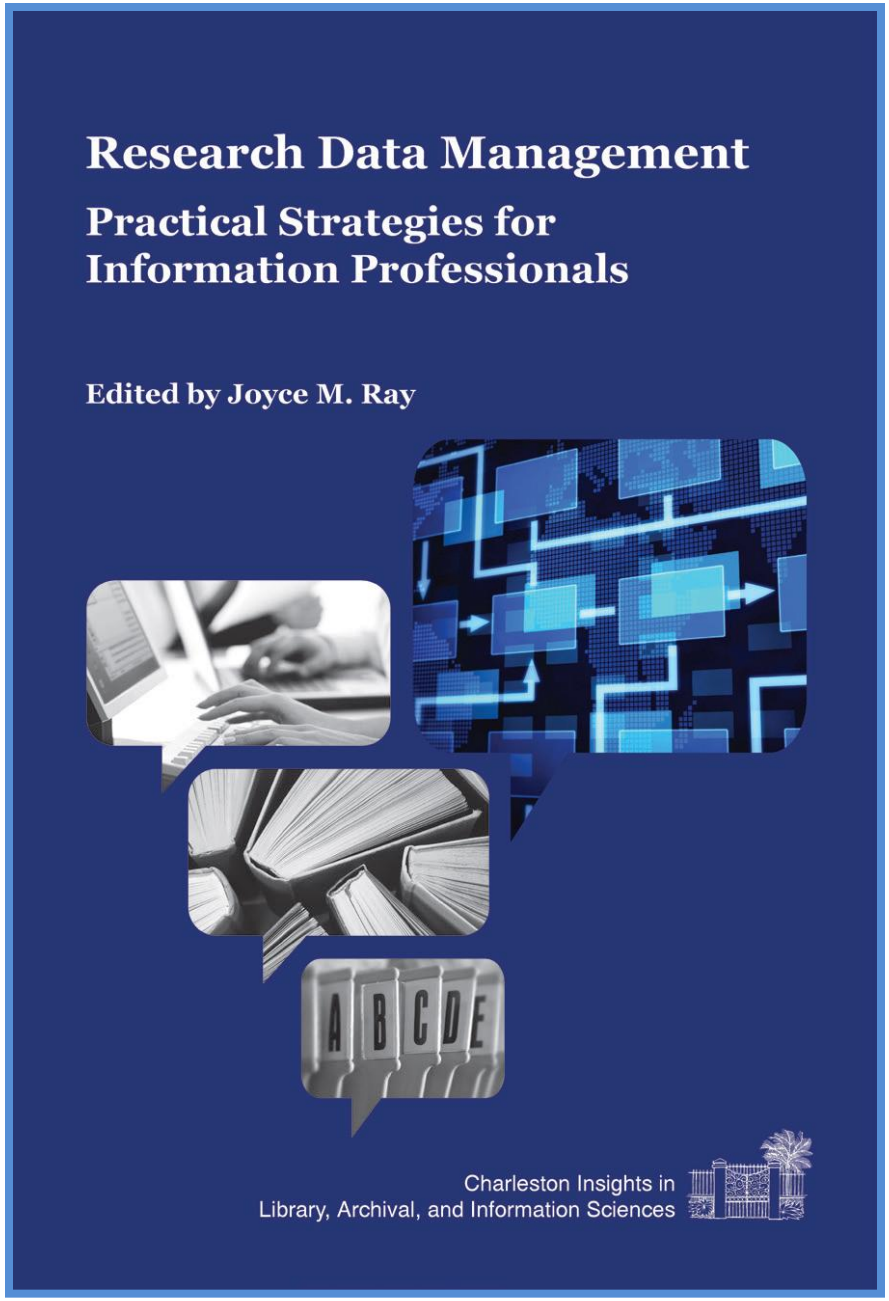
- Short answer: data is evidence
- Research data: any information that provides evidence useful for research
- “Data curation” and “digital” curation are often used interchangeably

Growing Awareness of the Value of Research Data

- US National Science Foundation began requiring Data Management Plans with all applications in 2011
- Funders in the US and Europe are now routinely requiring data management plans with applications for research grants
- US Executive Order issued in 2013 requires federal funding agencies to “carefully consider” DMP’s in evaluating grant applications and take steps to ensure that research data is accessible to other users after the end of the grant period

Data is better when shared





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Core Museum Functions
(US Government Office of Personnel Management)

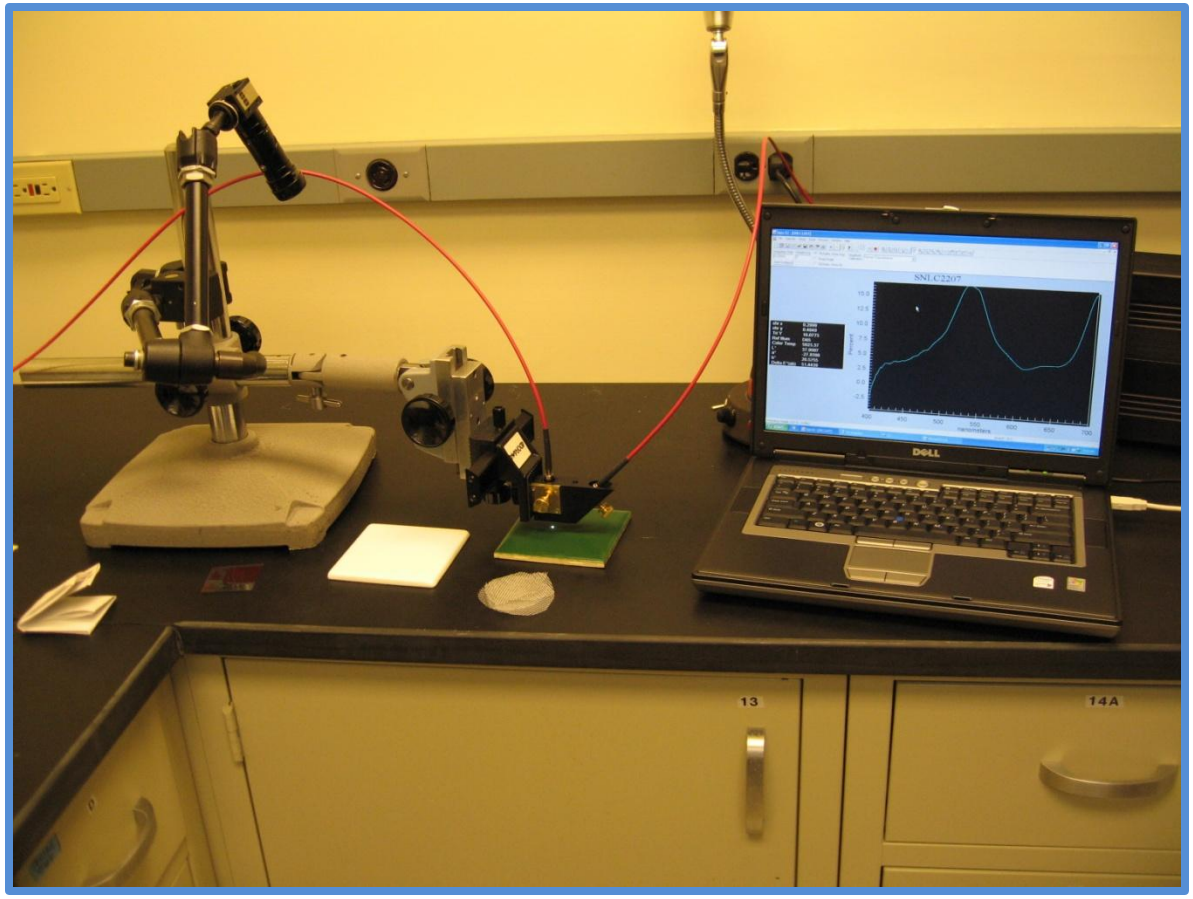
1. Research
2. Collections
3. Exhibits
4. Education

What kinds of research do museums do?

Big Data

Harvard-Smithsonian Astrophysical Observatory

Small Data



Smithsonian Conservation Research Institute

Exhibition Research

L'Art en Guerre, France 1938-1947
Musee National d'Art Moderne

Citizen Science

London Museum of Natural History

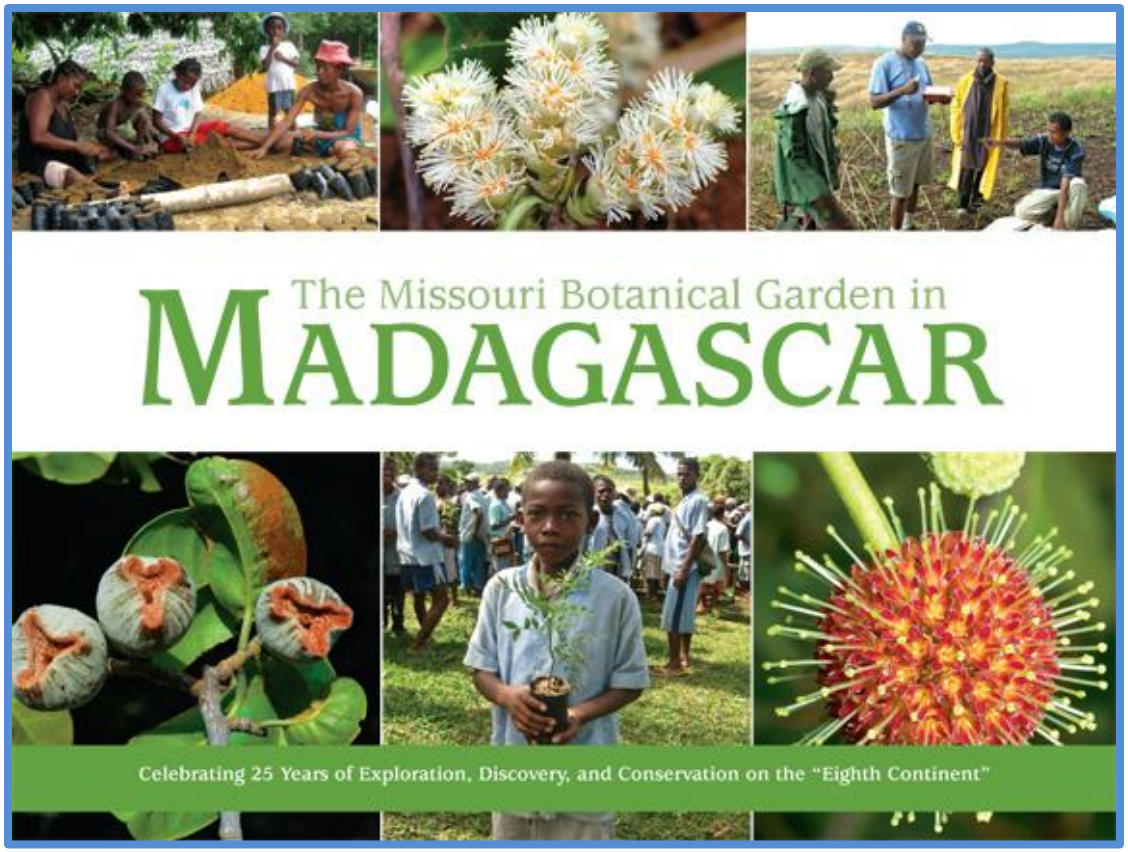
Video Games Emulation Research

Computerspiele Museum, Berlin
Research led by Bibliotheque Nationale de France

Animal Research

"Smithsonian Wild"(Smithsonian scientists and volunteers)
+ Living Collections (Zoos, Aquaria)

Other Biodiversity Research



Missouri Botanical Garden Program in Madagascar

Botanical Gardens, Arboreta, Natural History Museums

Archaeological Data

Ishtar Gate, Pergamon Museum, Berlin

and . . .

- Documentation about objects and collections

Digitized assets: existing content is the primary data source in the humanities

World War I German munitions workers, digitized at Europeana commemoration day event

Digital Media Art

(*"All art was once contemporary"*- Egyptian Museum, Munich)

Ken Goldberg, *Ouija 2000*
Berkeley Art Museum

Aggregation services for cultural heritage data

europeana
think culture

Digital Public Library of America

depend upon good practices and standards
for interoperability

Who will curate all this data?

A peer-reviewed open-access journal

Biodiversity Data Journal

Making your data count!

DataCite

Helping you to find, access, and reuse data

Scientific Data, Nature Publishing Group

New data publications require deposit of data in an appropriate repository – *how will museums respond?*

How will we educate digital curators?
US Federal Funding for Digital Curation Education

IMLS has been the primary funder:

- 2003 - 21st Century Librarians (now Laura Bush 21st Century Librarians) program established
- 2006-2011 – approx. $20+ million per year, mostly grants to the 50 +/- accredited LIS schools in the US, for scholarships, fellowships, recruitment and program development
- 2006 – first call for proposals on digital curation education

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IMLS Digital Curation Education Grants

- MLS, PhD programs and continuing education in library and information science
- 2006-2011: major grants to:
  - University of Illinois Urbana Champaign
  - University of North Carolina at Chapel Hill
  - University of Arizona
  - University of Tennessee
  - Syracuse University
  - University of Michigan, etc.

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DigCCurr Curriculum Development Project

2006 IMLS award to University of North Carolina Chapel Hill. Goals:

- Develop a curricular framework for digital preservation to prepare a cohort of educators with a shared knowledge base
- Build modules rather than full courses
- Emphasize core, generalizable modules which could also be adapted for different disciplines

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US Digital Curation Curriculum Framework

Typically includes:

- Digital Preservation
- Foundations of Digital Curation (everything other than preservation)
- Specialized courses depending on program, e.g., lifecycle (archival) focus, or disciplinary focus (usually science)
- Often an internship (or “placement” in Europe, i.e., hands-on work experience)

Summary: IMLS Funding for Professional Education

- 21st Century Librarians program:
  - 2006 – 2011: ca. $20+ million per year
  - 2012: $11 million

- 21st Century Museum Professionals program:
  - 2006 - 2012: ca. $2 million per year
  - only for continuing education
  - program eliminated 2013

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Career Paths in Museums

- No single credential
- Curators at major museums generally have PhDs in relevant disciplines
- Directors often hired for business experience and fundraising ability

There are not enough data curation education programs to meet the need

Spencer D. Keralis, “Data Curation Education: A Snapshot”, in Jahnke, L; Asher, A; and Keralis, S, *The Problem of* Data, Council on Library and Information Resources, 2012. Retrieved from http://www.clir.org/pubs/reports/pub154

Found that most data curation education programs were in LIS schools and most limited enrollment to LIS students and librarians.

Johns Hopkins MA in Museum Studies

Online with one on-site seminar—emphasis on technology

http://advanced.jhu.edu/academic/museum/

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JHU Certificate in Digital Curation

- Launched September 2013
- Online with one on-site internship
- Max. 15 students per course

http://advanced.jhu.edu/academics/certificate-programs/digital-curation-certificate/

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JHU Digital Curation Certificate Curriculum

1. Digital Preservation
2. Foundations of Digital Curation (metadata, tools)
3. Managing Digital Information (format transformation, DAMs)
4. Elective from MA in Museum Studies courses
5. Internship — full semester credit course, 120 hours on site, repeatable once in lieu of elective
6. Research Thesis – full semester credit course, ideally will build on internship, may be supervised by internship mentor

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2013 - Workshop on Data Curation Education

Hosted by JHU in Washington, DC, with partners University of Arizona and Simmons College LIS schools

- Educators and leading practitioners from the library, archives and museum communities (incl. LC, NARA, Smithsonian, Chicago Art Institute, Field Museum, DPLA, JHU Libraries, and Maryland Institute for Technology and the Humanities)
- Focused on online certificate programs (U of North Carolina CH, U of Illinois UC, U of North Texas, U of Maine, U of Arizona, Simmons, and JHU)

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Consensus Issues

- Challenges of online discovery and access (and also opportunities for innovation)
- Organizational challenges in adapting work processes to incorporate technology; need for shared knowledge, common practices, and collaboration across disciplinary, institutional, and geographic boundaries *(including research, practice and education)*

Knowledge and Skills Required Across LAMs

- Familiarity with standards, practices and vocabulary that facilitate interoperability and preservation
- Familiarity with general and specialized metadata appropriate to the institution (discipline)
- General organizational, project management and communication skills; ability to work in a team of people with different areas of expertise (*Can data curation education programs help?*)

Special Considerations for Museums

- "Curator" has a different meaning in the museum context
- Digital curation skills are needed, but museums would prefer to hire "their own" (people with museum experience and a deep understanding of the museum mission)
- Museum descriptive practices don't fit well with common metadata schemas, complicating aggregation

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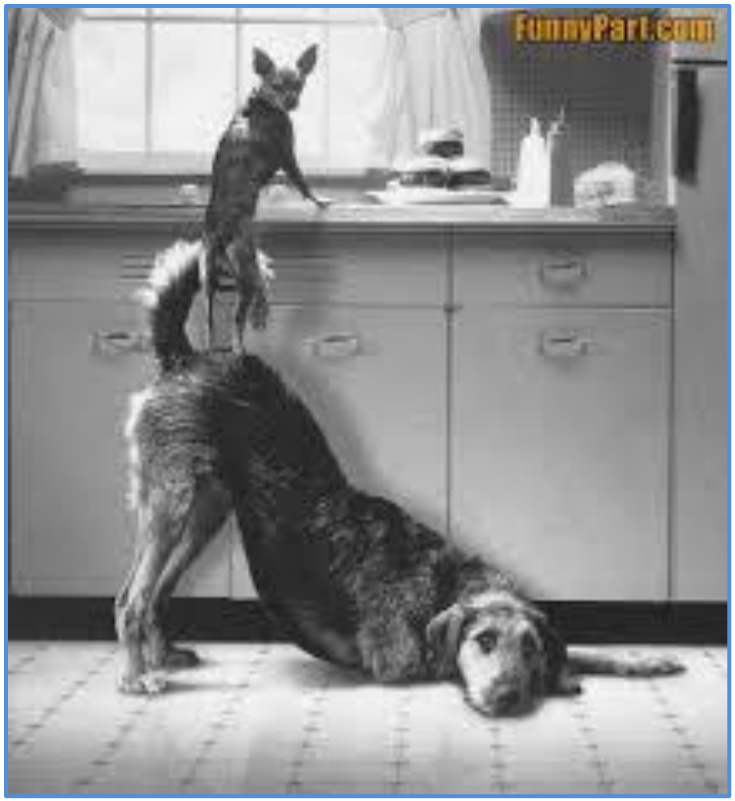
Conclusions

- Much of the data curation education framework developed by LIS schools in the US can be adapted to museum education (with museum examples)
- Principles and practices common to all museums can be taught as core courses
- Specialization by type of museum (discipline) is also needed, e.g., through internships and research projects
- Shared vocabulary is important, so ongoing conversation is essential across the data curation spectrum

Museum-specific Challenges for Data Curation Educators

- There is a long tradition of museum research, but no tradition of managing research data, or even awareness of its long-term value
- The value of digitized assets and collection documentation—as opposed to the value of objects—may be overlooked
- The long-term benefits of open access to digital information may not be recognized

No one can do it alone



Museums need to be at the table

Thank you!

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