



The Data of Ideas:

Enabling Research Dissemination, Knowledge Transfer & Impact
through Data Citation

OLA Super Conference

28th January 2016

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Queen's University.

Overview

1. About data citation
 - Benefits of data citation
 - Challenges of data citation
2. How to cite data
3. Measuring the impact of research data.
4. Questions.



What's in a name...

Data

That which is **collected, observed, or created** in a digital form, for purposes of analyzing to produce original research results.

Source: http://www.docs.is.ed.ac.uk/docs/data-library/EUDL_RDM_Handbook.pdf

Primary sources

A document or physical object which was **written or created during the time under study**. These sources were present during an experience or time period and offer an inside view of a particular event.

Secondary sources

...**interprets and analyzes primary sources**. These sources are one or more steps removed from the event. Secondary sources may have pictures, quotes or graphics of primary sources in them.

Source: <http://www.princeton.edu/> .

What does data look like?

Arts,
Humanities &
Social
Sciences



- **Published materials** (books, magazine and newspaper articles) written at the particular time; memoirs & autobiographies
- **Handwritten documents**, such as diaries and journals, speeches, interviews, letters
- **Maps**
- **Laws** and court cases
- **Records of government** agencies, organizations
- Public opinion **polls**
- **Fiction** from a particular time and place
- **Photographs, audio** recordings, videotapes, films
- **Art**, including paintings, prints and other media
- **Artifacts** - furniture, clothing, tools, jewelry, pottery.
- **Religious** and philosophical texts etc.

What does data look like?

Science,
Technology,
Engineering,
Mathematics,
& Medicine



- **Collection of digital objects** acquired and generated during the process of research
- **Database contents** including:
 - Video, audio, text, images etc.
- **Contents of an application** such as input, output, log files for analysis software, simulation software, schemas
- **Code, scripts, models, algorithms**
- Methodologies and workflows
- Standard operating procedures and protocols
- **Clinical Data files**
- **DNA Sequencing**, Genome data
- Laboratory notebooks, field notebooks, diaries
- Questionnaires, responses, transcripts, codebooks
- Specimens, samples
- **Statistics** etc.
- **Text or Word documents, spreadsheets, audio, video** etc.

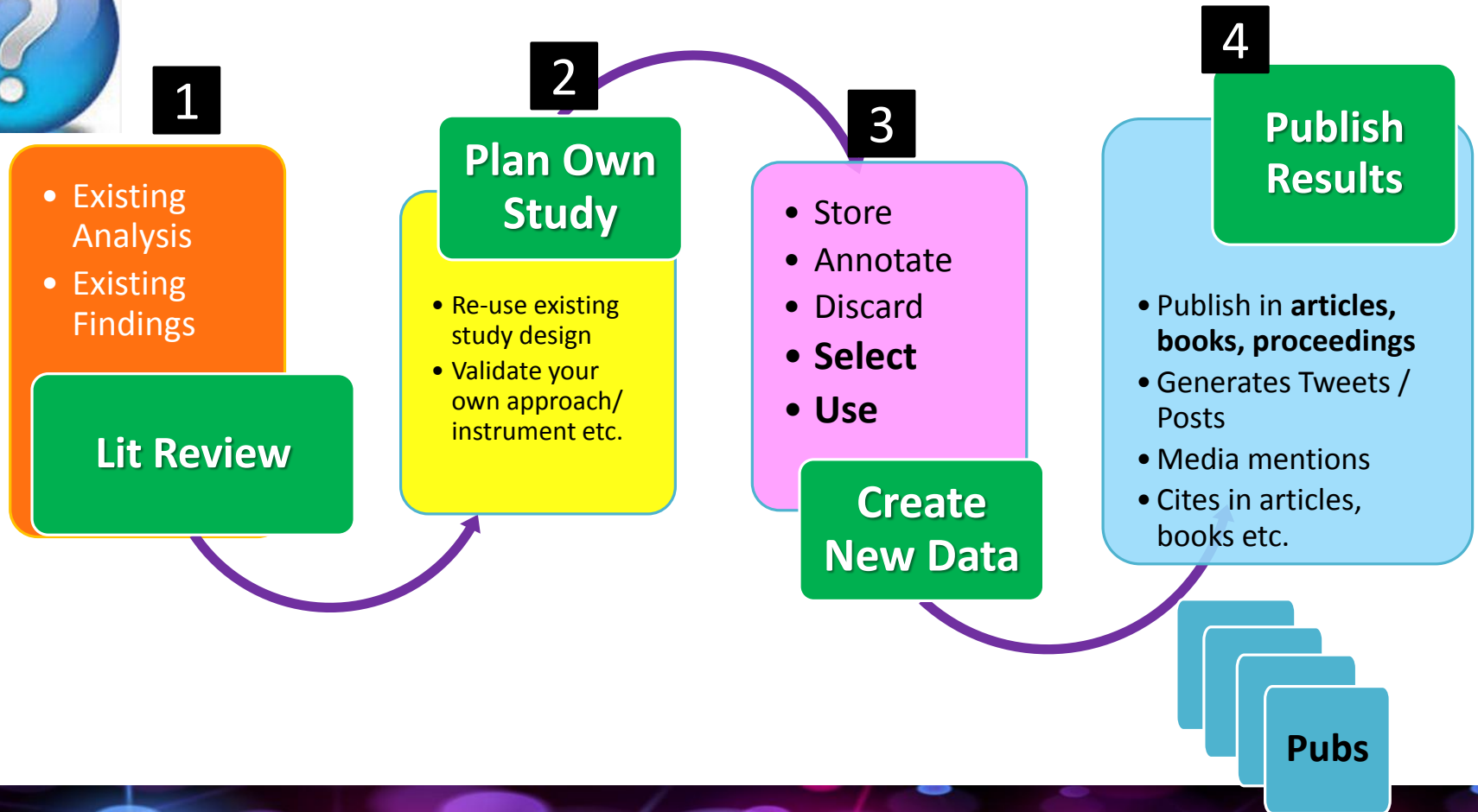
'Good Research is Based on Good Data'



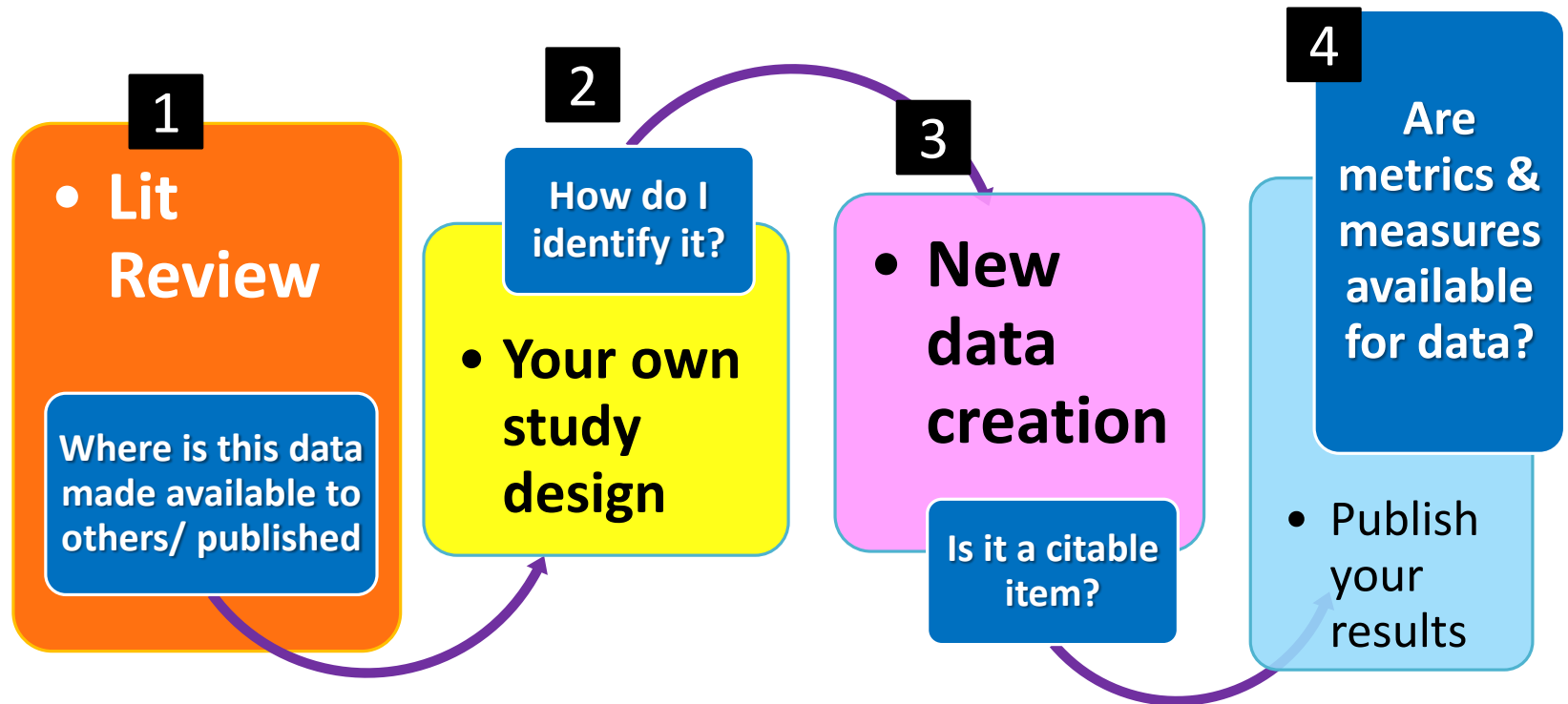
Why Cite Data?



Data & the Knowledge Creation Process



Why Should Data be Considered a 'Citable Item'?



Why we cite

- Giving credit
 - Background reading
 - Identifying methodology
 - Identifying the original paper.
- Support / authenticate existing findings
- Refute
 - Correcting own work
 - Correcting other's work
 - Criticizing / disputing works of others.
- Alerting
 - Forthcoming work
 - Providing leads.
- Review
- Compare
- Note only
- Apply / re-use.

W

Blah blah blah blah blah, blah blah blah blah blah blah. Blah blah
blah blah blah blah blah. Blah blah blah, blah blah blah blah.
According to Lee (2005), something very interesting was the result
Something something something something, so [redacted]
Blah blah blah blah blah. Smith (2005) reports on some key effects
of e-something on something, and suggests another interesting point.
Something something blah something

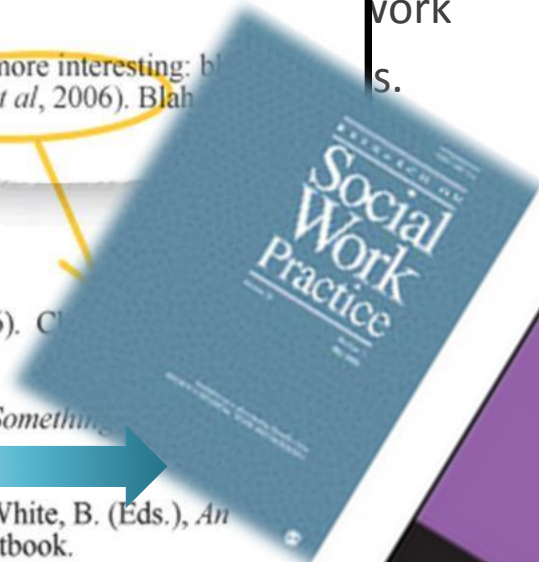
However a recent study indicates something even more interesting: bl
something blah something blah something (Jones *et al*, 2006). Blah
blah, blah blah, blah blah blah.

Reference List

Jones, C., Smith, A., Garcia, D. & Lee, A. B. (2006). C
e-something. *Something Interesting*, 40, pp50-55.

Lee, A. B. (2005). *An Organisational Theory Of Something*.
NY: Reference Book [redacted]

Smith, A. (2005). E-something. **In:** Black, A. & White, B. (Eds.), *An
Introduction To Something*, 30-52. Edinburgh: Textbook.

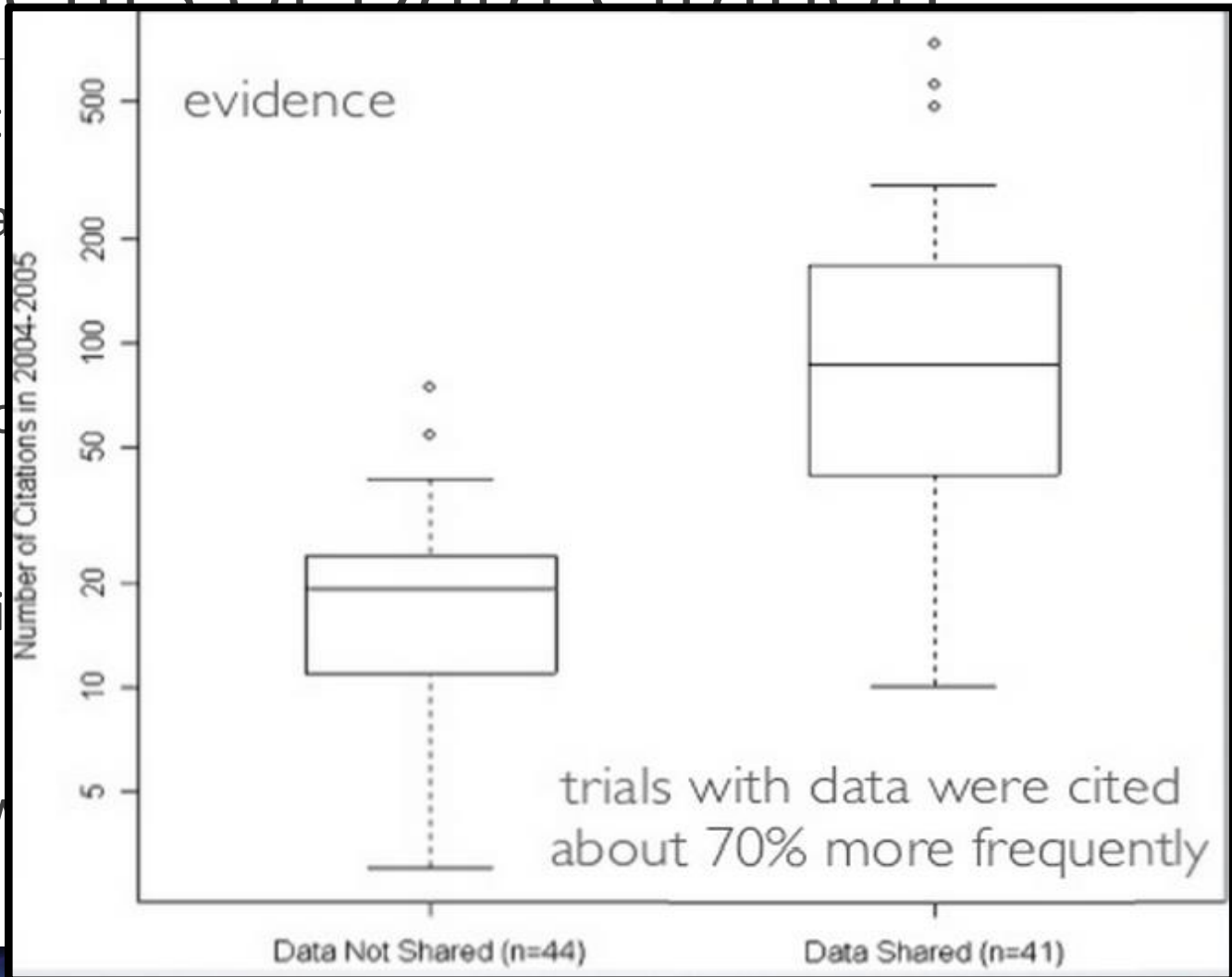


work
s.



Benefits of Data Citation

1. Citation
2. Impact
3. Demand
4. Discovery
5. ROI
6. Efficiency
7. Cost
8. Knowledge





Funder Requirements & Data

Social Sciences and Humanities Research Council (SSHRC)

- SSHRC requires that all data collected with the help of SSHRC funds be **made available to other researchers**.
- Costs - **eligible expenses**

Canadian Institutes of Health Research (CIHR)

- **Deposit data** (bioinformatics, atomic, molecular coordinate data, etc.) into an appropriate **public archive** immediately upon publication of research results.
 - Deposit into existing **discipline-based archives** (e.g. GenBank) or other appropriate public archive (e.g. **University-based archives** such as Scholars Portal Dataverse).



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Open Access

Data in Brief

Data in Brief provides a way for researchers to easily share and reuse each other's datasets by publishing data articles that:

- Thoroughly describe your data, facilitating reproducibility.
- Make your data...

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News

Listen to this new "Publishing data initiatives" podcast!

Supporting data-sharing to speed up innovation in Materials Science

Elsevier's open data initiative, including Data in Brief, will provide new ways of storing, sharing

Over 500 Data Repositories Established



Share / Publish Your Data via a Data Repository

re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES



Scholars Portal **Dataverse**
A Service of the Ontario Council of University Libraries



Create citable data...

Before publishing/sharing your data:

1. Can/should your data be open, embargoed or mediated access or closed
2. Data cleansing & file formats
3. Copyright & contractual agreements
4. Secure storage to enable ongoing management & access
5. Provide a publically available metadata record that describes the data/collection, including citation information.

Recommended: assign a unique DOI (Digital Object Identifier) to your data.



Data Elements for Which a Citation can be added

1. Dataset
2. Descriptive information about the dataset
3. Dataset components



3



1

2

Description: (required)



This task allows a user to select an area of interest by drawing a box over a set of crime points. A hot spot analysis is done and the result image is returned to a web browser.

Data Citation Challenges

1. No widely used method to identify datasets
2. No widely used method to cite datasets
Data citation standards vary across disciplines and publishers.
3. Effective way to link between articles and datasets.
4. Metadata layers and granularity:
 - Data collection
 - Datasets
 - Data items

How to Cite Data

Data can be cited using a standard reference format like other publications.

Key Citation Elements

Author	The creator of the dataset. This can be an individual, a group of individuals, or an organization.
Publication date	Whichever is the later of: <ul style="list-style-type: none">• the date the dataset was posted online• the date all quality assurance procedures were completed.
Title	<ul style="list-style-type: none">• Name of the data set or the name of the study, and main collection and sub-collection (if any) of which the dataset is a part.
Location (Unique identifier)	<ul style="list-style-type: none">• A unique identifier for the data, according to a persistent scheme e.g. Digital Object Identifier.

Additional Citation Elements

Edition	<ul style="list-style-type: none"> The level or stage of processing of the data, indicating how raw or refined the dataset is.
Version	<ul style="list-style-type: none"> Is there a version or edition number associated with the data set, denoting any data changes, as the result of adding more data points or re-running a derivation process?
Feature name and URI.	<ul style="list-style-type: none"> The name of an ISO 19101:2002[11] ‘feature’ (e.g. GridSeries, ProfileSeries) and the URI identifying its standard definition, used to pick out a subset of the data.
Resource Type	<ul style="list-style-type: none"> E.g. Database, dataset
Publisher & Publisher Location	<ul style="list-style-type: none"> The entity responsible for producing / hosting and/or distributing the data or performing quality assurance. Their physical location.
Unique Numeric Fingerprint (UNF)	<ul style="list-style-type: none"> A short, fixed-length string of numbers and characters that summarize all the content in the data set, such that a change in any part of the data would produce a completely different UNF. A way to ensure no changes have taken place since the citation.
Producer and/or distributor	<ul style="list-style-type: none"> The producer:: organization that sponsored the author’s research and/or made the creation of the data set possible, such as codifying and digitizing the data. The distributor: organization that makes the data set available for downloading and use.

Citation
Examples

Citing
Datasets



Excavations at St Peter's Church, Barton-upon-Humber

H E M Cool, Mark Bell, 2011

[Introduction](#)
[Overview](#)
[Downloads](#)
[Metadata](#)
[Usage Statistics](#)

Data copyright © Barbican Research Associates unless otherwise stated

Resource identifiers

ADS Collection: 1030

Collection doi: 10.5284/1000389

[How to cite using this DOI](#)

Primary contact

Dr H E M Cool
Director
Barbican Research Associates
16 Lady Bay Road
West Bridgford

Introduction

St Peter's Church at Barton-upon-Humber (TA 0347 2194) was declared redundant in 1972 and taken into public guardianship in 1978 by the then Department of Environment. Given that it had long been recognised that it had a late Saxon origin, a major programme of excavation and survey was instituted. This explored the church and its churchyard, and ran from 1978 to 1984 under the direction of Warwick Rodwell. The programme has meant that this is the most intensively studied and recorded parish church in the country. It also produced the largest collection of human remains ever excavated in the UK. The latter provide a unique insight into the population of a small, relatively isolated, market town over 900 years.

The results of the project are being published in two letterpress volumes with parts of volume 1 and the database constructed during the post excavation project available here. The database contains data from both volumes including full osteological information for all the burials. The summaries for both volumes are also available here as downloadable files.

Rodwell, W. with Atkins, C. 2011. *St Peter's, Barton-upon-Humber, Lincolnshire - A Parish Church and its Community. Volume 1: History, Archaeology and Architecture*, (Oxbow Books, Oxford).

Waldron, T. 2007. *St Peter's, Barton-upon-Humber, Lincolnshire - A Parish Church and its Community. Volume 2: The Human Remains*, (Oxbow Books, Oxford).

All the work has been funded by English Heritage and its predecessors. Any enquiries concerning access



Dataset E.G.1

http://archaeologydataservice.ac.uk/archives/view/bartonhumber_ah_2010/index.cfm

Excavations at St Peter's Church, Barton-upon-Humber

Excavations at St Peter's

H E M Cool, Mark Bell, 2011



Dataset Metadata

Location	British Isles and Ireland; World; Europe; United Kingdom; England; North Lincolnshire; Barton-upon-Humber [7010361]; England; East Midlands		
Grid reference	OSGB	503470 421940	
Grid reference	Latitude longitude bounding box	-0.4352812943	53.6839955086 -0.4340308849 53.6834584466
Subject	FISH Archaeological Objects (England)	COIN	
	FISH Archaeological Objects (England)	Human Bone	
	FISH Archaeological Objects (England)	FLOOR TILE	
	FISH Archaeological Objects (England)	PIN	
	FISH Archaeological Objects (England)	BEAD	
	FISH Archaeological Objects (England)	CERAMIC	
	Library of Congress Subject Headings	Archaeology	
	Monument Type (England)	CHURCH	
	Monument Type (England)	ENCLOSURE	
	Monument Type (England)	INHUMATION CEMETERY	
Period	MIDAS	Early Medieval	
	MIDAS	Medieval	
Project dates	Created From	01-JAN-1974	
	Created To	30-NOV-2010	
	First Released	10-MAR-2011	
	Last Modified	10-MAR-2011	
Related information	Associated Collection	Waldron, T. 2007. St Peter's, Barton-upon-Humber, Lincolnshire - A Parish Church and its Community. Volume 2: The Human Remains, (Oxbow Books, Oxford).	
	Associated Collection	Rodwell, W. with Atkins, C. 2011. St Peter's, Barton-upon-Humber, Lincolnshire - A Parish Church and its Community. Volume 1: History, Archaeology and Architecture, (Oxbow Books, Oxford).	
File types available	PDF	19 files	
	CSV	45 files	

Excavations at St Peter's Church, Barton-upon-Humber.

Dataset:

File types:

PDF: 19 files

CSV: 45 files

Dataset Citation Styles – Key Elements

Author, Pub Date, Title, Location
(Unique ID)

APA

Cool, H. E. M., & Bell, M. (2011). Excavations at St Peter's Church, Barton-upon-Humber [Data set]. doi:10.5284/1000389

Chicago

Cool, H. E. M., and Mark Bell. Excavations at St Peter's Church, Barton-upon-Humber (accessed May 1, 2015). doi:10.5284/1000389.

MLA

Cool, H. E. M., and Mark Bell. "Excavations at St Peter's Church, Barton-upon-Humber." Archaeology Data Service, 2011. Web. 1 May 2011. <http://dx.doi.org/10.5284/1000389> .

Oxford

Cool, H. E. M. & Bell, M. (2011) Excavations at St Peter's Church, Barton-upon-Humber [data-set]. York: Archaeology Data Service [distributor] DOI 10.5284/1000389.

Dataset

E.G. 2

Title: Archaeological Fish Bone Images Archive Tables

Authors: Colley, Sarah
Department of Archaeology
Faculty of Arts

Keywords: fishes
archaeological
fish bones
Sydney fishes
fish taxonomy
New South Wales
NSW Fisheries Commission Report 1880
fishing
fish bone images
archaeozoology

Issue Date: 18-Jun-2010

Abstract: Tables (List of Fishes, Fish Taxon Names and Codes, Fish Anatomy Names and Codes and '1880s NSW Fisheries Commission Information'), data indexes and explanation of data relationships. Part of the 'Archaeological Fish-Bone Images' archive (<http://hdl.handle.net/102.100.100/127>) also registered with Research Data Australia (<http://services.and.s.org.au/home/orca/rda/view.php?key=102.100.100%2F134>) and the on-line publication: Colley, S. and R. Brownlee 2010 'Archaeological Fish Bones On-Line: a digital archive of Sydney fishes' published in 'Internet Archaeology'

Description: Reports research conducted by Sarah Colley for the Sydney Fish Project Stage 1. The content, coding and data structures are also useful for other researchers who wish to document and interpret fish remains from other comparable archaeological sites. Includes interpretation of Aboriginal and colonial fish and fishing in the Sydney region from before and after AD1788 based on archaeological, historical and environmental information.

URI: <http://hdl.handle.net/2123/6253>

Department/Unit/Centre: Department of Archaeology
Faculty of Arts

Type of Work: Dataset

Appears in Collections: [Research Papers and Publications. Archaeology](#)

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File	Description	Size		
AFBI_Table1_ListofFishes_May2010.xls	Table 1. List of Fishes.	228 kB	Microsoft Excel	View/Open
AFBI_Table2_FishTaxonNames_May2010.xls	Table 2. Fish Taxon Names and Codes	80 kB	Microsoft Excel	View/Open
AFBI_Table3_FishAnatomy_May2010.xls	Table 3. Fish Anatomy Names and Codes	32.5 kB	Microsoft Excel	View/Open

Optional Citation Element: Version

Creator (Publication Year): Title. Version. Publisher. Identifier

Version (Edition)

Colley, Sarah. (2010) Archaeological Fish Bone Images Archive Tables. **1st edition**. Sydney eScholarship Repository Sydney.

<http://ses.library.usyd.edu.au/handle/2123/6253>

Current Population Survey: Annual Demographic File, 1987 (ICPSR 8863)

Principal Investigator(s): United States Department of Commerce. Bureau of the Census; United States Department of Labor. Bureau of Labor Statistics

Summary:

This data collection supplies the standard monthly labor force data and also provides supplemental data on work experience, income, noncash benefits, and migration. Comprehensive information is given on the employment status, occupation, and industry of persons 14 years old and over. Additional data for persons 15 years old and older are available concerning weeks worked and hours per week worked, reason not working full time, total income and income components, and residence on Ma... ([more info](#))

Series: [Current Population Survey Series](#)

ICPSR

This study is provided by [ICPSR](#). ICPSR provides leadership and training in data access, curation, and methods of analysis for a diverse and expanding social science research community.

Access Notes

- These data are available only to users at ICPSR member institutions. Because you are not [logged in](#), we cannot verify that you will be able to download these data.

Dataset(s)

Dataset - [Download All Files](#) (126.6 MB)

Documentation: [Codebook.pdf](#)

Data: [ASCII](#)

Dataset E.G. 3

Optional Citation Element: Resource Type

Creator. **Title.** **Resource Type.** **Version.** **Publisher Location:**
Distributor. **Publication Year.** **Identifier.**

United States Department of Commerce. Bureau of the Census, and
United States Department of Labor. Bureau of Labor Statistics. **Current
Population Survey: Annual Demographic File, 1987 [Computer file].**
ICPSR08863-v2. **Ann Arbor, MI:** Inter-university Consortium for Political
and Social Research [distributor], 2009-02-03. doi:10.3886/ICPSR08863

Scholars Portal Dataverse

SP Dataverse Network
[Q](#) [i](#) [c](#) [Create Account](#) [Queen's University IP Group](#) [Log](#)

HALLETT, P.E. FARMED SOLITARY BEES AND WASPS.
 hdl:10864/10110
 Version: 8 – Released: Tue May 15 11:44:14 EDT 2012

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Data Citation

i If you use these data, please add the following citation to your scholarly references. [Why cite?](#)

Peter E. Hallett, 2003, "Hallett, P.E. Farmed Solitary Bees and Wasps. ", hdl:10864/10110 American Bee Journal [Distributor] V8 [Version]

Citation Format ▾

Data Citation Details ▾

Title	Hallett, P.E. Farmed Solitary Bees and Wasps.
Study Global ID	hdl:10864/10110
Authors	Peter E. Hallett (Departments of Psysiology and Zoology, University of Toronto)
Producer	Peter E. Hallett, Departments of Psysiology and Zoology, University of Toronto
Distributor	American Bee Journal (ABJ)
Distribution Date	2003

Description Includes published articles and abstracts by P.E. Hallett, as well as his original research data, research documents and python scripts.

Citing Data that May Change Over Time

- Different versions should have a unique DOI
- Always include the data accessed in your citation
- If the data changes rapidly – include the time accessed.
- Consult your repository service for evolving discipline norms.

If Your Data Repository or Journal Does Not Provide a Recommended Citation



Use DataCite's recommended citation format:

Creator (Publication Year): Title. Publisher. Identifier.

Creator (Publication Year): Title. Version. Publisher. Resource Type. Identifier

E.g.

Irino, T; Tada, R (2009): Chemical and mineral compositions of sediments from ODP Site 127-797. Geological Institute, University of Tokyo. <http://dx.doi.org/10.1594/PANGAEA.726855>.

If you have a DOI but no suggested citation format

DataCite Citation Formatter: <http://crosscite.org/citeproc/>

DOI Citation Formatter beta



crossref **mEDRA**



DOI:

Style:

Locale:

Giardine, B., Borg, J., Higgs, D. R., Peterson, K. R., Philipson, S., Maglott, D., ... Patrinos, G. P. (2011, March 20). Systematic documentation and analysis of human genetic variation in hemoglobinopathies using the microattribution approach. Nat Genet. Nature Publishing Group. <http://doi.org/10.1038/ng.785>

Current
Issues With
Data
Citation

**THE BIG
ISSUE**

Granularity & Attribution

Datasets:

- May form part of a collection
- May be made up of several files, containing several tables, many data points.
- May not be obvious what would constitute an intellectual whole.

Attribution:

- A dataset is assembled from many, many contributions and contributors...

Conventions for doing this have yet to be established

- **For authors:**

- list datasets at whatever level of granularity has been chosen by the host repository for assigning identifiers.
- If a finer level of granularity is required, the **in-text citation** should provide the reader with the information needed to find the subset

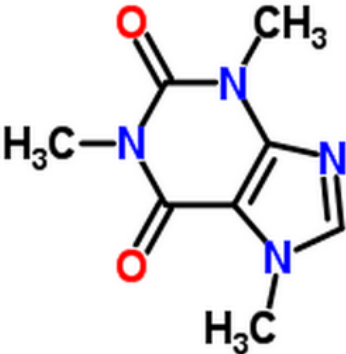
- **For in-text citations, indicate the page, chapter, figure, or table within the parenthetical citation.**

- *if the repository provides identifiers at several levels of granularity, the finest-grained level that meets the need of the citation should be used in the bibliography, to minimise the additional information needed.*

Alex Bell and Monica Duke. (2015) How to Cite Datasets and Link to Publications. Digital Curation Centre. [Link](#)

American Chemical Society (ACS) Style

RSC ChemSpider database of chemicals



The image shows the chemical structure of caffeine, a purine alkaloid. It consists of a fused bicyclic ring system: a six-membered pyrimidine ring fused to a five-membered imidazole ring. The pyrimidine ring has two carbonyl groups (C=O) at positions 2 and 6, and two methyl groups (CH₃) attached to the nitrogen atoms at positions 1 and 3. The imidazole ring has a methyl group (CH₃) attached to the nitrogen at position 7.

Caffeine

ChemSpider ID: **2424**

Molecular Formula: **C₈H₁₀N₄O₂**

Average mass: 194.191 Da

Monoisotopic mass: 194.080383 Da

- ▼ Systematic name
1,3,7-Trimethyl-3,7-dihydro-1H-purine-2,6-dione
- ▶ SMILES and InChIs
- ▼ Cite this record

CSID:2424, <http://www.chemspider.com/Chemical-Structure.2424.html>
(accessed 20:43, May 9, 2015)

? 2D 3D Save **Zoom**

Metadata & Citation



Description



Metadata & Citation

- Your data publishers / distributor / repository should include a unique citation to the metadata describing the dataset
 - Useful for users and enables greater flexibility of output
 - Useful when exporting records to bibliographic software such as EndNote and Mendeley.
 - Citation metadata facilitates reuse of citation information data citation tracking and indexing services e.g. Thomson Reuters Data Citation Index.

DataCite Metadata Schema

Identifier (with type attribute)

- The identifier is a unique string that identifies a resource – the allowed value is the DOI

Creator (with type and name identifier attributes)

- The main researchers involved in producing the dataset

Title (with optional type attribute)

- A name by which the resource is known

Publisher

Publication Year

- The year in which the data was or will be made publicly available



Where to find data
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[Submitting data to BODC](#)
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Watergate Bay ©



International Oceanography
Centre

Published Data Library (PDL)

P0311 impact of phosphate and iron fertilisation on rates of nitrogen fixation in surface waters

Download

Title	Impact of phosphate and iron fertilisation on rates of nitrogen fixation in surface waters by stable-isotope mass spectrometry during the FEEP programme cruise P0311.
Author(s)	Rees A. (1) (1) Plymouth Marine Laboratory
Subject	biota, oceans
Abstract	Between the 24th April and 26th May 2004 a two-ship exercise using RRS Charles Darwin and RV Poseidon aimed to test the hypothesis that: The supply of, and the interaction between iron and phosphorous control biological activity and fluxes in the subtropical North Atlantic. An experimental area in international waters to the west of the Canary Islands was selected following an intense period of vertical and horizontal mapping by the Charles Darwin. Using SF6 as a tracer for amended waters, two separate experiments were performed: The first (5th – 15th May) involved the addition of 20 tonnes of anhydrous monosodium phosphate at 10 m depth over an area of approximately 25 km ² , centered at 27.8 N 23.3 W; The second experiment was conducted following a mid-cruise return by the Poseidon to Tenerife between 16th May and 22nd May, at 27.5 N 22.5 W. 5 tonnes of acidified iron sulphate were added over the first 12 hours, then following a brief recovery period, 20 tonnes of phosphate added over the top of the iron. Measurements of Nitrogen Fixation using ¹⁵ N methodology were monitored prior to and after deployment (IN stations) of the fertilised patches relative to several (OUT) control stations. Following P addition nitrogen fixation rates increased progressively at IN stations relative to background, so that mean rates had increased by 3.3 times, 6 days after phosphate addition. At PRE and OUT stations, fixation rates were fairly uniform at all 3 depths sampled (0.30 ± 0.12 nmolN L ⁻¹ d ⁻¹ , n=9). Following P and Fe additions rates of N fixation appeared unaffected 15 m and 40 m showing no significant difference to out stations at either depth. Relative to background rates of 0.3 ± 0.1 nmol N L ⁻¹ d ⁻¹ at 25 m, N Fixation increased following Fe addition to 0.5 nmol N L ⁻¹ d ⁻¹ , and then after P addition rates increased to 3.3 times the background rate, reaching a maximum of 1.0 nmol N L ⁻¹ d ⁻¹ on the 20th May. By the 22th May rates at 25 m had fallen to 0.15 nmol N L ⁻¹ d ⁻¹ .
Temporal coverage	03 May 2004 - 22 May 2004
Spatial coverage	Northeast Atlantic Ocean (40W)
File format	Delimited
Language	English
Discovery metadata record	Link to the related European Directory of Marine Environmental Data (EDMED) record
Publisher	British Oceanographic Data Centre - Natural Environment Research Council, UK
Publication date	17 January 2012



Metadata Citation Example:

Recommend citation style:

Creator (Publication Year): Title. Publisher. Identifier.

Citation:

Rees, A.P.; (2012): Impact of phosphate and iron fertilisation on rates of nitrogen fixation in surface waters by stable-isotope mass spectrometry during the FEEP programme cruise PO311. British Oceanographic Data Centre (BODC), Natural Environment Research Council (NERC).

<http://dx.doi.org/10.5285/6B0962C8-574B-473B-A18A-1F9AC95AA7BF>

Find Data-set Metadata - DataCite Canada Metadata Search



National Research Council Canada
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- PubMed Central Canada
- Gateway to Research Data

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Proactive Disclosure



DataCite Canada

Services

Adding value to your research through data registration

DataCite Canada's data registration service provides Canadian data centres and libraries with a mechanism for registering research data and assigning digital object identifiers (DOIs) to them.

DOIs help data producers take control of the management of their research, share, get credit for it and build their reputation through data citations. DOIs also make research data easier to access, reuse and verify, thereby making it easier to build on previous work, conduct new research and avoid duplicating already existing work.

Our data registration service requires organizations to first register for an account. To find out how, see our **Information for Prospective Clients** section.

DataCite Canada's services are offered in cooperation with **DataCite**, an international consortium of national-scale libraries and research organizations committed to increasing access to research data on the Internet. DataCite Canada is DataCite's DOI allocation agent for Canada.

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DataCite Canada is part of the broader international DataCite initiative...

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doi:10.5443/11378

This page represents DataCite's metadata for *doi:10.5443/11378*.

For a landing page of this dataset please follow <http://dx.doi.org/10.5443/11378>

Citation Winton, Alexandra; McLeod, Georgette; Neufeld, David; Roburn, Shirley; Friendship, Katelyn; Neufeld, Erin; Hume, Trish; Parsons, Sue; Olson, Jackie; (2012): Documenting traditional knowledge in relation to climate change and its effects in Tr'ondëk Hwëch'in traditional territory; Canadian Cryospheric Information Network. <http://dx.doi.org/10.5443/11378>  

Descriptions

Abstract Tr'ondëk Hwëch'in is a self-governing First Nation that signed a Final Agreement with the Yukon Government and Canada in 1998. Tr'ondëk Hwëch'in offers a variety of year-round programming to the community of Dawson City, Yukon and many of these programs are supported by information collected through the documentation of traditional knowledge. Our IPY project involved multiple phases, including field research, oral history interviews, community mapping, and academic partnerships. Other important aspects of this project included training for youth, and increasing local awareness about climate change. Over a period of nearly two years, the Tr'ondëk Hwëch'in Heritage Department conducted over

Data & Attribution



Contributions

B.G., J.B., R.C.H. and G.P.P. conceived and designed the study. B.G., J.B. and D.M. implemented the process, built and populated the databases. K.R.P., F.C.C. and H.F. performed experiments. B.K.S., D.J.A., A.N.B., B.C., P.F., A.E.F., A.F., R.G., M.V.E.G., M.G., R.J.G., P.C.G., C.L.H., J.D.H., M.J., P.J., E.K., P.K., S.M., K.M., J.O., A.P., M.N.P., P.P., S. Pavlovic, L.P., M.R., S.S., I.S., M.S., S.L.T., J.T.-S., R.T., T.W., J.S.W., C.W., B.Z. and G.P.P. contributed data. B.G., J.B., D.R.H. and S. Philipsen analyzed results. R.C.H. and G.P.P. supervised data analysis. D.M., W.M., C.R., D.H.K.C. and H.W. provided expertise and infrastructure. B.G., J.B., D.R.H., K.R.P., S. Philipsen, R.C.H. and G.P.P. wrote the paper.

Competing financial interests

The authors declare no competing financial interests.

Corresponding author

Correspondence to: [George P Patrinos](#)

- Supplementary information

[Abstract](#) · [Change history](#) · [References](#) · [Author information](#) · [Supplementary information](#)



PDF files

1. [Supplementary Text and Figures \(528K\)](#)

Supplementary Figures 1–5, Supplementary Table 2 and Supplementary Note



Excel files

1. [Supplementary Table 1 \(1.5M\)](#)

Microattribution Tables

nature
genetics

Home |

home >

NATURE

日本語要約

System
genetics
micro

Belinda C

Donna M

C Costa,

Monica V

Hartevel

Affiliation

Nature Ge

Received

“Supplementary Data” section: Table listing each contribution and the agent responsible. Where possible, standard identifiers (for both contributions and contributors) are used to abbreviate the entries.

This second worksheet contains the accessions used in databases and the researcher IDs of those who contributed data.						Systematic documentation and analysis of human genetic variation		
						Supplementary Table 1		
						Worksheet 2: Microattribution Information		
#dbID	HGVS name	dbSNP ss#	dbSNP rs#	OMIM	Swiss-Prot	Researcher ID	PMID	Common name
ALOX5AP_00001	NM_001629.2:c.323+154T>C	-	rs4468448	-	-	HbVar (A-2391-2010)	17918249	-
ALOX5AP_00002	NM_001629.2:c.323+3269T>C	-	rs4769058	-	-	HbVar (A-2391-2010)	17918249	-
ALOX5AP_00003	NM_001629.2:c.324-3699A>G	-	rs9508834	-	-	HbVar (A-2391-2010)	17918249	-
AQP9_00001	NM_020980.3:c.835A>G	-	rs1867380	-	-	HbVar (A-2391-2010)	17918249	-
ARG2_00002	NM_001172.3:c.860-11T>C	-	rs10483802	-	-	HbVar (A-2391-2010)	18275000	-
ARG2_00001	NM_001172.3:c.860-426C>A	-	rs10483801	-	-	HbVar (A-2391-2010)	18275000	-
ASS1_00001	NM_000050.4:c.495+1473C>T	-	rs590086	-	-	HbVar (A-2391-2010)	17918249	-
ASS1_00002	NM_000050.4:c.597+18A>G	-	rs652313	-	-	HbVar (A-2391-2010)	17918249	-
ASS1_00003	NM_000050.4:c.838+2190A>G	-	rs12555797	-	-	HbVar (A-2391-2010)	17918249	-
ASS1_00004	NM_000050.4:c.839-88A>T	-	rs543048	-	-	HbVar (A-2391-2010)	17918249	-
ATRX_00086	NM_000489.3:c.20+1G>A	-	-	-	-	HbVar (A-2391-2010)	12858175	-
ATRX_00003	NM_000489.3:c.109C>T	-	-	-	-	HbVar (A-2391-2010)	10632111	-
ATRX_00004	NM_000489.3:c.187G>T	-	-	-	-	HbVar (A-2391-2010)	18409179	-
ATRX_00005	NM_000489.3:c.236C>G	-	-	-	-	HbVar (A-2391-2010)	12858175	-
ATRX_00087	NM_000489.3:c.242+2T>C	-	-	-	-	HbVar (A-2391-2010)	16266892	-
ATRX_00088	NM_000489.3:c.370G>T	-	-	-	-	HbVar (A-2391-2010)	16376512	-
ATRX_00089	NM_000489.3:c.390_391insA	-	-	-	-	HbVar (A-2391-2010)	18409179	-
ATRX_00090	NM_000489.3:c.413_414delAA	-	-	-	-	HbVar (A-2391-2010)	11449489	-
ATRX_00006	NM_000489.3:c.521G>A	-	-	-	-	HbVar (A-2391-2010)	19055664	-
ATRX_00007	NM_000489.3:c.524G>A	-	-	-	-	HbVar (A-2391-2010)	10204841	-
ATRX_00091	NM_000489.3:c.528_529insCAA	-	-	-	-	HbVar (A-2391-2010)	9326931	-
ATRX_00093	NM_000489.3:c.536A>G	-	-	-	-	HbVar (A-2391-2010)	8968741	-
ATRX_00008	NM_000489.3:c.565C>G	-	-	-	-	HbVar (A-2391-2010)	16813605	-
ATRX_00009	NM_000489.3:c.568C>G	-	-	-	-	HbVar (A-2391-2010)	9326931	-
ATRX_00010	NM_000489.3:c.568C>T	-	-	-	-	HbVar (A-2391-2010)	11449489	-
ATRX_00011	NM_000489.3:c.569C>T	-	-	-	-	HbVar (A-2391-2010)	16763962	-
ATRX_00012	NM_000489.3:c.576G>C	-	-	-	-	HbVar (A-2391-2010)	9326931	-



Linking
Publications
to Data

Add a digital object identifier (DOI) to the dataset

Include this in the metadata of the research output

OR

Cite the dataset

Data Recognized as similar status to Articles?

January 14, 2013.. Biographical Sketch(es), has been revised to rename the “Publications” section to “Products”.... This change makes clear that products may include, but are not limited to, publications, **data sets, software, patents, and copyrights.**

Biosketches now include “Products”,
not “Publications”



ODIN

- Open Researcher & Contributor ID Initiative (ORCID) : open, non-profit, community-based - registry of unique researcher identifiers
 - A transparent method of linking research activities and outputs to these identifiers.

ODIN : build on the ORCID and DataCite initiatives to uniquely identify scientists and data sets and connect this information across multiple services and infrastructures for scholarly communication.

To address ongoing questions:

- Referencing a data object
- Tracking of use and re-use
- Links between a data object, subsets, articles, rights statements and every person Involved in its life-cycle.

ODIN: <http://datacite.labs.orcid-eu.org>

- Authors can search the DataCite Metadata Store for their works
- Add (or claim) those research outputs – including datasets, software, and other types – to their ORCID profile.



Measuring the Impact of Data

Impact types:

- **Citations**
- **DataCite Statistics** – number of times a data doi has been resolved to a URL
- **Webserver logs** of page views and downloads of data
- **Social Media Links / Mentions**

Thomson Reuters Data Citation Index

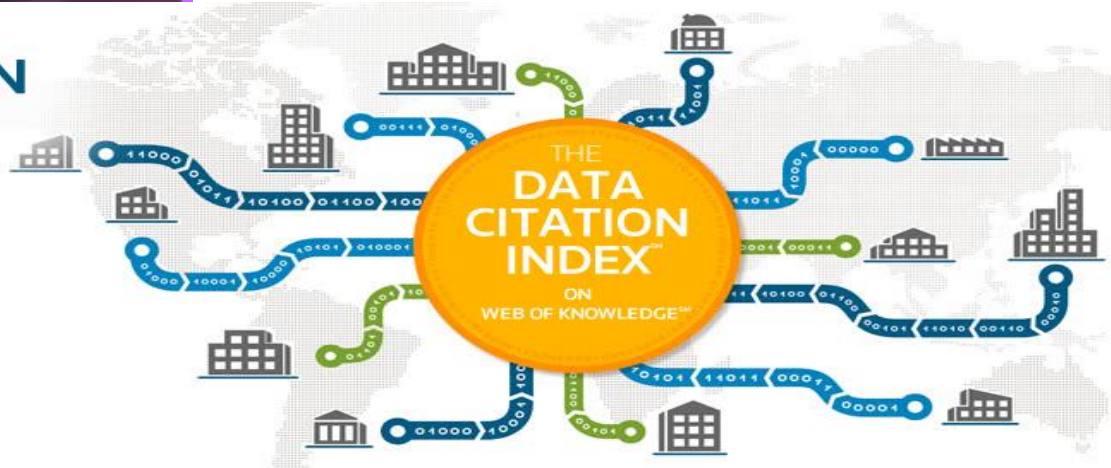
- Searches across data repositories
- Times cited
- Citing publications
- Detailed data records
- Recommended citation format provided

THE DATA CITATION INDEXSM

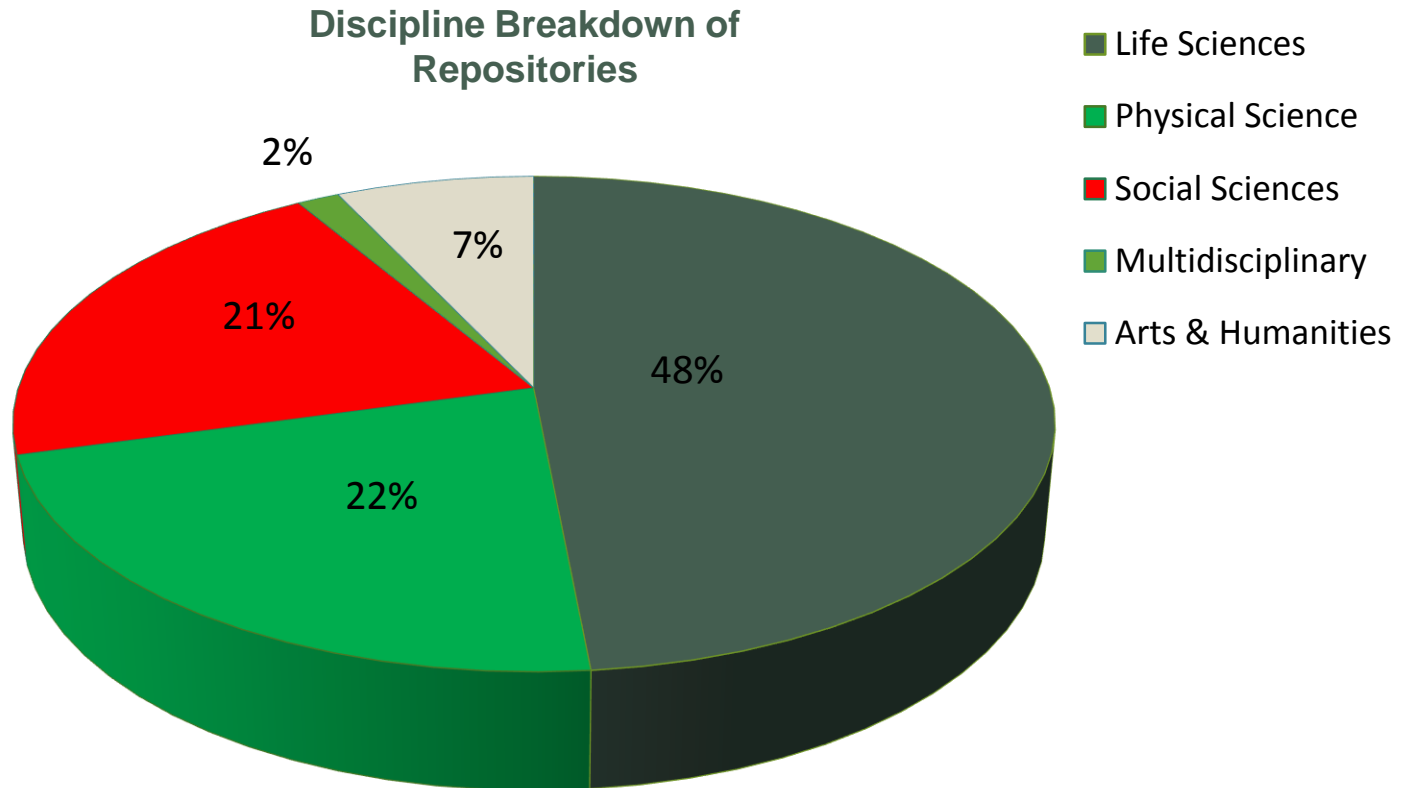
CONNECTING THE DATA TO
THE RESEARCH IT INFORMS

What is it?

VIEW VIDEO



Research Data Repository Coverage



Source: Thomson Reuters



Carl Boettiger

25 Datasets

7.8k views

26 shares

22 tweets

Show tweets (22)

Sorting by default

Overview

Map

Twitter fans

articles (25)

datasets (25)

figures (2)

posters (6)

slide decks (19)

software products (68)



Lab Notebook, 2012

(2013) *figshare*.

highly discussed

highly viewed

highly discussed

highly viewed

Regime shifts in ecology and evolution (PhD Dissertation)

(2012) *figshare*.

view dataset

highly viewed

highly viewed

discussed

discussed

rOpenSci- Open Tools to Facilitate Data Driven Science in Ecology and Evolution

(2013) *figshare*.

view dataset

highly viewed

highly discussed

viewed

Data from: Early warning signals and the prosecutor's fallacy

(2013) [Boettiger](#), Hastings. *Dryad Digital Repository*.






























view dataset

highly viewed

discussed

viewed

Samples of PlumX Metrics Sources

- | | | |
|---|---|---|
|  Amazon |  Github |  Scopus |
|  Bit.ly |  Goodreads |  SlideShare |
|  CrossRef |  Google+ |  SourceForge |
|  Delicious |  Medwave |  Stack Overflow |
|  Dryad |  Mendeley |  Twitter |
|  dSpace |  PLOS |  USPTO |
|  EBSCO |  PubMed Central |  Vimeo |
|  ePrints |  Reddit |  Wikipedia |
|  Facebook |  Research Blogging |  Worldcat (OCLC) |
|  figshare | |  YouTube |

Choose the articles you're interested in

Pick new articles:

- > Mentioned in the past
- > With keyword
- > In journal(s)
- > With identifiers
- > From publisher
- > With Medline subject
- > Mentioned at any time on
- > Order by

Show matching articles

See all articles, the attention paid to them or the rankings of the journals they're from

Altmetric Explorer Reports dashboard Explore the data Help Logged in as euan

Articles from journals covering Psychology mentioned at least once in the past 3m

Pick new articles:

Articles 7,181 Activity 15,384 Journals 2,367

- > Mentioned in the past
- > With keyword
- > In journal(s)
- > With identifiers
- > From publisher
- > With Medline subject
- > Mentioned at any time on
- > Order by

Show matching articles

339

- Tweeted by 326
- On 1 Facebook Pages
- Mentioned in 12 Google+ posts
- Picked up by 1 news outlets
- Blogged by 1
- 62 readers on Mendeley
- 0 readers on Connotea
- 3 readers on CiteULike

Click for more details

Experimental measurements

Ozawa's Inequality

Heisenberg's uncertainty principle

Interesting science

Hover over a score donut to see details. Click on a donut to view the actual tweets, blog posts, news stories etc.

ResearchGate Score

ResearchGate:

Social networking site for researchers

- Add publications to their profile and share data and publications with others (followers)
- Generates statistics about views, downloads and citations, RG Score
- OpenReview – reader can publish an open review on any paper they have read- reviews based on a structure with emphasis on whether the paper's results are reproducible.

Summary

Your Data:

- Deposit your data with a suitable data archive or repository as soon as you are able.
- If they do not provide you with a persistent identifier or URL for your data, encourage them to do so.
- If sharing via your website – post advice on citation – based on evolving DataCite template.
- When you publish a paper that cites a dataset, notify the repository that holds the dataset, so it can add a link from that dataset to your paper.

Citing others data:

- Use the citation style required by the editor/publisher. If no form is suggested for datasets, take a standard data citation style (e.g. DataCite's) and adapt it to match the style for textual publications.
- Include data citations alongside those for textual publications in your reference list
- Some reference management packages now include support for datasets, which should make this easier.

Summary cont...

Your Data:

- Cite datasets at the finest-grained level available that meets your need. If that is not fine enough, provide details of the subset of data you are using at the point in the text where you make the citation.
- If a dataset exists in several versions, be sure to cite the exact version you used.
- Link your data to your publications and vice versa
- Cite your data in your reference list
- Formally reference other data sets you have used in your publications
- As part of your researcher profile include data citations in your bio-sketch and CV.

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Enabling Research Dissemination, Knowledge Transfer &
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