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Author

Schottlaender, Brian E. C.

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3RD ANNUAL SYMPOSIUM ON OPEN ACCESS: CONCLUDING REMARKS

University of North Texas 21 May 2012

Brian E. C. Schottlaender
The Audrey Geisel University Librarian

WHATI

HEARD



DATA PRESERVATION



- The key reason for preservation is re-use
 => in fact, preservation <u>IS</u> re-use.
 [Choudhury]
- "Without a deep, rigorous exploration and investigation of preservation, we run the risk of incomplete data management." [Choudhury]



DATA RE-USE



- Science is being transformed from something you observe in real time into something you accumulate over time and analyze later [Gutman]
- Data archives are central to astronomy today => no longer "second-class science" [Hanisch]
- Facilitating research with data isn't just about more data => it's about effective use of data [Droegemeier]



DATA AGGREGATION



- Data increasingly need to integrate with other kinds of data [Gutman]
- Science is being transformed from something you observe in real time into something you accumulate over time and analyze later [Gutman]
- The challenges associated with integrating heterogeneous data [and they are] are non-trivial. [Renear]



ATTRIBUTION CITATION PUBLICATION



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- EZID => helps generate citations, with which you can get credit [Kunze]
- Working to enrich data sharing and publishing infrastructure [Hanisch]
- Need a system--and more importantly, a philosophy--for giving credit to faculty for generating, maintaining, and provisioning data [Droegemeier]



DATA ECOLOGY



- Preservation and reuse of data for scholarship is a mosaic of partnerships and roles [Gutman]
- We need to both cooperate AND specialize [Gutman]
- Objective: insert themselves into the scientist's workflow [Strasser]
- NSB: Broad array of stakeholders [Griffiths]



W/ thanks to McKenzie Smith



Curation Ecology: technology view

- 1. Storage layer iRODS, S3, Palimpsest
- Data management layer
 IRs, ICPSR, UK Data Archive
- 3. Linking (or Semantic) layer SFX, Semantic Web
- Discovery layer
 Google/Google Scholar, ICPSR UI
- 5. Delivery layer content interaction tools, e.g. Ajax widgets like MIT Exhibit
- Social layer myGrid/Taverna, Kepler, VREs, VIVO



Curation Ecology: functional view

- Storage layer
 Bit-level persistence
- Data management layer
 Metadata, policies, preservation strategies
- 3. Linking (or Semantic) layer Identifiers, RDF, ORE encoding
- 4. Discovery layer
 Library catalogs, Web search engines, federated search
- Delivery layer

 ebook readers, visualization tools, streaming media servers, security and ethics
- 6. Social layer collaboration tools, social networking tools, VLEs and VREs
- 7. Business layer cost recovery, legal/policy frameworks, virtual organizations



Curation Ecology: organizational view

- Research Groups (individual faculty, labs, Labs and Centers) knowledge producers/consumers (social layer)
- Professional Societies knowledge aggregators (linking layer)
- 3. Data Centers system, data storage expertise (storage, data management layers)
- Libraries and archives content/data management, data linking expertise (data management layer)
- Businesses (Publishers, IT companies) discovery, delivery layers
- 6. Universities, Funders business, policy layers



- Curation Ecology: data view
 - eScience
 - Data-driven research (experimental data)
 - Data-intensive research (hybrid data)[Griffin]



EXPECTATION-SETTING/ STOCK-TAKING



- ... a deep, rigorous exploration and investigation of preservation [Choudhury]
- The challenges associated with integrating heterogeneous data [and they are] are non-trivial. [Choudhury]
- ... we need to know a lot more than we do now about all aspects of data creation and management. [Renear]



WHATI

DIDN'T HEAR

MUCH ABOUT



PEER REVIEW



- How is quality assured and who determines it? [Droegemeier]
- "Tread softly on the question of data quality." [Hanisch]



DISCOVERY and **DELIVERY**







DATA GOVERNANCE



- Global Research Council just organized
 => G20 + OECD [Droegemeier]
- Key questions ...
 - Who owns it and when, and who decides?[Droegemeier]

[There's trouble in Whoville ...]



EXHORTATIONS TO LIBRARIANS



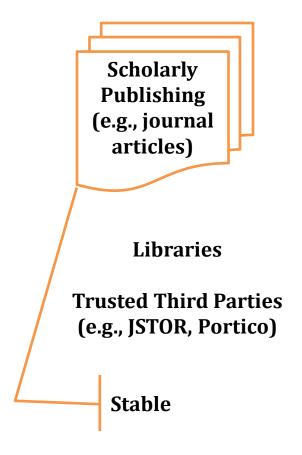
- "When you don't have subscriptions, what've you got? What do you do?" [Gutman]
- Librarians/Archivists/Curators: "How do I organize and manage data to help students and faculty answer their research questions, and do so going into the future?" [Gutman]
- Priority for support by libraries, by data type (low to high):
 - eScience simulation data
 - Experimental data 1 (automated collection/preparation)
 - Experimental data 2 (human involvement)
 - Higher-order computed data objects [Griffin]
- Libraries can lead the effort to create new models for scholarly communication [Griffin]



- It's your [i.e., librarians'] responsibility to get the word out about the tools available to scientists. [Hulsey]
- Librarians need to become comfortable with data [Griffiths]
- ... a deep, rigorous exploration and investigation of preservation [Choudhury]
- ... we need to know a lot more than we do now about all aspects of data creation and management. [Renear]



"THE SCHOLARLY RECORD"



"THE SCHOLARLY RECORD"

"Scholarly" = Scholarly & Scientific

Infrastructures largely self-contained

Scholarly Raw Material (e.g., archives, data)

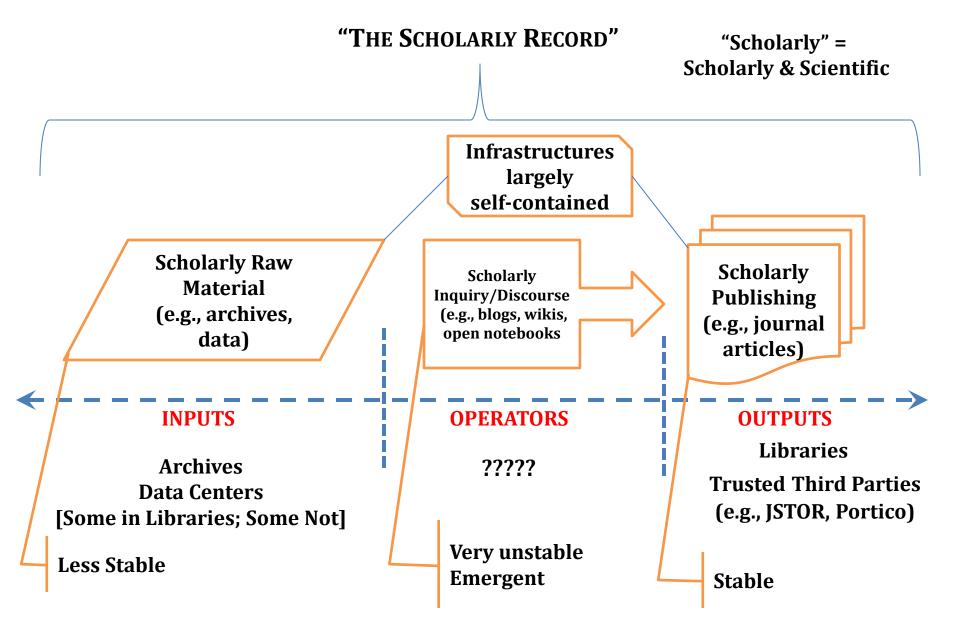
Archives
Data Centers
[Some in Libraries; Some Not]

Less Stable

Scholarly Publishing (e.g., journal articles)

Libraries Trusted Third Parties (e.g., JSTOR, Portico)

Stable



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THANK YOU

BECS@UCSD.EDU

@UCSDBECS