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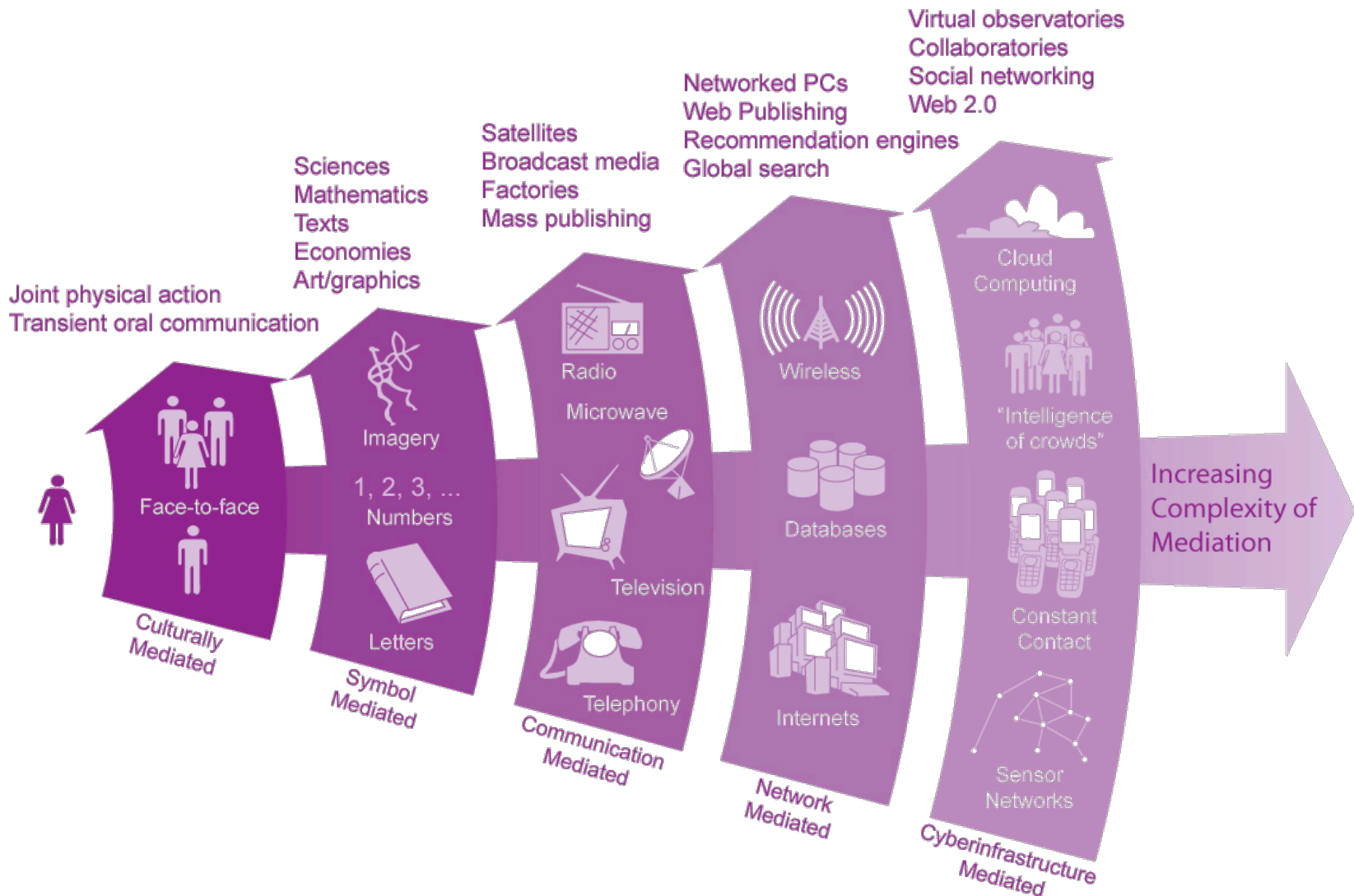
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Digital Scholarship and Digital Libraries: Past, Present, and Future

Christine L. Borgman
Professor and Presidential Chair in Information Studies
University of California, Los Angeles

Keynote Presentation
17th International Conference on Theory and Practice of Digital Libraries
Valletta, Malta, September 22-26, 2013

Technological advances in mediated communication



Science

12 September 2008 | \$10



AAAS

Science

11 February 2011 | \$10



Digital

Digital scholarship encompasses the tools, services, and infrastructure that support research in any and all fields of study.

Scholarship

Neelie Kroes, VP European Commission:



To collect, curate, preserve and make available ever-increasing amounts of scientific data, new types of infrastructures will be needed. The potential benefits are enormous but the same is true for the costs. We therefore need to lay the right foundations and the sooner we start the better.

Wood, J., Andersson, T., Bachem, A., Best, C., Genova, F., Lopez, D. R., ... Hudson, R. L. (2010). *Riding the wave: How Europe can gain from the rising tide of scientific data*. Final report of the High Level Expert Group on Scientific Data. Retrieved from <http://cordis.europa.eu/fp7/ict/e-infrastructure/docs/hlg-sdi-report.pdf>

Open access policies

- European Union
 - European Open Data Challenge
 - Policy RECommendations for Open Access to Research Data in Europe
 - Riding the wave: How Europe can gain from the rising tide of scientific data
 - OpenAIRE
- Research Councils of the UK
 - Open access publishing requirements
 - Provisions for access to data
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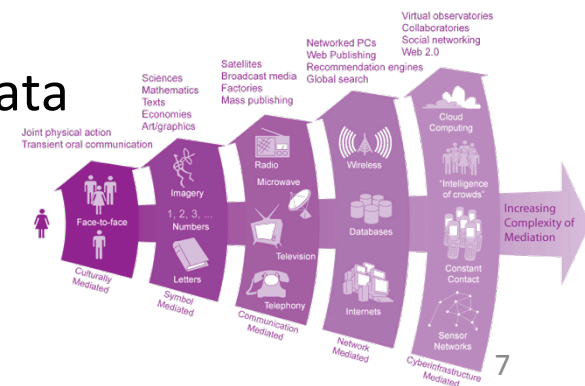
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WHERE DISCOVERIES BEGIN

Policy RECommendations for Open Access to Research Data in Europe



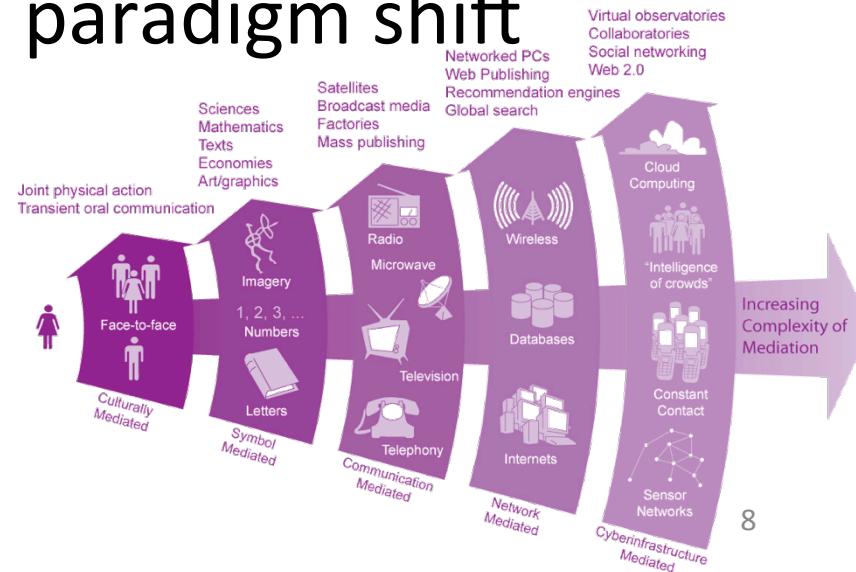
Big Data, Little Data, No Data: Scholarship in the Networked World

- Section I: Data and Scholarship
 - Ch 1: Big Scholarship, Little Scholarship
 - Ch 2: Data-Intensive Scholarship
 - Ch 3: What are Data?
- Section II: The Diversity of Data: Case Studies
 - Ch 4: Science: Astronomy, Sensor-networked science
 - Ch 5: Social Science: Surveys/Social Networks; Qualitative studies
 - Ch 6: Humanities: Digital collections; Buddhist studies
- Section III Data Policy and Practice
 - Ch 7: Supply: Releasing and Sharing Data
 - Ch 8: Demand: Reusing and Repurposing Data
 - Ch 9: Credit, Attribution, and Discovery
 - Ch 10: Into the Future: What to Keep

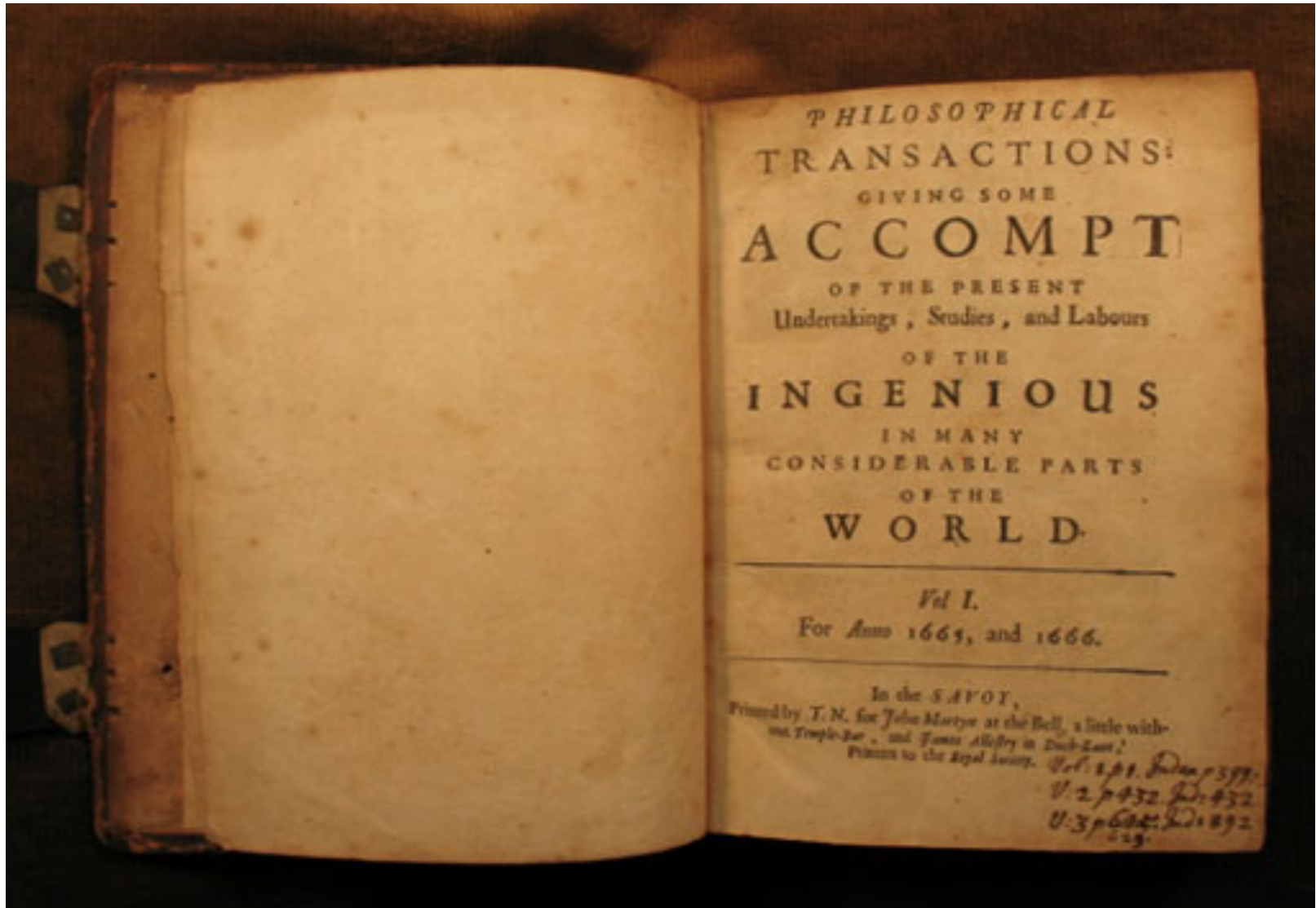


Theories and themes

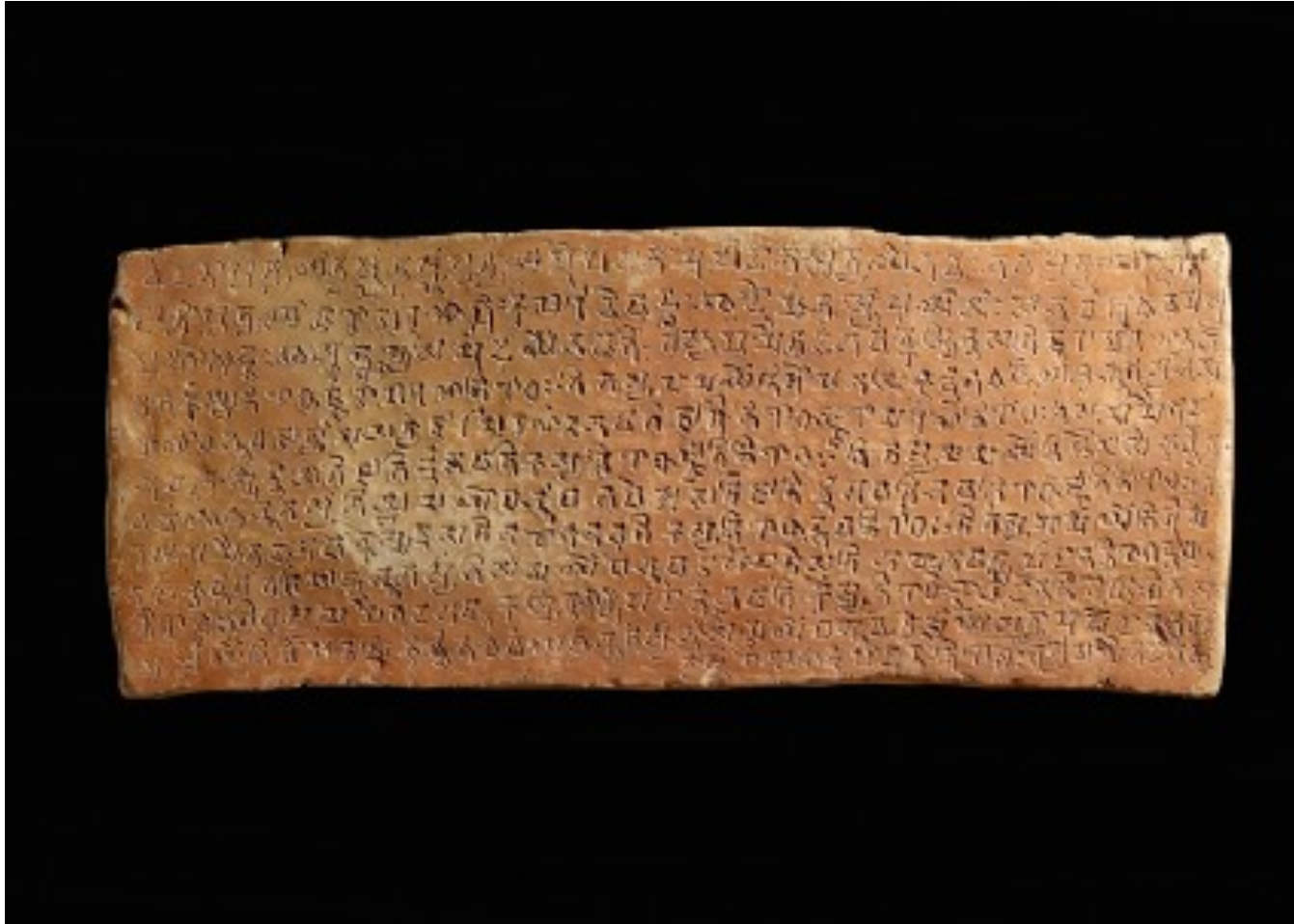
1. Open scholarship is the norm
2. Formal and informal scholarly communication are converging
3. Data practices are local
4. Open access to data is a paradigm shift



1. Open scholarship is the norm



Bricks in the wall...



Brick inscribed with the Sutra on Dependent Origination *Gorakhpur district, late 5th century - early 6th century AD. Ashmolean Museum*

Open access publishing

PHILOSOPHICAL
TRANSACTIONS:
GIVING SOME
ACCOMPT
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.



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The OLH is now recruiting editors for each of our disciplinary fields. If you have academic editorial expertise and would like to get involved in open access publishing, please get in ...

MAY 2013 Roadmap for Technical Pilot

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MAY 2013 Forms of Innovation

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April 17, 2013 | 0 Comments and 0 Reactions

BIS Select Committee on Open Access

On 16th April, OLH Project Director Dr Martin Eve was invited to give evidence at the Business, Innovation and Skills Committee, which is appointed by the UK House of Commons to examine the administration, expenditure and policy of the Department for Business, Innovation and Skills (BIS) and its associated public bodies, including Ofcom and the

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WELCOME

Welcome to the Open Library of Humanities (OLH). This site aims to give the background to, and rationale for, our vision of building a low cost, sustainable, Open Access future for the humanities. Please feel free to look around the site and get in touch if you'd like to be involved.

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John Baines, The inundation stela of Sebekholpe VIII. Acta Orientalia, 36, 39-54.

Thomas Outdrige, (2011). Coarse-grained modelling of DNA and DNA self-assembly. DPhil. University of Oxford.

Elna Kilpi, (2010). The education of children of immigrants in Finland. DPhil. University of Oxford.

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Open data and open ontologies



The Open Biological and Biomedical Ontologies

Ontologies


Resources

Participate


About

The OBO Foundry is a collaborative experiment involving developers of science-based ontologies who are establishing a set of principles for ontology development with the goal of creating a suite of orthogonal interoperable reference ontologies in the biomedical domain. The groups developing ontologies who have expressed an interest in this goal are listed below, followed by other relevant efforts in this domain.

In addition to a listing of OBO ontologies, this site also provides a statement of the OBO Foundry principles, discussion fora, technical infrastructure, and other services to facilitate ontology development. We welcome feedback and encourage participation.

Click any column header to sort the table by that column. The  link to the term request trackers for the listed ontologies.

OBO Foundry ontologies

Title	Domain	Prefix	File	Last changed
Biological process	biological process	GO	go.obo 	
Cellular component	anatomy	GO	go.obo 	
Chemical entities of biological interest	biochemistry	CHEBI	chebi.obo 	
Molecular function	biological function	GO	go.obo 	
Phenotypic quality	phenotype	PATO	quality.obo 	
PRotein Ontology (PRO)	proteins	PR	pro.obo 	
Xenopus anatomy and development	anatomy	XAO	xenopus_anatomy_edit.obo 	
Zebrafish anatomy and development	anatomy	ZFA	zebrafish_anatomy.obo 	2013/04/12

OBO Foundry candidate ontologies and other ontologies of interest

Title	Domain	Prefix	File	Last changed
Adverse Event Reporting Ontology	health	AERO	aero.owl	
Amphibian gross anatomy	anatomy	AAO	AAO_v2_edit.obo 	
Amphibian taxonomy	anatomy	ATO	amphibian_taxonomy.obo	
Anatomical Entity Ontology	anatomy	AEO	aero.obo	2012/06/01
Ascomycete phenotype ontology	phenotype	APO	ascomycete_phenotype.obo	2013/05/02
Basic Formal Ontology	upper	BFO	1.1	
Bilateria anatomy	anatomy	BILA	bilateria_mrca.obo	
Biological imaging methods	experiments	FBbi	image.obo	2011/05/24
BRENDA tissue / enzyme source	anatomy	BTO	BrendaTissueOBO	
C. elegans development	anatomy	WBls	worm_development.obo	
C. elegans gross anatomy	anatomy	WBbt	WBbt.obo 	

Quick Links

-  [Mappings between ontologies](#)
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-  [About the OBO Foundry](#)
-  [Current events](#)
-  [How to join](#)
-  [OBO Foundry paper in Nature Biotechnology](#)
November 2007

Other Ontology Lists

-  [BioPortal](#) (NCBO's ontology repository)
-  [Ontology Lookup Service \(OLS\)](#)
term lookup)

Open data collaborations

The screenshot shows the homepage of the CIDOC CRM website. At the top, there is a navigation bar with links for 'about', 'search', 'site map', 'people', 'donate', 'contact', and 'help'. Below this is a banner for 'Humanities and Social Sciences' with the ICOM logo and the text 'INTERNATIONAL COUNCIL OF MUSEUMS'. The main header features 'The CIDOC Conceptual Reference Model' and the 'CIDOC CRM' logo. A secondary navigation bar includes links for 'Home', 'The CIDOC CRM', 'Activities', 'People', 'Resources', 'FRBR-CRM', and 'External References'. The main content area is titled 'CIDOC CRM Home page' and contains a 'Site Search' box with a 'GO' button. The 'Current Page:' section is 'What is CIDOC CRM'. The text explains that the CIDOC Conceptual Reference Model (CRM) provides definitions and a formal structure for describing the implicit and explicit concepts and relationships used in cultural heritage documentation. It also states that the CIDOC CRM is intended to promote a shared understanding of cultural heritage information by providing a common and extensible semantic framework. The footer includes 'Site hosted by FORTH', 'Last Updated: 18-01-2013', and a 'Recent Reviews' section with a reviewer name and title.

Humanities and Social Sciences

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ICOM
INTERNATIONAL COUNCIL OF MUSEUMS

The CIDOC
Conceptual Reference Model

CIDOC CRM

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What's New?

What is the CIDOC CRM

The **CIDOC Conceptual Reference Model (CRM)** provides definitions and a formal structure for describing the implicit and explicit concepts and relationships used in cultural heritage documentation.

The **CIDOC CRM** is intended to promote a shared understanding of cultural heritage information by providing a common and extensible semantic framework that any cultural heritage information can be mapped to. It is intended to be a common language for domain experts and implementers to formulate requirements for information systems and to serve as a guide for good practice of conceptual modelling. In this way, it can provide the "semantic glue" needed to mediate between different sources of cultural heritage information, such as that published by museums, libraries and archives.

The **CIDOC CRM** is the culmination of over 10 years work by the **CIDOC Documentation Standards Working Group** and **CIDOC CRM SIG** which are working groups of **CIDOC**. Since 9/12/2006 it is official standard **ISO 21127:2006**.

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- John Barnes, The foundation sites of Sobolevsky VII. Acta Orientalia, 36, 38-54.
- Thomas Curdtzky, (2011), Course-grained modeling of DNA and DNA self-assembly. CPiH, University of Oxford.
- Eliza Riley, (2010), The reduction of children of immigrants in Finland. CPiH, University of Oxford.

Latest Additions

- Nicole Gibby and Andrew Honey, (2012), The conservation of two corporate French manuscripts from the 16th century: two contrasting approaches?
- Deeann Bhattacharya, Shikharaj and Margaret Stevens, (2013), Are university admissions economically fair?
- Mark Irish, (2013), The synthesis and characterization of metal complexes containing chemically reduced bipyridyl ligand systems. CPiH, University of Oxford.
- Andreas Pisk, (2012), Essays in corporate restructuring, reputation and law. CPiH, University of Oxford.
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A Web Application for Sharing, Citing, Analyzing and Preserving Research Data

IQSS
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ABOUT SOFTWARE DATA MANAGEMENT GUIDES

A repository for research data that takes care of **long term preservation** and **good archival practices**, while researchers can **share, keep control of** and **get recognition** for their data.

Supports the sharing of open data and enables reproducible research.

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get credit for all your research

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"NERC is committed to supporting long-term environmental data management to enable continuing access to these data."

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NATURAL ENVIRONMENT RESEARCH COUNCIL

SEARCH Harvard Dataverse Network

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THE DATA BLOG

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2 of 10: We hold thousands of data collections for social science research and teaching, quantitative and qualitative

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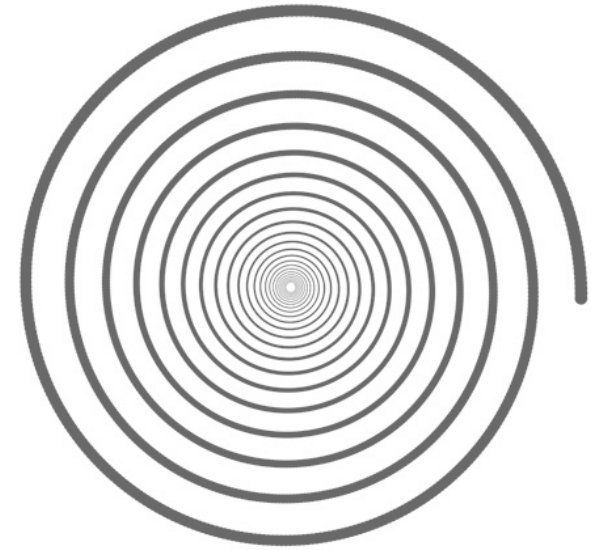
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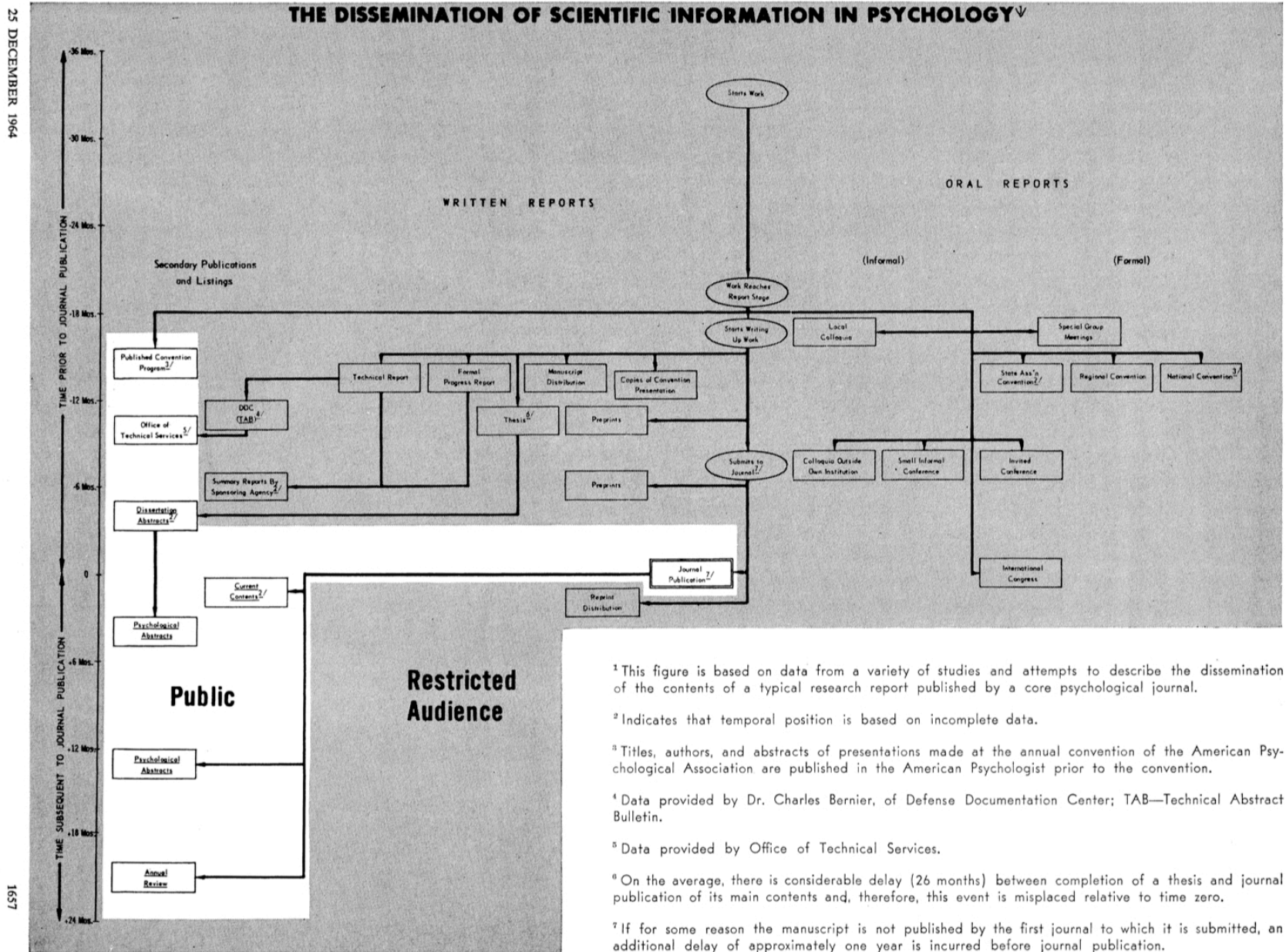
CITING DATA PREPARING YOUR DATA

Open access attitudes

- Begets rigour
- Prevents fraud
- Speeds the pace of research
- Begets free riders
- Risks misuse and and misinterpretation
- Violates the confidentiality of human subjects
- Raises conflicts between policies of universities, funders, publishers, and research partners
- I don't do data

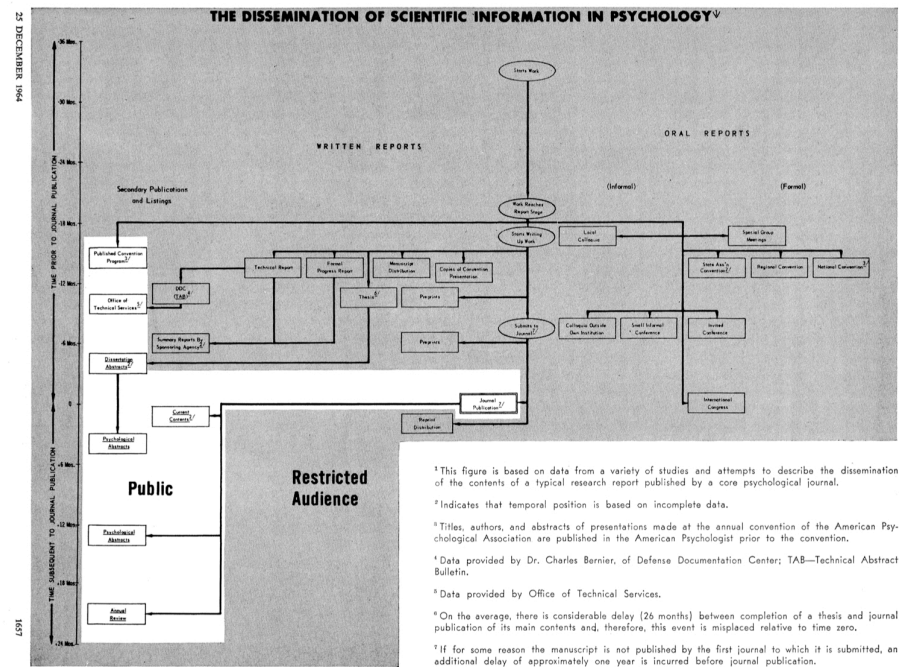


2. Formal and informal scholarly communication are converging



Credit for formal scholarly communication

- Quality of content
- Citations to article
- Citations to journal
- Reviews of books
- Derived metrics
 - Impact factors
 - H-index



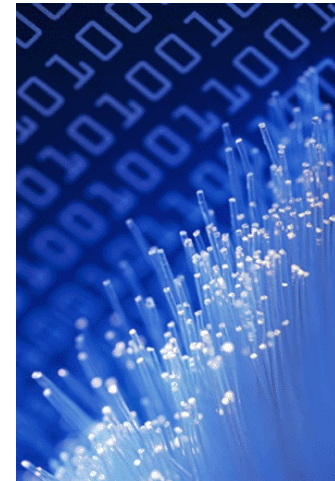
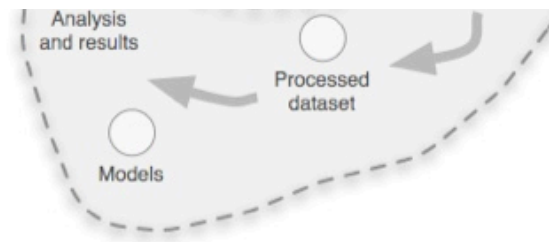
Credit for informal scholarly communication



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<!-- Dismount 6.02-->
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    <Button Grid.Column="1" DataContext="{Binding Path=.ApparatusSymbolItems[dmt_salto_fw_tucked_180]}" />
  </UniformGrid>
</Border>
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    <Button Grid.Column="1" DataContext="{Binding Path=.ApparatusSymbolItems[dmt_salto_fw_stretched]}" />
    <Button Grid.Column="2" DataContext="{Binding Path=.ApparatusSymbolItems[dmt_salto_fw_stretched_180]}" />
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</Border>
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http://3.bp.blogspot.com/-bj29MM_7Nuk/UBzpOz2JXPI/AAAAAAAAAFA/vDpCD2dW0iE/s1600/GS_Code_Example.png

Pepe, A., Mayernik, M. S., Borgman, C. L. & Van de Sompel, H. (2010). From Artifacts to Aggregations: Modeling Scientific Life Cycles on the Semantic Web. *Journal of the American Society for Information Science and Technology*, 61(3): 567–582.



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



<http://www.itadvicex.com/wp-content/uploads/2013/05/blogs-5.jpg>

Credit for informal scholarly communication

The image shows a screenshot of the NYU Press website. At the top left, there is a logo for 'media comm' with the tagline 'open scholarship in c'. To the right of this is the NYU Press logo, which consists of a stylized 'NYU' in a square followed by the text 'NYU PRESS'. Below the logo is a navigation menu with buttons for 'BOOKS', 'PARTNERS', 'NEWS', 'for AUTHORS', and 'CONTACT'. A search bar is located on the right side of the page, with the text 'Search by Title, Aut'. Below the navigation menu, the title 'Planned Obs' is visible. The main content area features a book cover for 'Planned Obsolescence: Publishing, Technology, and the Future of the Academy' by Kathleen Fitzpatrick. The cover shows a tray of wooden blocks. To the right of the cover, the book's title and author are listed, along with details: 256 pages, 16 illustrations, November 2011, ISBN: 9780814727874. Below this, there are links for 'Introduction' and 'Table of Contents'. The price is listed as '\$79.00 Cloth', and it is noted that the book is also available in 'Paper, eBook' with a link to 'click here for exam copies'. A 'BUY' button is prominently displayed. Below the 'BUY' button is a 'SHARE' button with icons for Facebook, Twitter, and email. At the bottom of the page, there is a 'powered by Google' logo and a navigation bar with tabs for 'DESCRIPTION', 'AUTHOR', 'REVIEWS', and 'AUDIO/VIDEO'. On the far right, a sidebar contains a search box and buttons for 'Search', 'Register', and 'Log in'.

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yet a book, though it's
change the world, or a
reside.

4 And it's attempting to
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and more effective pro
what it preaches, avai

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sending the manuscri

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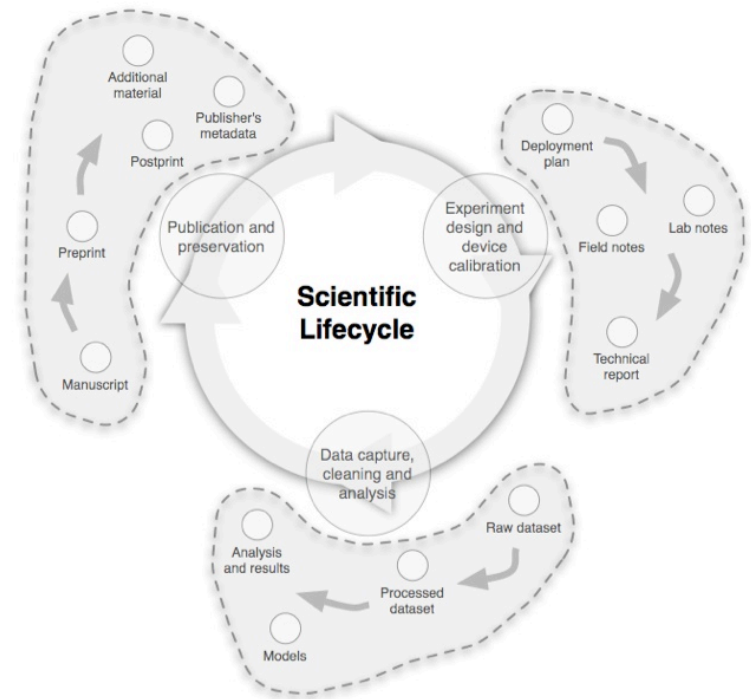
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Credit for informal scholarly communication

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Data Citation and Attribution

For Attribution—

Developing Data Attribution and
Citation Practices and Standards

Summary of an International Workshop

Uhlir, P. F. (Ed.). (2012). *For Attribution -- Developing Data Attribution and Citation Practices and Standards: Summary of an International Workshop*. Washington, D.C.: The National Academies Press. Retrieved from http://www.nap.edu/catalog.php?record_id=13564

NATIONAL RESEARCH COUNCIL
OF THE NATIONAL ACADEMIES

OUT OF CITE, OUT OF MIND:

**THE CURRENT STATE OF PRACTICE, POLICY, AND
TECHNOLOGY FOR THE CITATION OF DATA**

CODATA-ICSTI Task Group on Data Citation Standards and Practices

Edited by Yvonne M. Socha

Data Science Journal, Volume 12,
13 September 2013

3. Data practices are local

Big data: Volume, Variety, Velocity

Big Data Landscape

Vertical Apps



Ad/Media Apps



Business Intelligence



Analytics and Visualization



Log Data Apps



Data As A Service



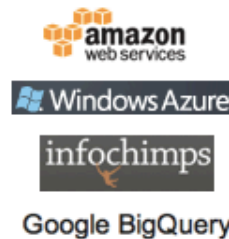
Analytics Infrastructure



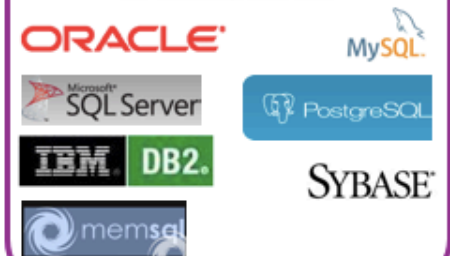
Operational Infrastructure



Infrastructure As A Service



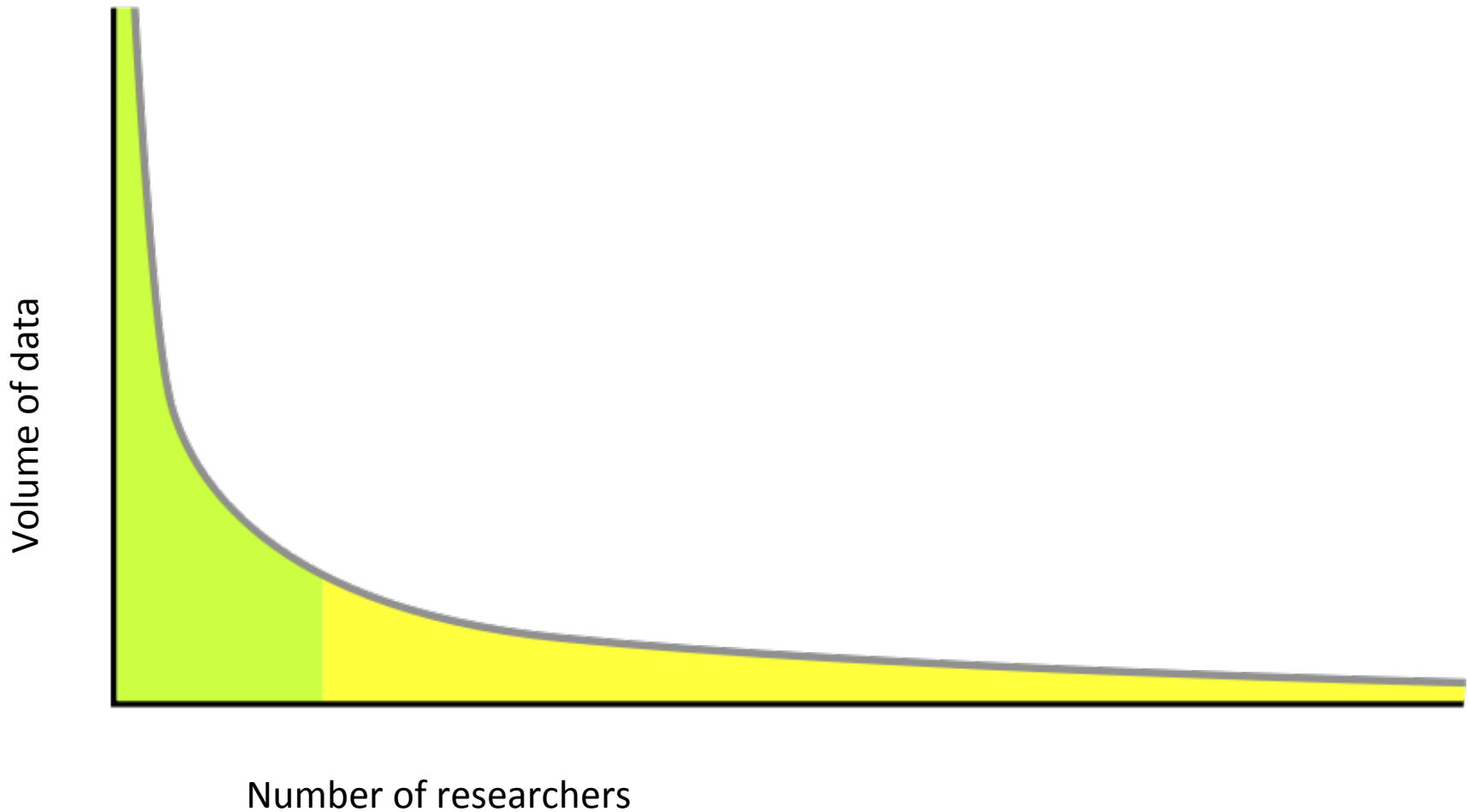
Structured Databases



Technologies



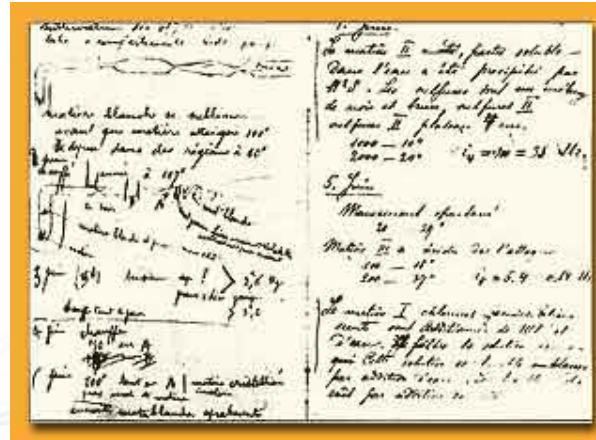
Long tail of data



What are data?



hudsonalpha.org

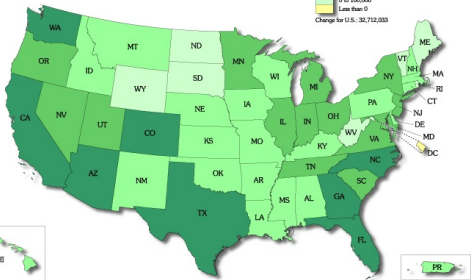


Marie Curie's notebook aip.org



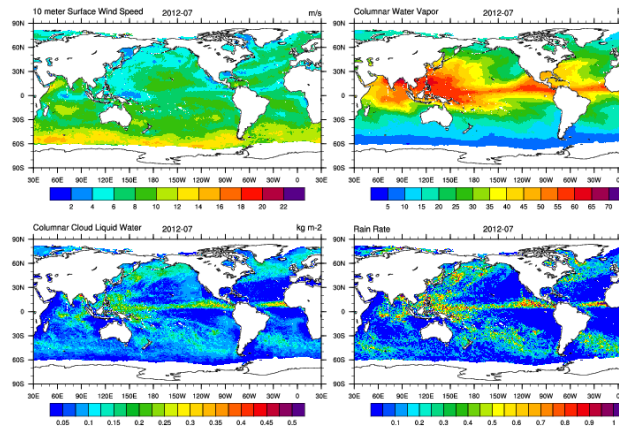
NASA Astronomy Picture of the Day

Figure 2. Numeric Change in Resident Population for the 50 States, the District of Columbia, and Puerto Rico: 1990 to 2000



<http://www.census.gov/population/cen2000/map02.gif>

Monthly Mean: f17_ssmis_201207v7.nc



ncl.ucar.edu

Date: 1/2.07.75 Place: Sakaltutan Zafor

He will grow old in his present house; new house is for sons - 5 sons. Not sure they want to live in village. He will only build another if they want him to. eS came from Germany and did the plastering. He arranged the carpentry in Kayseri. Çok para gitti. (much money went) Has a tractor.

Date: July 1980 Place: Sakaltutan Zafor:

Household now Zafor and wife; Nazif Unal and wife and youngest son, still a boy. They run two dolmuş; one with a driver from Süleymanlı. Goes in and out once a day. He gets 8,000 a month. Zafor then said, keskin deoil. (not sharp - i.e.? not profitable) I said he did very well on 8,000 TL with only two journeys a day. Nazif Unal has "bought" a Durak (dolmuş stop) from Belediye and works all day in Kayseri.

http://onlineqda.hud.ac.uk/Intro_QDA/Examples_of_Qualitative_Data.php

Range of data practices

Industrial methods

Artisanal methods





LETTERS

A role for self-gravity at multiple length scales in the process of star formation

Alyssa A. Goodman^{1,2}, Erik W. Rosolowsky^{2,3}, Michelle A. Borkin^{1,†}, Jonathan B. Foster², Michael Halle^{1,4}, Jens Kauffmann^{1,2} & Jaime E. Pineda²

Self-gravity plays a decisive role in the final stages of star formation, where dense cores (size ~ 0.1 parsecs) inside molecular clouds collapse to form star-plus-disk systems¹. But self-gravity's role at earlier times (and on larger length scales, such as ~ 1 parsec) is unclear; some molecular cloud simulations that do not include self-gravity suggest that 'turbulent fragmentation' alone is sufficient to create a mass distribution of dense cores that resembles, and sets, the stellar initial mass function². Here we report a 'dendrogram' (hierarchical tree-diagram) analysis that reveals that self-gravity plays a significant role over the full range of possible scales traced by ¹³CO observations in the L1448 molecular cloud, but not everywhere in the observed region. In particular, more than 90 per cent of the compact 'pre-stellar cores' traced by peaks of dust emission³ are projected on the sky within one of the dendrogram's self-gravitating 'leaves'. As these peaks mark the locations of already-forming stars, or of those probably about to form, a self-gravitating cocoon seems a critical condition for their existence. Turbulent fragmentation simulations without self-gravity—even of unmagnetized isothermal material—can yield mass and velocity power spectra very similar to what is observed in clouds like L1448. But a dendrogram of such a simulation⁴ shows that nearly all the gas in it (much more than in the observations) appears to be self-gravitating. A potentially significant role for gravity in 'non-self-gravitating' simulations suggests inconsistency in simulation assumptions and output, and that it is necessary to include self-gravity in any realistic simulation of the star-formation process on subparsec scales.

Spectral-line mapping shows whole molecular clouds (typically tens to hundreds of parsecs across, and surrounded by atomic gas) to be marginally self-gravitating⁵. When attempts are made to further break down clouds into pieces using 'segmentation' routines, some self-gravitating structures are always found on whatever scale is sampled^{6,7}. But no observational study to date has successfully used one spectral-line data cube to study how the role of self-gravity varies as a function of scale and conditions, within an individual region.

Most past structure identification in molecular clouds has been explicitly non-hierarchical, which makes difficult the quantification of physical conditions on multiple scales using a single data set. Consider, for example, the often-used algorithm CLUMPFIND⁸. In three-dimensional (3D) spectral-line data cubes, CLUMPFIND operates as a watershed segmentation algorithm, identifying local maxima in the position-position-velocity (p-p-v) cube and assigning nearby emission to each local maximum. Figure 1 gives a two-dimensional (2D) view of L1448, our sample star-forming region, and Fig. 2 includes a CLUMPFIND decomposition of it based on ¹³CO observations. As with any algorithm that does not offer hierarchically nested or

overlapping features as an option, significant emission found between prominent clumps is typically either appended to the nearest clump or turned into a small, usually 'pathological', feature needed to encompass all the emission being modelled. When applied to molecular-line

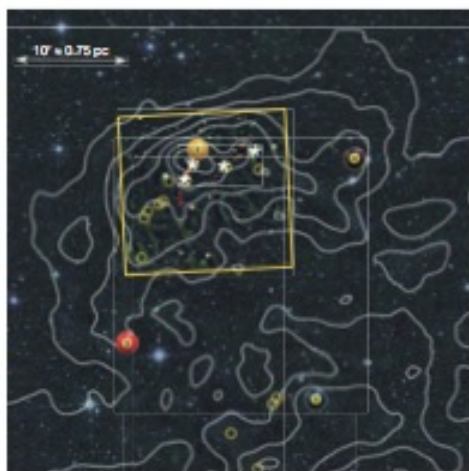
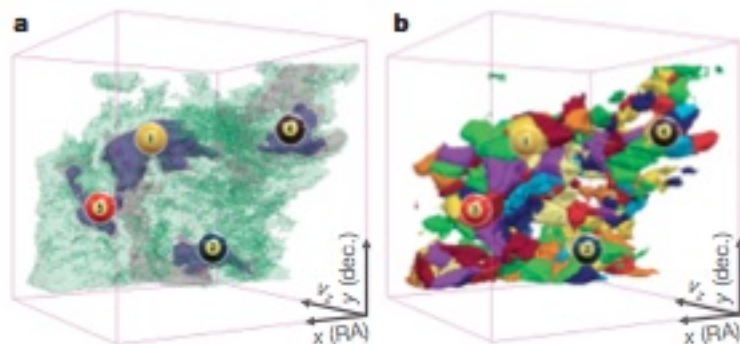


Figure 1 | Near-infrared image of the L1448 star-forming region with contours of molecular emission overlaid. The channels of the colour image correspond to the near-infrared bands J (blue), H (green) and K (red), and the contours of integrated intensity are from ¹³CO(1-0) emission⁹. Integrated intensity is monotonically, but not quite linearly (see Supplementary Information), related to column density¹⁰, and it gives a view of 'all' of the molecular gas along lines of sight, regardless of distance or velocity. The region within the yellow box immediately surrounding the protostars has been imaged more deeply in the near-infrared (using Calar Alto) than the remainder of the box (2MASS data only), revealing protostars as well as the scattered starlight known as 'Cloudshine'¹¹ and outflows (which appear orange in this colour scheme). The four billiard-ball labels indicate regions containing self-gravitating dense gas, as identified by the dendrogram analysis, and the leaves they identify are best shown in Fig. 2a. Asterisks show the locations of the four most prominent embedded young stars or compact stellar systems in the region (see Supplementary Table 1), and yellow circles show the millimetre-dust emission peaks identified as star-forming or 'pre-stellar' cores³.



Click to rotate

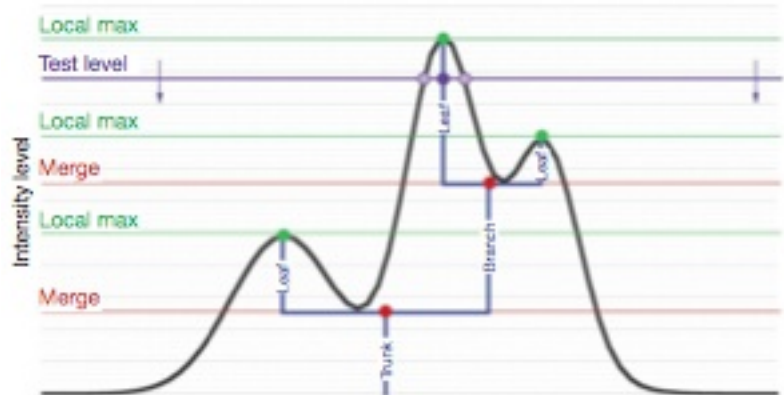
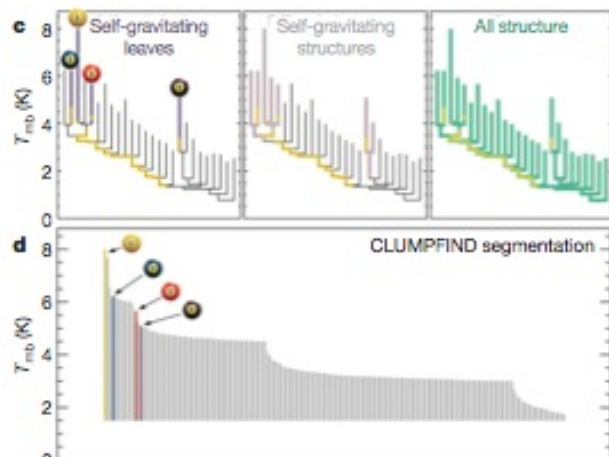
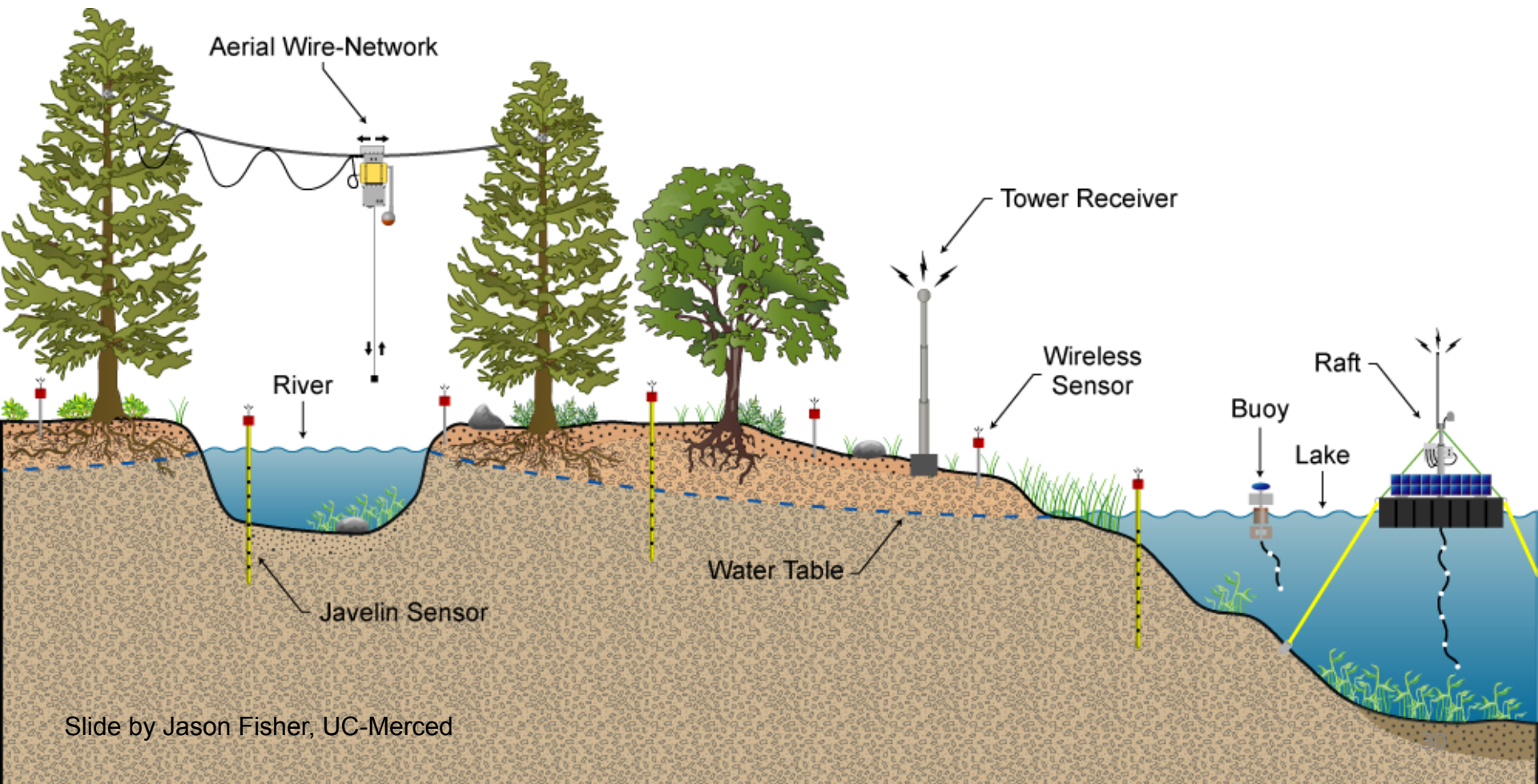


Figure 3 | Schematic illustration of the dendrogram process. Shown is the

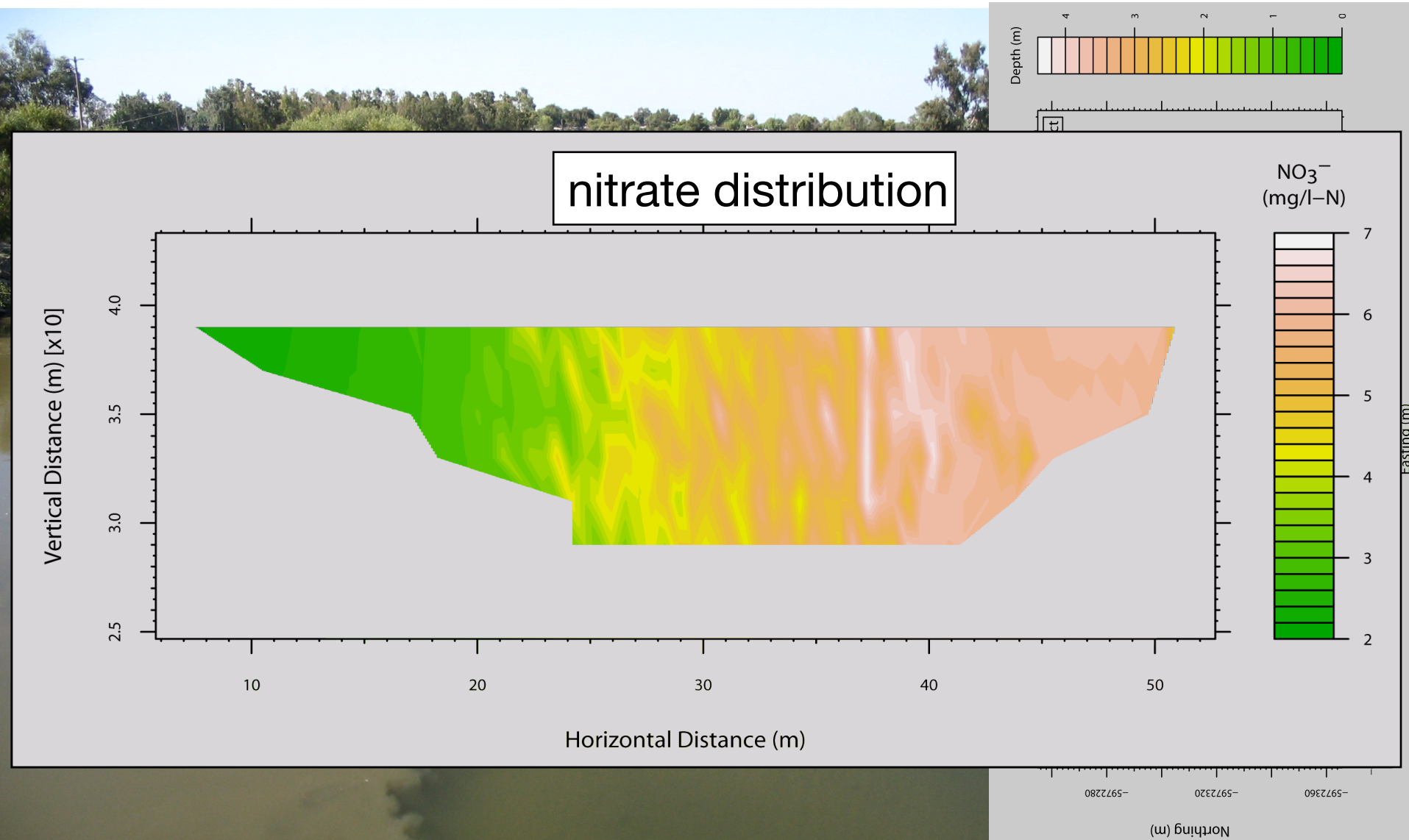
¹Initiative in Innovative Computing at Harvard, Cambridge, Massachusetts 02138, USA. ²Harvard-Smithsonian Center for Astrophysics, Cambridge, Massachusetts 02138, USA. ³Department of Physics, University of British Columbia, Vancouver, Kelowna, British Columbia V1V 1V7, Canada. ⁴Surgical Planning Laboratory and Department of Radiology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts 02115, USA. [†]Present address: School of Engineering and Applied Sciences, Harvard University, Cambridge, Massachusetts 02138, USA.

Sensor networked science



Slide by Jason Fisher, UC-Merced

Sensor network data

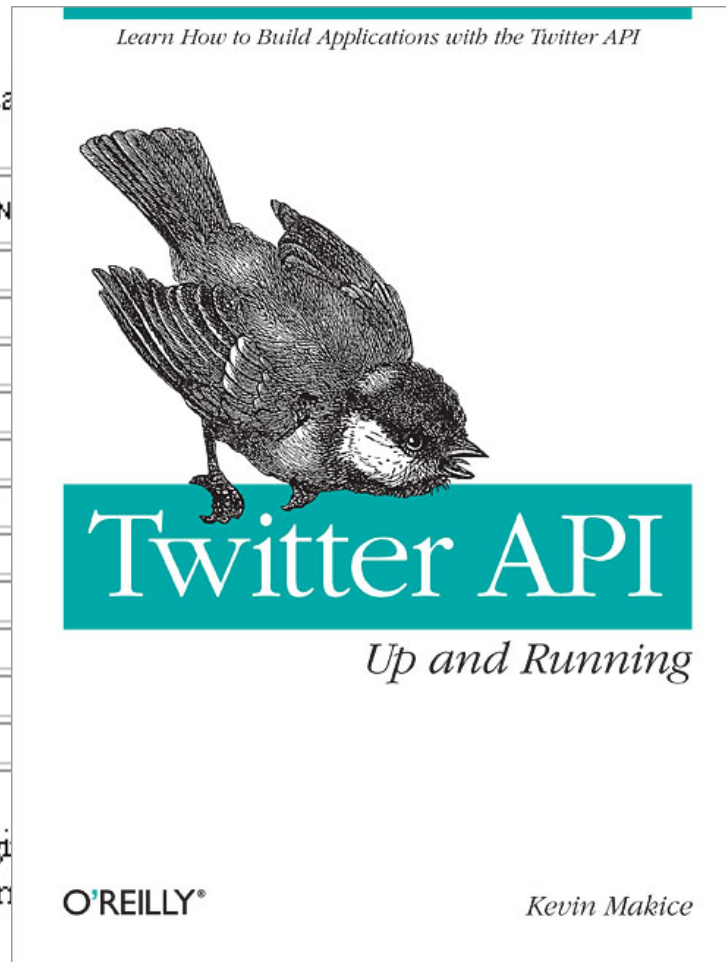


Social science data

Q6. Generally speaking, do you usually vote for a Democrat, Republican, or Independent, or what?

RESPONSE	PUN
Strong Democrat	
Not very strong Democrat	
Independent, close to Democrat	
Independent (Neither, No response)	
Independent, close to Republican	
Not very strong Republican	
Strong Republican	
Other party, refused to say	
Don't know	
No answer	

See Appendix D: Recodes, for original coding across surveys. If planning to perform analysis, see No. 56.



Q6. Generally speaking, do you usually vote for a Democrat, Republican, or Independent, or what?

	1994	1996	1998	COL: 240
7	423	400	370	6,046
1	644	577	597	8,756
0	341	356	349	4,581
5	369	457	477	4,882
8	282	258	244	3,379
9	519	500	484	6,265
0	321	307	239	3,479
7	44	43	63	530
0	0	0	0	10
9	49	6	9	188

Appendix N for changes in GSS Methodological Report



▼ CBETA 首頁 ▼ 電子佛典集成光碟 ▼ 下載

CBETA 首頁

熱門連結

Zacchetti, S. (2005). In Praise of the Light: A Critical Synoptic Edition with an Annotated Translation of Chapters 1-3 of Dharmarakṣa's Guang zan jing, Being the Earliest Chinese Translation of the Larger Prajñāpāramitā. Tokyo, Japan: The International Research Institute for Advanced Buddhism, Soka University. Retrieved from http://iriab.soka.ac.jp/orc/Publications/BPPB/index_BPPB.html



我們也有 專頁

追蹤

karmāntājivā
virahitakuśalakāyavānmanas-
karmāntājivāś¹⁰⁹ ca bhavanti sma

§ 1.66 (147c 28-148a 1) 一切衆生得平等心，展轉相瞻如父、如母、如兄、如弟、如姊、如妹，各各同心，等無偏邪，皆行慈心。

PG 4r 4-5 (Ś 18, 22-19, 1; PD 10, 1-2; PSL *kā* a 4-5): sarvasatvāś ca sarvasatveṣu samacittā abhūvan* yad uta¹¹⁰ mātāpitṛbhrātr̥bhaginīsamacittāḥ mitrajñātisahāyasamacittāḥ¹¹¹

§ 1.67 (148a 1-2) 一切群萌悉修十善，清淨梵行，無有塵埃。

PD 10, 2-3 (PG 4r 5-6; Ś 19, 2-3; PSL *kā* a 5): daśakuśalakarmapathasevinaś ca bhavanti sma¹¹² / brahmacāriṇaḥ śucayo nirāmayagandhāḥ¹¹³

§ 1.68 (148a 2-4) 一切黎庶悉獲安隱，所得安隱猶如比丘得第三禪。于時衆生而致智慧，而悉具足善快調定，離於卑劣，速得和雅。

PG 4r 6-8 (PD 10, 3-8; PSL *kā* a 5-6; Ś 19, 3-8): sarvasatvās tasmin samaye sarvasukhasamarpitā abhūvan* evaṃrūpeṇa sukhena samanvāgatāś¹¹⁴ tadyathā {s} tṛtīyadhyānasamāpannasya bhikṣoḥ sukhaṃ sarvasatvāś ca tasmin samaye evaṃrūpayā prajñayā samanvāgatā abhūvan* yad evaṃ jānaṃti sma¹¹⁵ • sādhu dānaṃ sādhu damaḥ sādhu saṃyamah¹¹⁶ sādhu satyaṃ • sādhu apramādaḥ sādhu maitrī sādhu karuṇā sādhu avihīṃsā prāṇibhūteṣu¹¹⁷ •

¹¹⁰ sarvasattvāś ... yad uta: not in PD & PSL.

¹¹¹ PG wrongly repeats verbatim this latter compound. PD 10, 2 and PSL have at this point a longer reading: mitrāmātyajñātisālohitāsamacittā. Note that Ś has all the words construed as one compound.

¹¹² PG 4r 5-6 & Ś 19, 2: daśakuśalakarma(tha)samanvāgatā [Ś without daśa-] abhūvan.

¹¹³ PG 4r 6, Ś 19, 3 and PSL *kā* a 5: nirāmagandhāḥ, which seems to be the correct reading; after this word, PG & Ś + sarvakuśalavitarakavīgatāḥ.

¹¹⁴ PD 10, 4 & PSL *kā* a 5: idṛśaṃ sukhaṃ pratilabhante sma.

¹¹⁵ yad ... sma: PD 10, 6 & PSL *kā* a 6: yad anyabuddhākṣetrasthā buddhā bhagavanta evaṃ [PSL + udānam] udānanti sma.

¹¹⁶ Ś 19, 7: saṃyamah.

¹¹⁷ sādhu dānaṃ ... prāṇibhūteṣu: PD 10, 7-8 & PSL *kā* a 6: sādhu damaḥ [PSL + sādhu śamaḥ] sādhu saṃyamah sādhu cīrṇo brahmacāryāvśaḥ sādhu prāṇibhūteṣu avihīṃseti.

登入 | Register

大藏經搜尋

論版主題

那落格 編輯
10
頭智巖的標

壯歲謁阿
別傳之

那落格 編輯
10

閱讀全文

最新回應

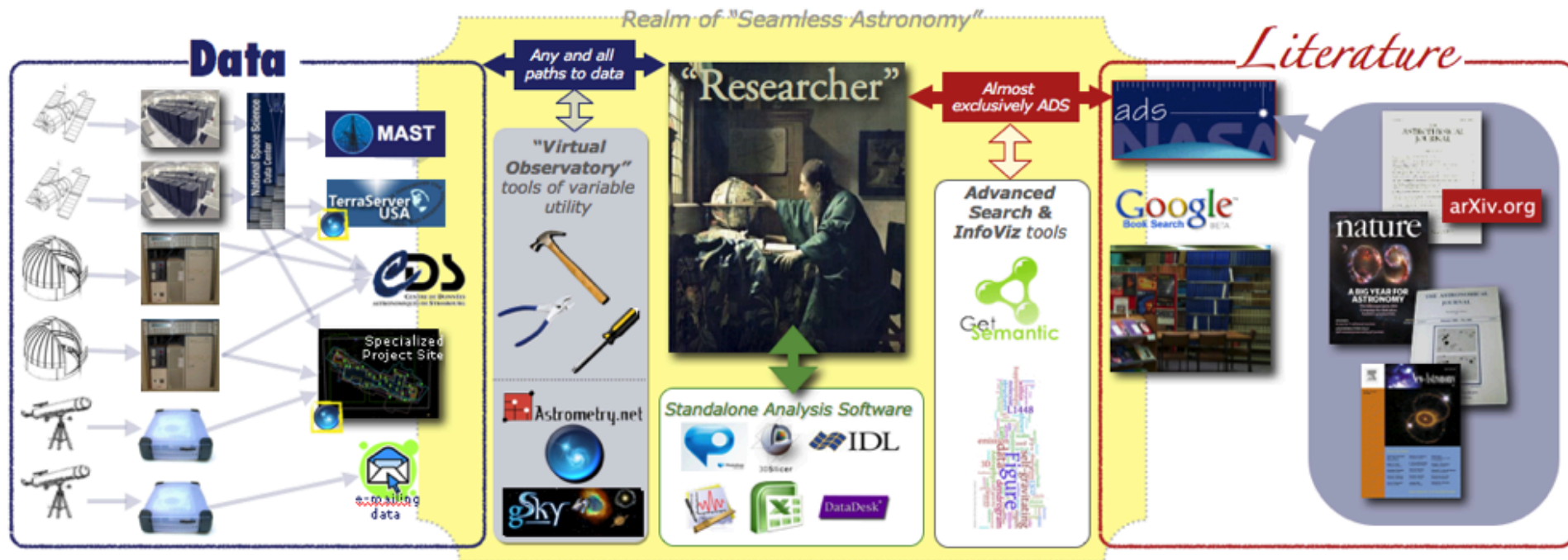
1) 卷29錯字

1) 牛頭智巖

，就是梅
也是花。不

勝，³³呵。
句也可改為

4. Open access to data is a paradigm shift



The Conundrum of Sharing Research Data

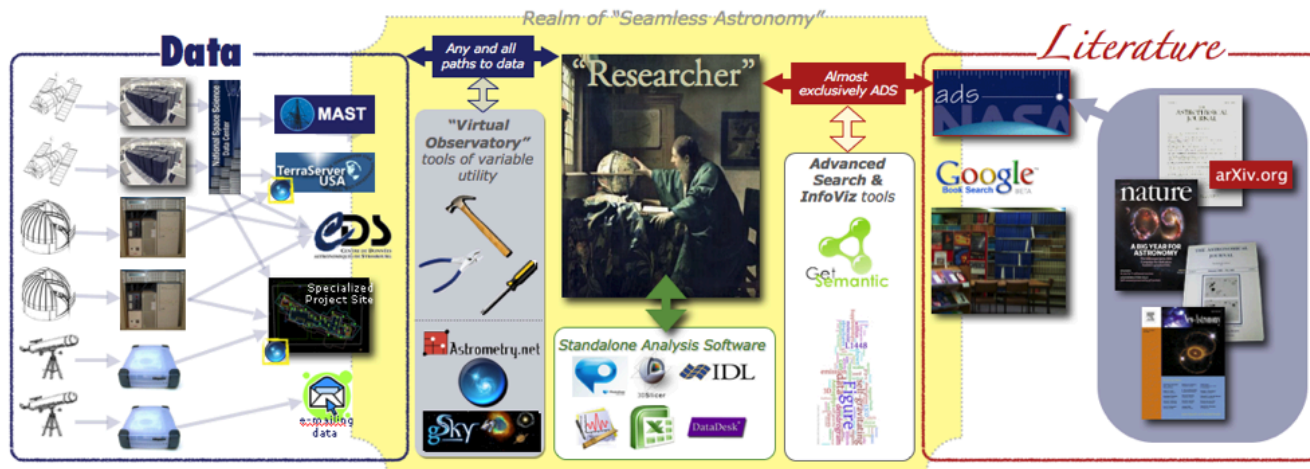
*If the rewards of the data deluge are to be reaped, then researchers who produce those data must share them, and do so in such a way that the data are interpretable and reusable by others.**



*Borgman, C.L. (2012). The Conundrum of Sharing Research Data. *Journal of the American Society of Information Science and Technology*, 63(6):1059–1078

Research practices

- Goal is publications that report the research
- Goal is data that are reusable by others



Data practices and reusability

Industrial methods

Artisanal methods

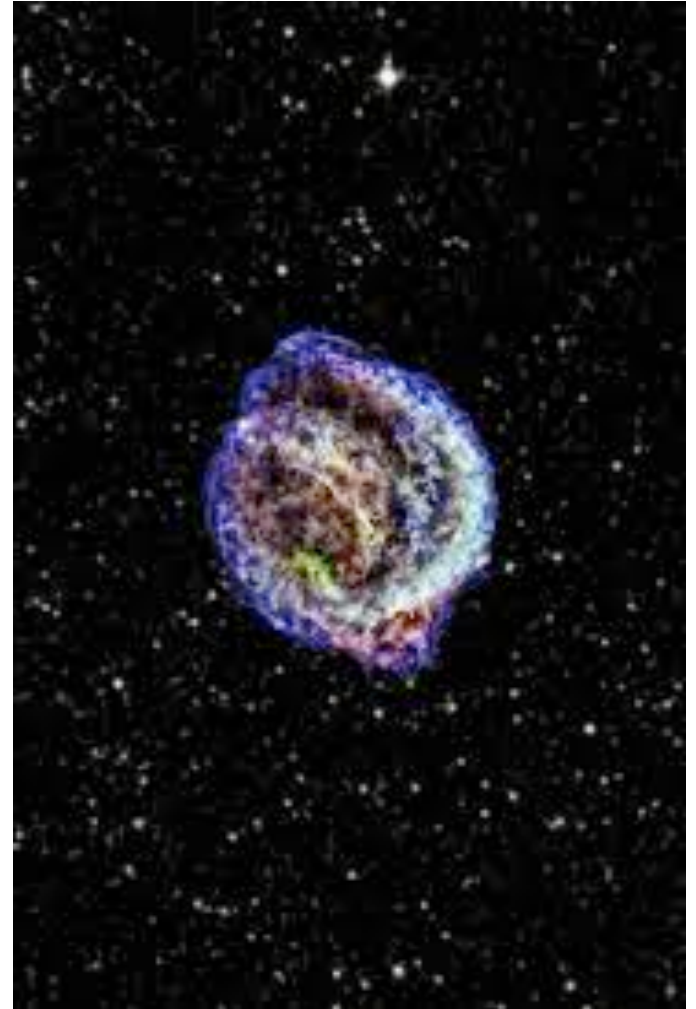


Replication

Interpretation

Degrees of reuse

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



Data reuse is difficult

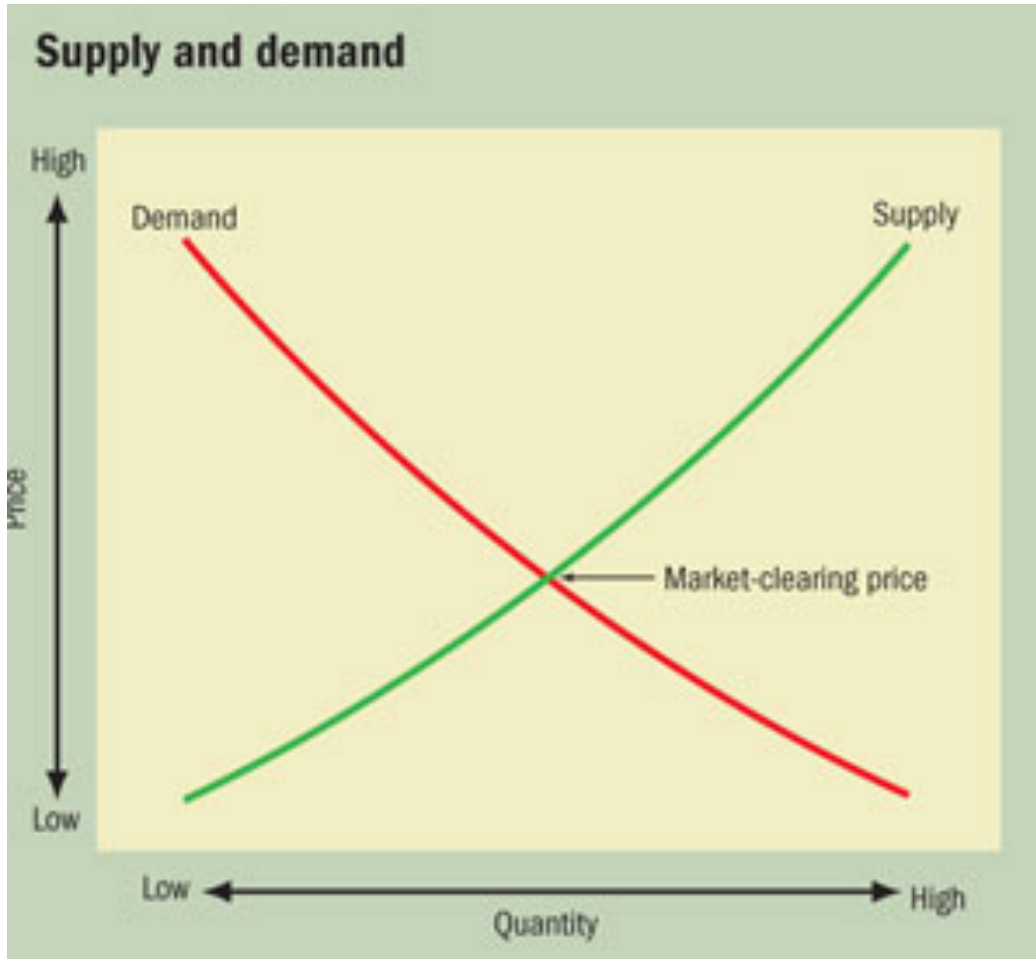
- Identify
- Retrieve
- Open
- Read
- Interpret
- Evaluate
- Compute upon
- Replicate
- Combine
- Describe
- Annotate
- License/rights
- Provenance
- Trust
- Attribution...

The screenshot shows the PLOS ONE website interface. At the top, there are navigation links for 'Subject Areas', 'For Authors', and 'About Us', along with a search bar and a 'sign in' button. The article title is 'If We Share Data, Will Anyone Use Them? Data Sharing and Reuse in the Long Tail of Science and Technology' by Jillian C. Wallis, Elizabeth Rolando, and Christine L. Borgman. The article is marked as 'OPEN ACCESS' and 'PEER-REVIEWED'. It has 5,483 views, 1 citation, 12 saves, and 205 shares. The article is categorized as a 'RESEARCH ARTICLE'. Below the title, there are tabs for 'Article', 'About the Authors', 'Metrics', 'Comments', and 'Related Content'. The 'Article' tab is active, showing a diagram of research areas and a table of metrics. The 'Metrics' tab shows a table with columns for 'Research Area', 'Status', 'Round 1', 'Round 2', and 'Totals'. The 'Related Content' tab shows a list of related articles. On the right side, there are buttons for 'Download', 'Print', and 'Share', and a 'Subject Areas' section with tags for 'Data management', 'Data processing', 'Oceans', and 'Research laboratories'.

Research Area	Status	Round 1	Round 2	Totals
Application Scientists	Faculty	7	6	13
	Staff	5	2	7
	Student	3	2	5
Technology Researchers	Faculty	4	2	6
	Staff	1	2	3
	Student	2	2	4
Totals		22	21	43

Wallis, J. C., Rolando, E., & Borgman, C. L. (2013). If We Share Data, Will Anyone Use Them? Data Sharing and Reuse in the Long Tail of Science and Technology. *PLoS ONE*, 8(7), e67332. doi:10.1371/journal.pone.0067332

Supply =
continuity,
trust



Demand =
investment,
risk

Infrastructure and incentives

- Knowledge infrastructure investments
 - Data archives
 - Tools, services, support
 - Data curation workforce
 - Data management training
 - Digital libraries
- Alignment of incentives
 - Data release
 - Data reuse
 - Publishing
 - Grants and funding
 - Credit and promotion

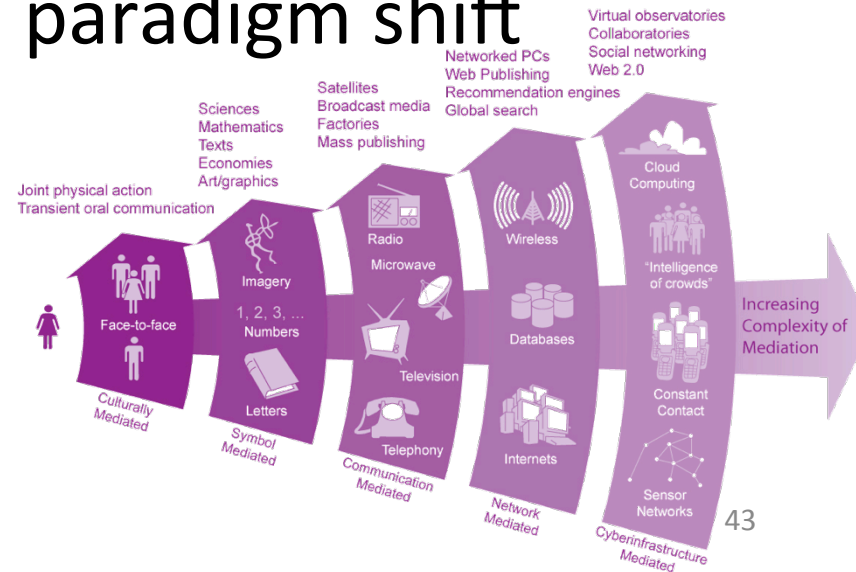


10 Simple Rules for the Care and Feeding of Scientific Data*

1. Love your data, and let others love it too.
2. Share your data online, with a permanent identifier.
3. Conduct science with data reuse in mind.
4. Publish workflow as context
5. Link your data to your publications as early as possible.
6. Publish your code (even the small bits).
7. Say how you want to get credit for your data (and software).
8. Foster and use data repositories.
9. Reward colleagues who share their data properly.
10. Help establish “Data Science” and “Data Scientists” as vital.

Theories and themes

1. Open scholarship is the norm
2. Formal and informal scholarly communication are converging
3. Data practices are local
4. Open access to data is a paradigm shift



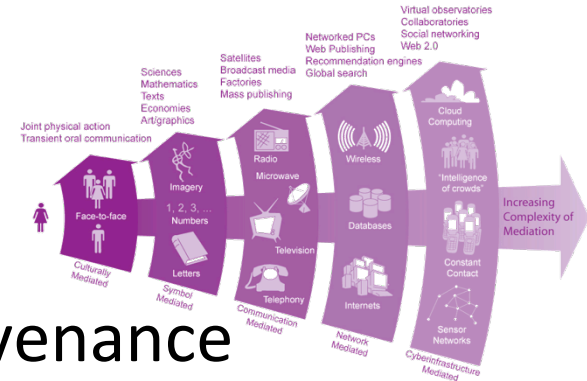
Conclusions: What to Keep

1. Open scholarship is the norm

- Publications
- Data: code, documentation, provenance
- Links between research objects

2. Formal and informal scholarly communication are converging

- Fixed research objects
- Dynamic research objects
- Context and relationships



Conclusions: What to Keep

3. Data practices are local

- Industrial processes: data archives
- Artisanal processes: orphaned data

4. Open access to data is a paradigm shift

- Conduct research with reuse in mind
- Start – not end – with digital library services



Acknowledgements

- UCLA Data Practices team

- Rebekah Cummings, Peter Darch, David Fearon, Ariel Hernandez, Matthew Mayernik, Alberto Pepe, Ashley Sands, Katie Shilton, Sharon Traweek, Jillian Wallis, Laura Wynholds, Kan Zhang

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- Microsoft External Research



- University of Oxford

- Balliol College
- Oliver Smithies Fellowship
- Oxford Internet Institute
- Oxford eResearch Center
- Bodleian Library

