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Title

"Problems of Attribution" Attribution: Managing Provenance, Ethics, and Metrics

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https://escholarship.org/uc/item/2b5309d6

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Publication Date 2013-05-23

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Panel 2 : Attribution: Managing Provenance, Ethics, and Metrics

Problems of attribution

ORCID-Dryad Symposium, 23 May 2013

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1990, Sage Publications

Data Attribution and Citation

- CODATA-ICSTI Task Group on Developing Data Attribution and Citation Practices and Standards, 2010-?
 - International Council of Scientific Unions
 - Committee on Data: CODATA
 - International Council for Scientific and Technical Information
- Task Group Co-Chairs
 - Christine Borgman, UCLA US
 - Sarah Callaghan, BADC UK
 - Jan Brase, DataCite Germany

For Attribution—

Developing Data Attribution and Citation Practices and Standards

Summary of an International Workshop

239 pages

NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES

2012

Citation of Data: The Current State of Practice, Policy, and Technology

CODATA-ICSTI Task Group on Data Citation Standards and Practices April 2013 DRAFT

198 pages

Driving questions for symposium

- 1. What are the *major technical issues* that need to be considered in developing and implementing scientific data citation standards and practices?
- 2. What are the *major scientific issues* that need to be considered in developing and implementing scientific data citation standards and practices? Which ones are *universal* for all types of research and which ones are *field- or context- specific*?
- 3. What are the major institutional, financial, legal, and socio-cultural issues that need to be considered in developing and implementing scientific data citation standards and practices? Which ones are universal for all types of research and which ones are field- or context-specific?
- 4. What is the status of data attribution and citation practices in individual fields in the natural and social (economic and political) sciences in United States and internationally? Case Studies.
- 5. Institutional Roles and Perspectives: What are the respective roles and approaches of the main actors in the research enterprise and what are the similarities and differences in disciplines and countries? The roles of research funders, universities, data centers, libraries, scientific societies, and publishers will be explored.

Infrastructure for digital objects

- Social practice
- Usability
- Identity
- Persistence
- Discoverability
- Provenance
- Relationships
- Intellectual property
- Policy

Borgman, C. L. (2012). Why Are the Attribution and Citation of Scientific Data Important? In *For Attribution -- Developing Data Attribution and Citation Practices and Standards: Summary of an International Workshop* (pp. 1–10). Washington, D.C.: The National Academies Press.



http://datalib.ed.ac.uk/GRAPHICS/blue_data.gif



Scholarly practice

- Why cite data?
 - Document evidence
 - Support discovery
 - Assign credit
- Why attribute data?
 - Social expectation
 - Legal responsibility
- How to cite data?
 - Bibliographic reference
 - Identifier
 - Link



http://inventionmachine.com/the-Invention-Machine-Blog/bid/ 51703/Three-Key-Challenges-to-Entering-New-Markets

Attribution of data

- Legal responsibility
 - Licensed data
 - Specific attribution required
- Scholarly credit: contributorship
 - Author of data
 - Contributor of data to this publication
 - Colleague who shared data
 - Software developer
 - Data collector
 - Instrument builder
 - Data curator
 - Data manager
 - Data scientist
 - Field site staff
 - Data calibration
 - Data analysis, visualization
 - Funding source
 - Data repository
 - Lab director
 - Principal investigator
 - University research office
- ---- Research subjects -
 - ⁷ Research workers, e.g., citizen science...



"Creative Commons is a non-profit that offers an alternative to full copyright."

Briefly...

Attribution means: You let others copy, distribute, display, and perform your copyrighted work - and derivative works based upon it - but only if they give you credit.

Finding and following digital objects

- Discoverability
 - Identify existence
 - Locate
 - Retrieve
- Provenance
 - Chain of custody
 - Transformations from original state

Relationships

- Units identified
- Links between units
- Actions on relationships





Metrics

- What to count?
- How to count them?
- What do the counts mean?
 - Theory of relationships?
 - Hypotheses?
 - Model of scholarly attribution?
- Is the method scientifically rigorous?
 - Is it valid?
 - Is it reliable?

Emily Haines and Jimmy Shaw of **Metric** Photo Credit: Claire Lorenzo. Flickr





Managing Provenance, Ethics, and Metrics Problems of attribution

Attribution

- What are contributor roles?
- Who deserves credit?
- What are legal obligations?

Citation functions

- Evidentiary
- Credit, attribution
- Discovery, linking

Provenance

- Workflows, transformations
- Software to interpret, analyze

Metrics

- What, how, and why to count
- Need a theory of citation behavior

http://www.dlorg.eu/index.php/publications/ecpolicy/ec-publications-policy

