Science, Scholarship, Knowledge Infrastructures, and Judy and Gary Olson

Christine L Borgman

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Gary & Judy Olson’s Retirement Celebration
University of California, Irvine
May 29, 2017
PHILOSOPHICAL TRANSACTIONS: GIVING SOME ACCOUNT OF THE PRESENT Undertakings, Studies, and Labours OF THE INGENIOUS IN MANY CONSIDERABLE PARTS OF THE WORLD

Vol I. For Anno 1665, and 1666.

In the SAVOY, Printed by T. N. for John Martyn at the Bell, a little without Temple-Bar, and James Allestry in Duck-Lane; Printers to the Royal Society.

Theme issue ‘Celebrating 350 years of Philosophical Transactions: life sciences papers’ compiled and edited by Linda Partridge
19 April 2015; volume 370, issue 1666
Technological advances in mediated communication

Why Share Research Data?

• To reproduce research
• To make public assets available to the public
• To leverage investments in research
• To advance research and innovation
Lack of incentives to share data

- Rewards for publication
- Effort to document data
- Competition, priority
- Control, ownership

http://www.buildingsrus.co.uk/.../target1.htm
Engineering researcher: “Temperature is temperature.”

Biologist: “There are hundreds of ways to measure temperature. ‘The temperature is 98’ is low-value compared to, ‘the temperature of the surface, measured by the infrared thermopile, model number XYZ, is 98.’ That means it is measuring a proxy for a temperature, rather than being in contact with a probe, and it is measuring from a distance. The accuracy is plus or minus .05 of a degree. I [also] want to know that it was taken outside versus inside a controlled environment, how long it had been in place, and the last time it was calibrated, which might tell me whether it has drifted.."
Data are representations of observations, objects, or other entities used as evidence of phenomena for the purposes of research or scholarship.


Knowledge Infrastructures
Knowledge Infrastructures

• Technical fabric
  – Data archives
  – Metadata, provenance, classification, collections
  – Tools, services, support

• Social fabric
  – Data curation workforce
  – Digital stewardship workforce

• Trust fabric
  – Memory institutions
  – Stewardship
When to invest in data?

http://www.lib.uci.edu/dss/images/lifecycle.jpg
When to invest in data?
Reuse across place and time

- Reuse by investigator
- Reuse by collaborators
- Reuse by colleagues
- Reuse by unaffiliated others
- Reuse at later times
  - Months
  - Years
  - Decades
  - Centuries

Image from Soumitri Varadarajan blog. Iceberg image © Ralph A. Clevenger. Flickr photo
Data Curation and Stewardship

• Services and tools
• Data management planning
• Selection and appraisal
• Metadata, provenance
• Migration
• Economics
• Infrastructure

http://www.librarygirl.net/2013/08/putting-your-best-foot-forward-tl.html
Olsons’ influence on the next generation of data librarians

• Support data sharing by fostering scholarly collaboration in the digital age: “...a team is likely to succeed if it...uses technologies to support ... the sharing of data/knowledge...”

• Create shared vocabularies within multidisciplinary teams to foster collaboration and data sharing.

• When working with widely distributed teams, there must be consensus on how the data will be analyzed, published, and released.


Slide by Yi Ding and Morgan Wofford, UCLA
Olson’s influence on the next generation of data librarians

- Be mindful of challenges of remote work and benefits of face-to-face communication when providing data management consultations.
- Take advantage of ways that communication technology is better than collocation to contribute to privacy, accessibility, and diversity.
- Stay up to date on new collaboration technologies “and the social behaviors that surround effective use.”

Judith Olson, & Gary Olson. (2014). How to make distance work work. IX Interactions, (XXI.2), 28. https://doi.org/1072-5220/14/0300

Slide by Yi Ding and Morgan Wofford, UCLA
Citation Record: Gary M. Olson

Citations per year

Citation indices

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Data compiled by Yi Ding and Morgan Wofford, UCLA
Citation Record: Judith S. Olson

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Acknowledgements

Christine Borgman
Peter Darch
Ashley Sands
Irene Pasquetto
Bernie Randles
Milena Golshan

UCLA Center for Knowledge Infrastructures
NSF

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