SUB | NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN

Tomorrow's Research Heritage

Overview

GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

[Anlass der Präsentation]

NIEDERSÄCHSISCHE STAATS- UND
UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN | SUB

I. WHAT IS RESEARCH HERITAGE?

Research is about nature, mankind and knowledge

- „A natureza é o único livro que oferece grande conteúdo em todas as folhas. "

- „Die Natur ist das einzige Buch, das auf allen Blättern großen Gehalt bietet."

Goethe

What is research? – Observing nature

What is research? – Collecting evidence
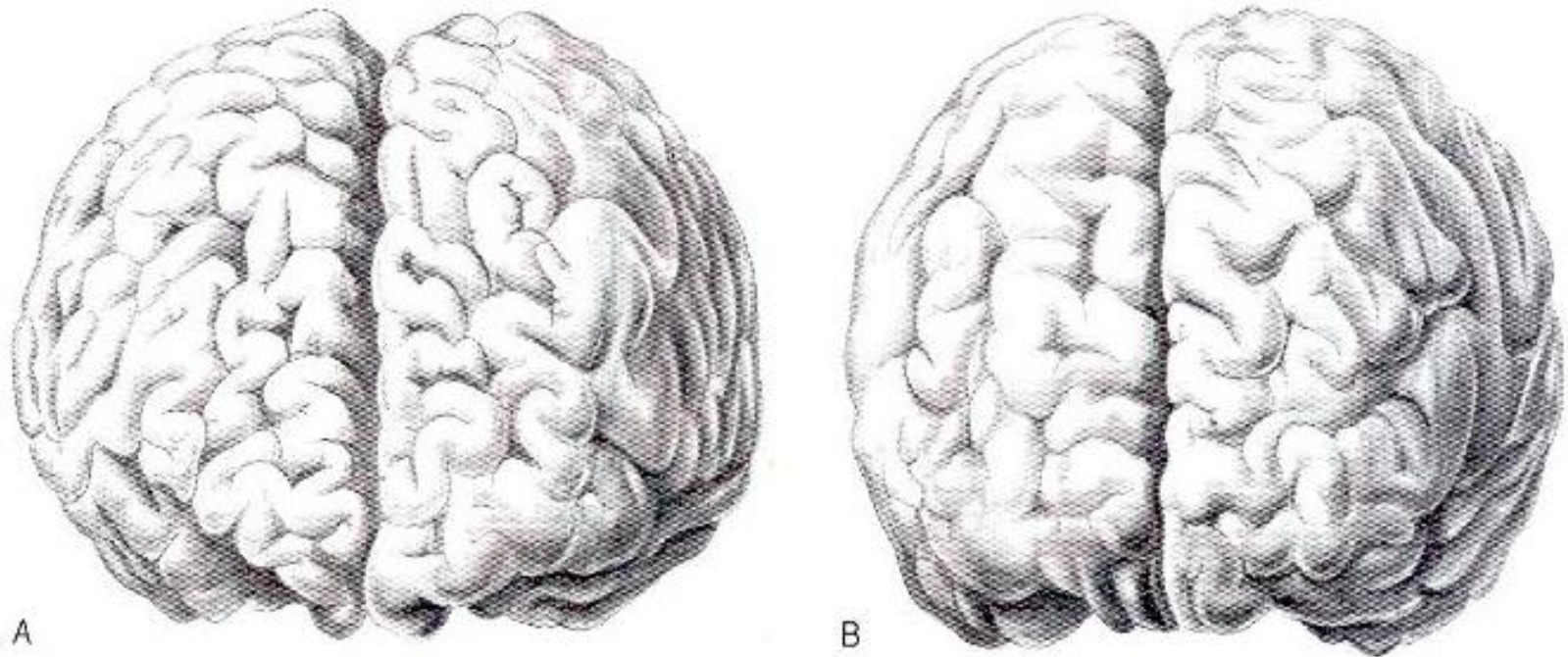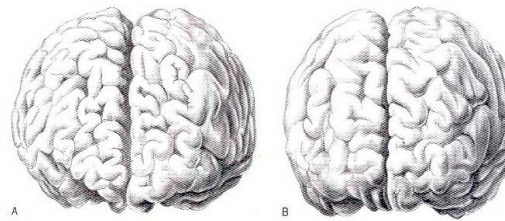
What is research? – Documenting

FIGURE 4-2. Reproduced from Wagner (1860), Table 3, showing the frontal lobe of the brain of Gauss (A) compared with that of a worker, age 57 (B). There is a difference, but part of it is explained by the "stenogyrencephalic" (numerous, narrow gyri) pattern in the former and the "eurygyrencephalic" (fewer but broader gyri) pattern in the latter. Both Retzius' types may occur in well-developed brains. (After Meyer, 1977.)

What is research? – Communication
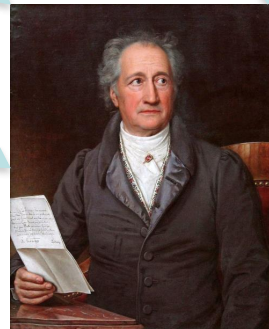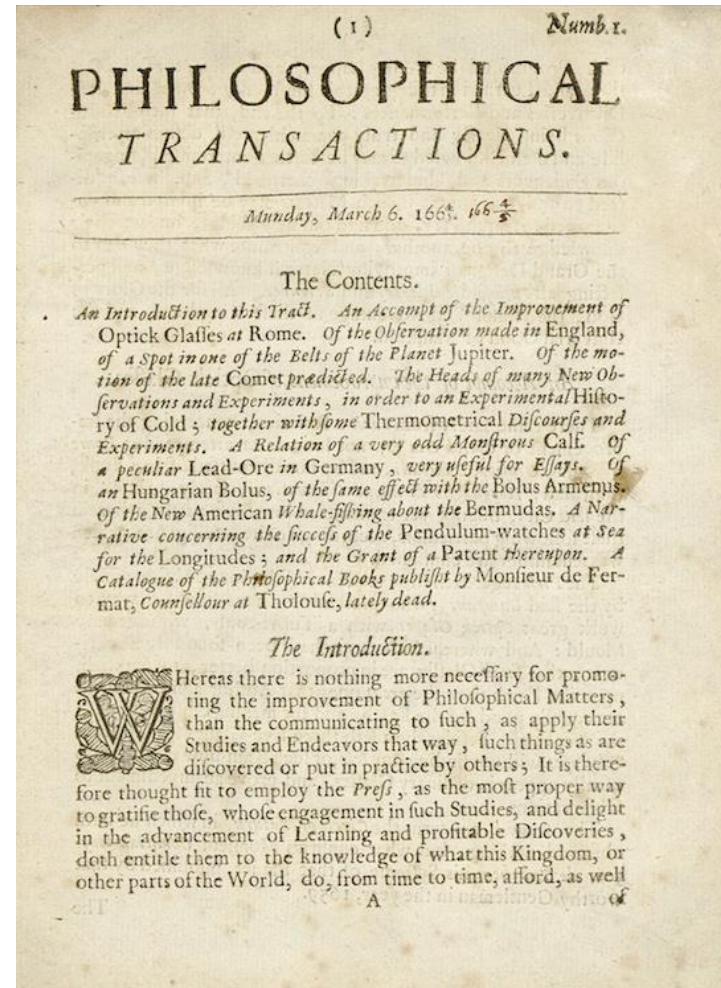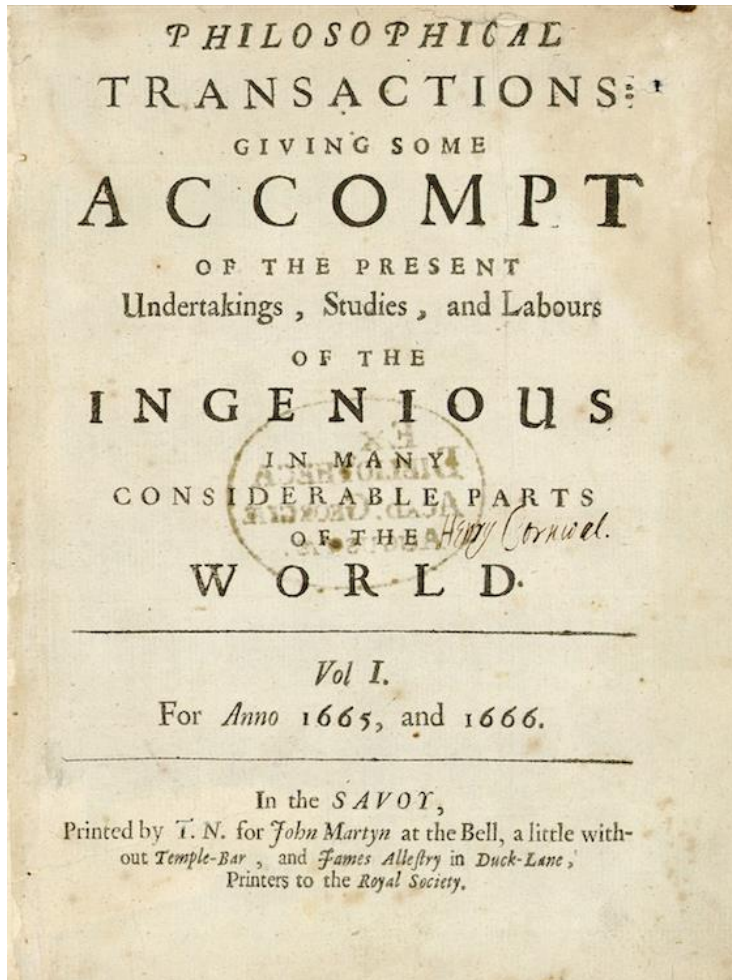
What is research heritage? – Food for thought!

Reusing
Reproducing
Communicating

II. THE DATA REVOLUTION

The Separation of Libraries and Data through Labs

Literature is here to stay...

It cannot be foreseen that literature will not be
at the heart of scholarship in the next decades.

...but new things come on top.
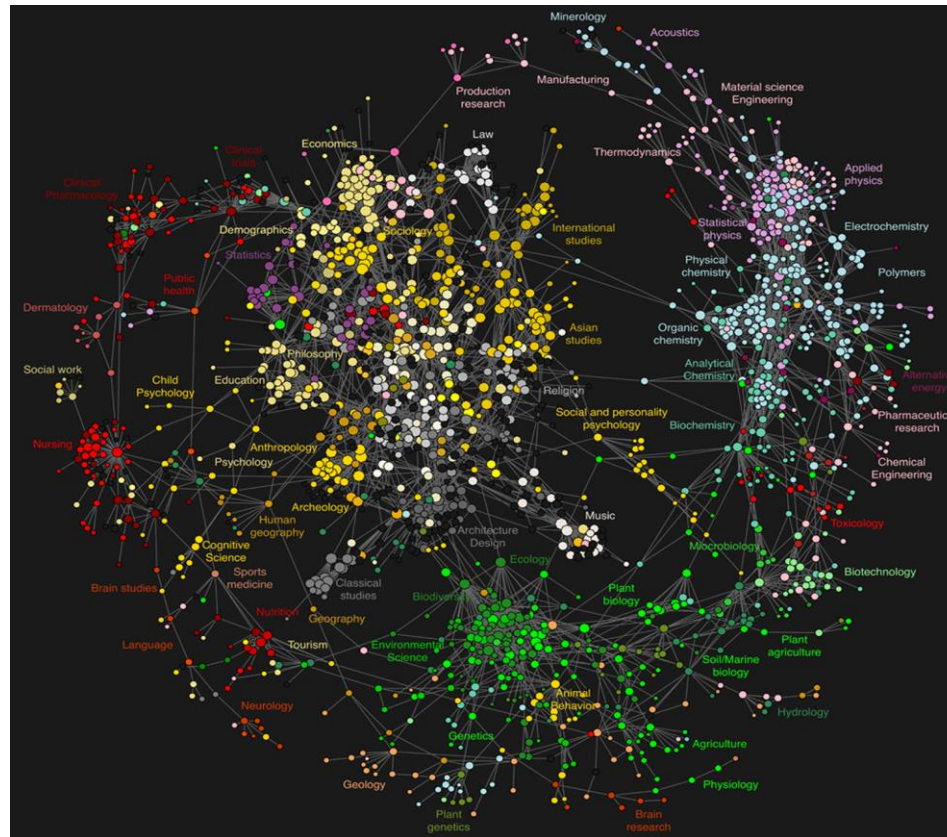
http://newsinfo.iu.edu/pub/libs/images/usr/9584_h.jpg

The world of knowledge has changed radically
– arriving at a universal encyclopaedia.

New types of users

http://www.flickr.com/photos/derrypubliclibrary/376225190

http://www.flickr.com/photos/fumi/2668956097/

Library users are not only *readers* but *knowledge workers*.

New units of knowledge

http://www.ukpmc.co.uk

Enhanced publications are a continuum of textual resources and underlying data.

New technology
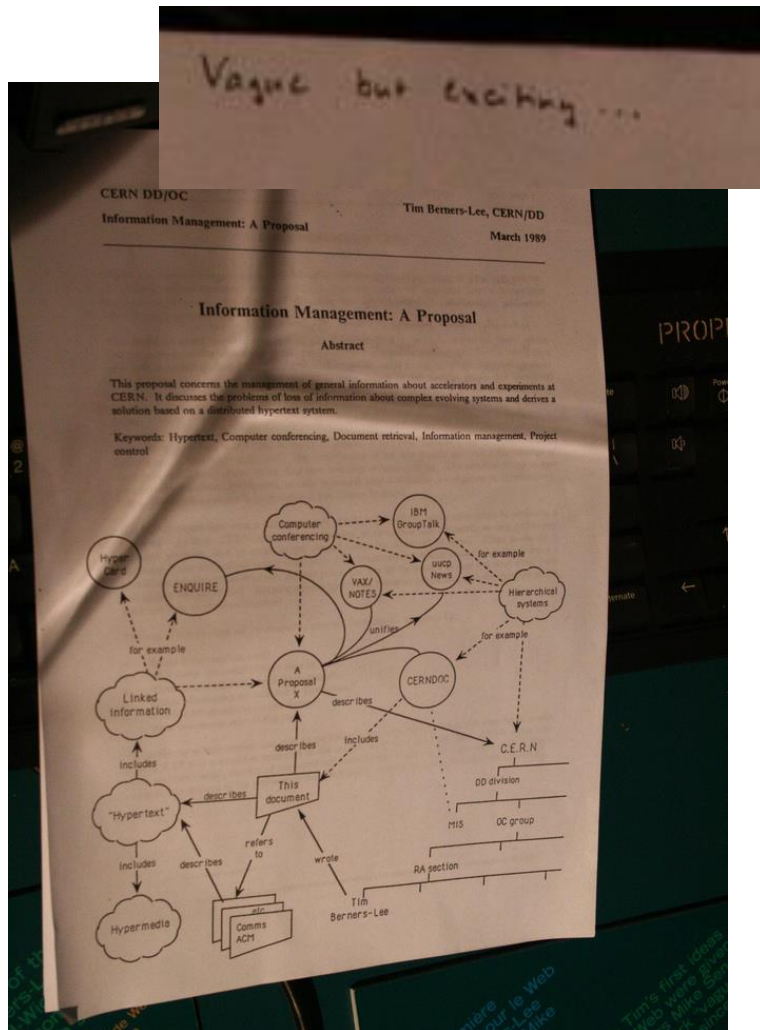
Complex knowledge resources can now be modelled and linked on the web – even for inferential computing.

Data at the heart of research

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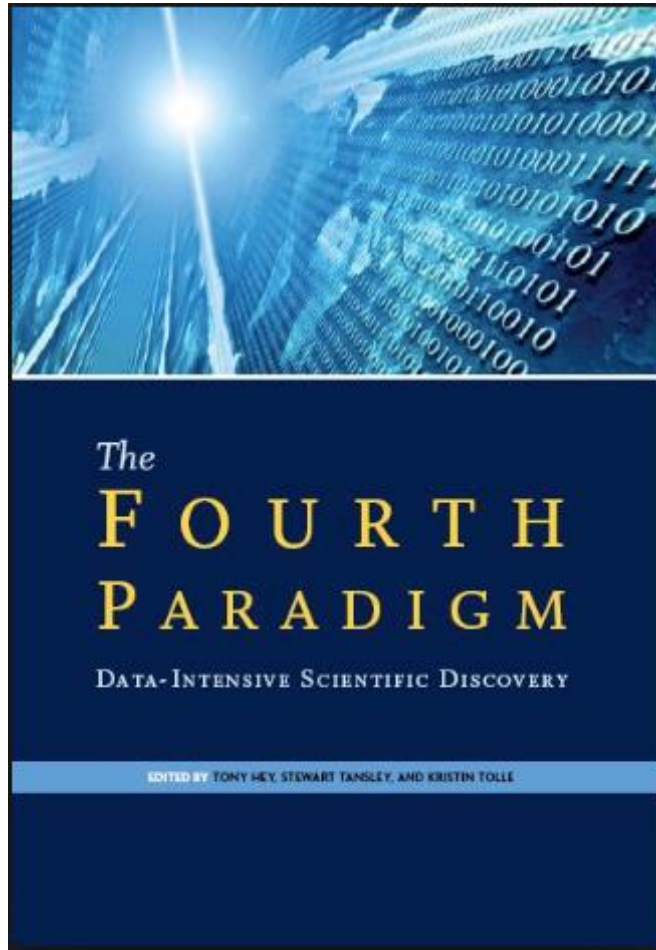
What changed? The atomisation of knowledge resources

© DAAD/Volker Lannert
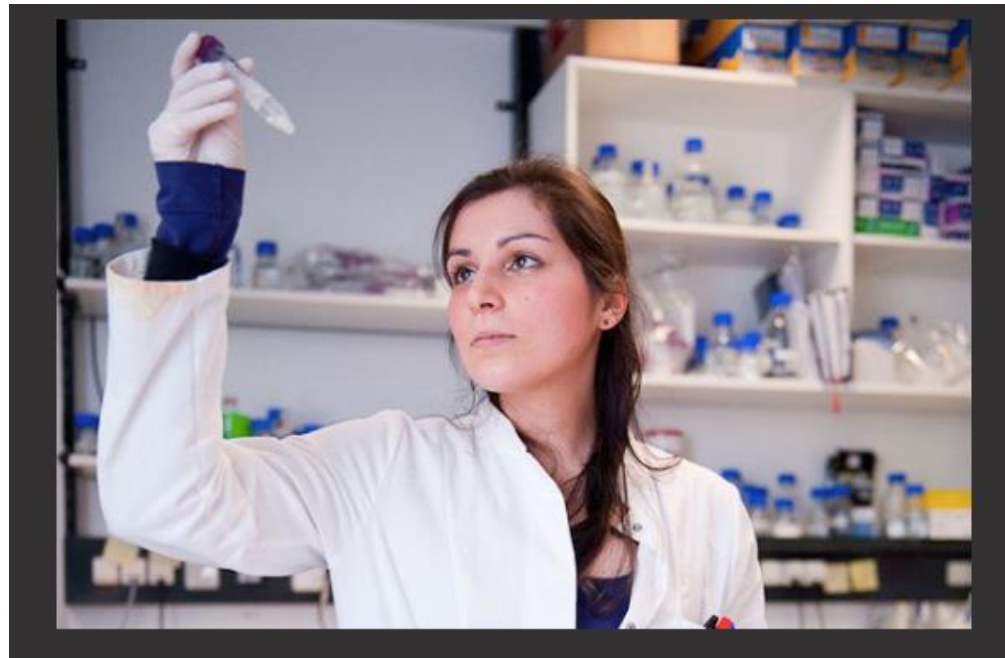
What stayed? Research heritage is food for thought!
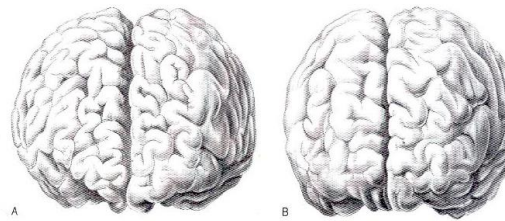
FIGURE 4-2. Reproduced from Wagner (1860), Table 3, showing the frontal lobe of the brain of Gauss (A) compared with that of a worker, age 57 (B). There is a difference, but part of it is explained by the "stenogyrencephalic" (numerous, narrow gyri) pattern in the former and the "eurygyrencephalic" (fewer but broader gyri) pattern in the latter. Both Retzius' types may occur in well-developed brains. (After Meyer, 1977.)
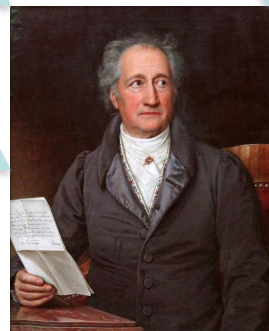
McLuhan's *Sensorium*
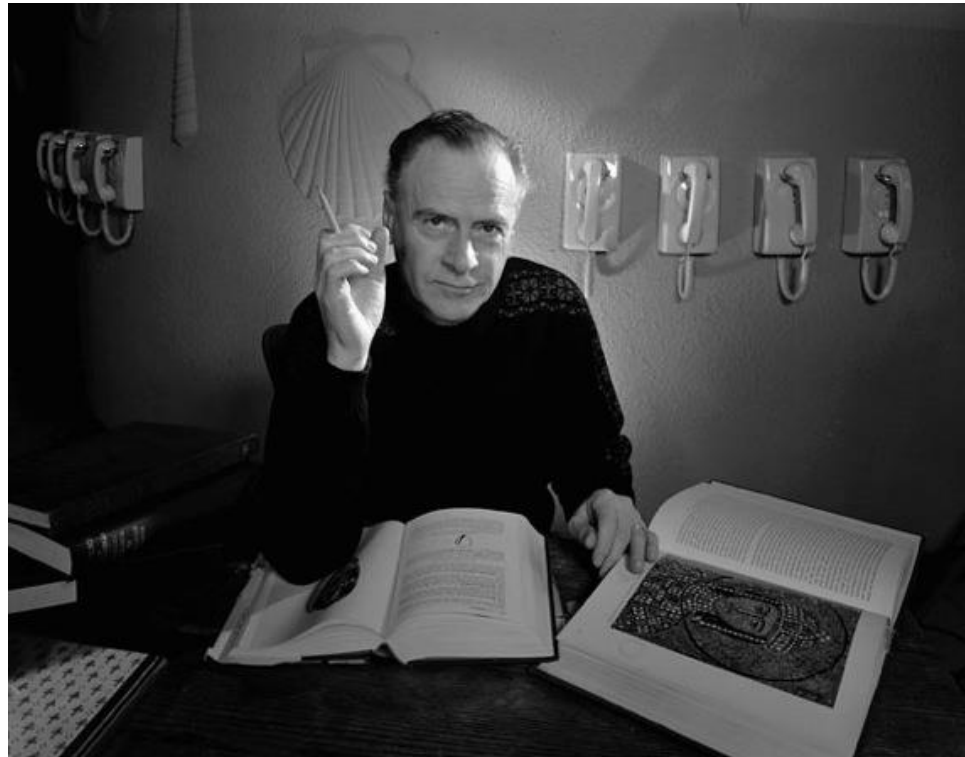
There is no principal difference between physical and digital knowledge resources ('media') – both are the extensions of human needs

III. Information professions at the crossroads

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The future belongs to knowledge networks

*DIFFERENTIATION OF
KNOWLEDGE REPRESENTATIONS*

**Knowledge
Networks**

Data

Text

Text

TIME

Past   Present   Future
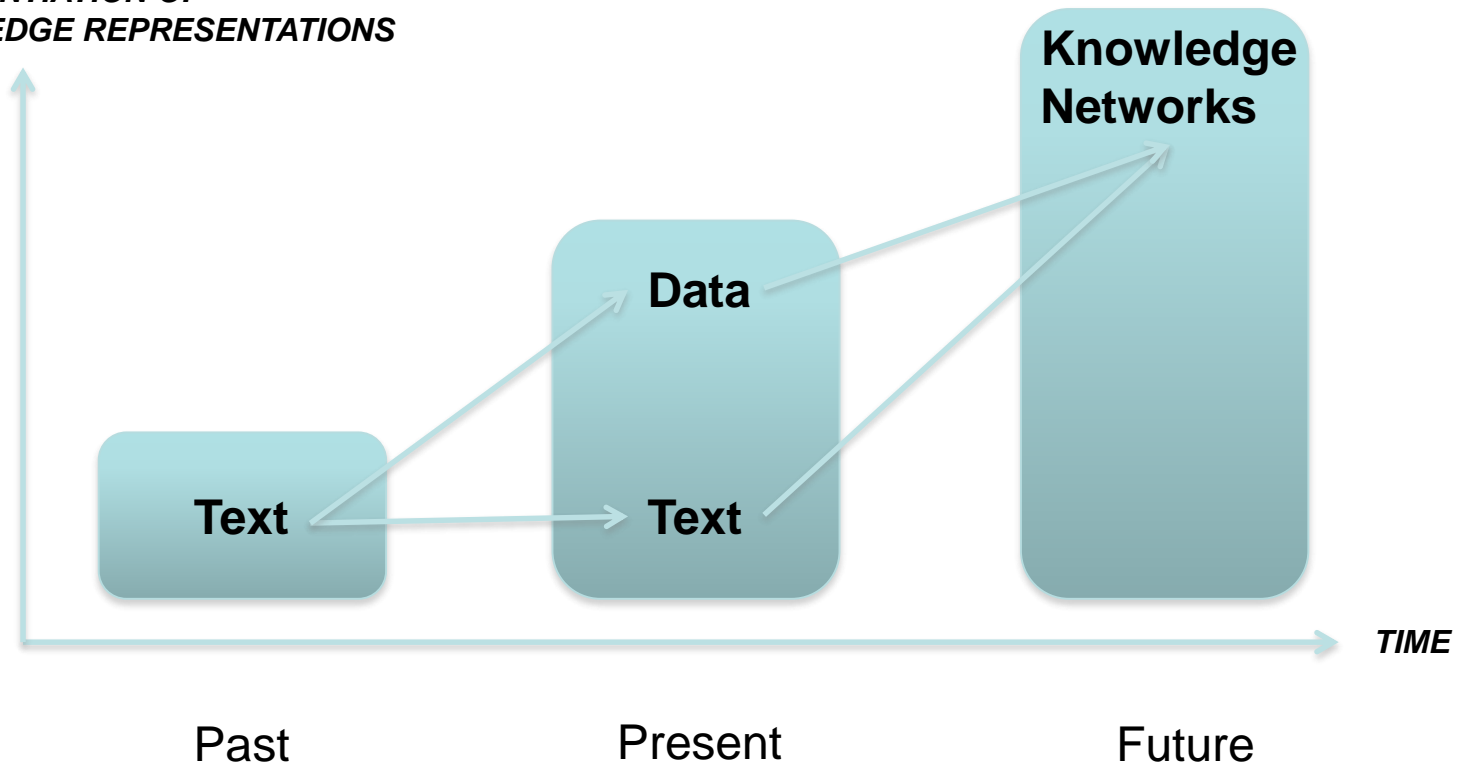
Information professions at the crossroads

• The future will bring even more complex knowledge networks

• Text is not the exclusive form of knowledge representation

• This challenge is too large to be mastered alone

• All information professions need to transform

• All information professionals need to transform together to create tomorrow's research heritage – otherwise a new profession might take over

IV. WHAT CAN WE DO?

Look at Libraries Practice

Ten recommendations for libraries to get started with research data management

Final report of the LIBER working group on E-Science / Research Data Management

Look at Archivists' Practice

Look at University Policy

LEAGUE OF EUROPEAN RESEARCH UNIVERSITIES

ADVICE PAPER

No.14 - DECEMBER 2013

LERU ROADMAP FOR RESEARCH DATA

Engage in Expert Conversations

Refer to Existing Repositories

UNIVERSITY EXAMPLE: BIELEFELD

RDM Principles

Grundsätze zu Forschungsdaten an der Universität Bielefeld

Forschende an der Universität Bielefeld sollen Forschungsdaten* nach folgenden Grundsätzen als wertvolles wissenschaftliches Werk behandeln:

- Über den gesamten Forschungszyklus – von der Datengewinnung bis zur Publikation – sollen Forschungsdaten sorgfältig und nach hohen fachlich einschlägigen Standards behandelt und dokumentiert werden.

- Ein „Data Management Plan" und fachspezifische Richtlinien** für Einrichtungen und Projekte soll durch die jeweils verantwortliche Leitung bereitgestellt werden – vor allem in jedem neuen, Daten-intensiven Drittmittelantrag.

- Das Forschungsdaten-Management in Einrichtungen und Projekten soll auf eine möglichst breite und langfristige Nutzung in Forschung, Anwendung und Öffentlichkeit ausgerichtet sein, wobei Verwertungsinteressen, der Schutz persönlicher Daten und Verpflichtungen gegenüber Dritten ausgewogen berücksichtigt werden.

- Zur nachhaltigen Verankerung und Entwicklung eines qualitätsvollen Forschungsdaten-Managements soll die fachspezifische Methodenausbildung sowie die Vermittlung von Prinzipien guter wissenschaftlicher Praxis in Lehre und Weiterbildung angemessen thematisiert werden.

Forschungsdaten stellen im weitesten Sinne Primärdaten, Sekundäranalysen, Visualisierungen, Modelle, Analysewerkzeuge, Objektsammlungen oder Produkte dar, die während des wissenschaftlichen Arbeitsprozesses erzeugt und benutzt werden.

Research for Cognitive Interaction

Projects

View all issues | Overall spent time | Overall activity

3D Indoor Scenes Database

Articulated Scene Model
The software implements a state-of-the-art algorithm for three dimensional scene segmentation. The algorithm intends to build up a robust static background model of the scene and extracts moveable and highly dynamic objects in the foreground. For system integration the package also includes application nodes for middleware connection and grabbing/visualization purposes....

BielefeldTypeLibrary
BTL – The Bielefeld Type Library (BTL)

The Bielefeld Type Library (BTL) is a collection of XML-based data descriptions that are exchanged between components (e.g. Icewing) or systems (e.g. BIRON/ToBI). It provides functionality for parsing/creating data objects and is currently available in C++/Java. For more detailed info please refer to the wiki....

Bonsai
Bielefeld Sensor and Actuator Interface

BonSAI is a robot behavior abstraction layer written in Java. It aims to provide a simple interface to various functions of a robotic system and can define behaviors and skills according to these functions....

CITEC Gentoo Portage Overlay
This is a repository of gentoo ebuilds mostly of software packages developed within the University of Bielefeld (CITEC/CoR-Lab) but also of open source software from third parties. You may use this overlay, please do not hesitate to file bugs. Be aware to use this overlay at your own risk. ...

emblued

Projects

☐ View closed projects

[Apply]

Project INF

Information and Data Infrastructure

People   **Summary**   **Publications**

- Friedhoff, Stefan, Meier zu Verl, Christian, Pietsch, Christian, Meyer, Christian, Vompras, Johanna, & Liebig, Stefan (2013): *Social Research Data: Documentation, Management, and Technical Implementation within the SFB 882*. (SFB 882 Working Paper Series 16). DFG Research Center (SFB) 882 From Heterogeneities to Inequalities, Bielefeld.
  PUB | PDF | URL

- Friedhoff, Stefan, Meier zu Verl, Christian, Pietsch, Christian, Meyer, Christian, Vompras, Johanna, & Liebig, Stefan (2013): *Replicability and Comprehensibility of Social Research and its Technical Implementation*. (RatSWD Working Paper Series 219). SCIVERO Press, Berlin.
  PUB | URL

- Meier zu Verl, Christian (2013): Der praktische Charakter wissenschaftlicher Theorien. Bericht von der GWTF-Jahrestagung. *Technikfolgenabschätzung - Theorie und Praxis, 22*(1), 106–108
  PUB | URL

- Kramer, Stefan, Leahey, Amber, Southall, Humphrey, Vompras, Johanna, & Wackerow, Joachim (2012): *Using RDF to Describe and Link Social Science Data to Related Resources on the Web*. (German Council for

News

- Besuch aus New York: Prof. Dr. Dalton Conley zu Gast im SFB 882
  17.06.2013

- Neue Gastwissenschaftlerin im SFB 882: Prof. Dr. Elke Winter, University of Ottawa
  10.06.2013

- Vortrag von Prof. Dr. Hans-Ulrich Wehler zum Thema "Soziale Ungleichheit in Deutschland"
  18.04.2013

  ≡ all news

Recent Publications

- Bilecen, Basak (2013): *Analyzing Informal Social Protection Across Borders: Synthesizing Social Network Analysis with Qualitative Interviews*

- Schunck, Reinhard (2013):

Universität Bielefeld
Fakultät für Soziologie

Datenservicezentrum
Betriebs- und OrganisationsDATEN

INFORMATION.plus! <ddi> Metadata powered by DDI

Inhalte «

Willkommen ✖ | **Verknüpfte Personen-Betriebsdaten im Anschluss an den ALLBUS 2008 (Studien-ID: allbus)** | Suchergebnisse

Studien-Navigation −

- Verknüpfte Personen-Betriebsdaten im Anschluss an den ALLBU
  - ALLBUS 2008
  - **ALLBUS Betriebsbefragung 2009**
- Beschäftigungsverhältnisse als sozialer Tausch
  - BEATA Betriebsfallstudie
  - BEATA Beschäftigten-Befragung
  - BEATA Partner und Partnerinnen-Befragung
- Betrieb und Beschäftigung im Wandel: Betriebliche Beschäftigungs
  - SFB580-B2 Betriebspanel Welle 1
  - SFB580-B2 Betriebspanel Welle 2
  - SFB580-B2 Betriebspanel Welle 3
- Entwicklung und Validierung eines Diagnosewerkzeugs zur Erfass
  - InnoKenn Experteninterviews
  - InnoKenn Fallstudien
  - InnoKenn Workshops
- Demografischer Wandel und der Arbeitsmarkt des öffentlichen Se
  - SFB580-B8 Intermediäre
  - SFB580-B8 kommunaler Vertreter
  - SFB580-B8 schulische Entscheidungsträger
- A balanced approach to understanding the shaping of human reso
- Abhängige Selbständigkeit in der Versicherungswirtschaft - Neue
- AEVO Betriebs- und Kammerbefragung 2007
- Affective Complementarity in Service Encounters
- Aging Workforce Management in der Automobilindustrie. Definition

Suche nach Studien +

Kurzbeschreibung	Der inhaltliche Fokus der Betriebsbefragung lab auf Sozialer Ungleichheit innerhalb von Betrieben. S Allgemeine Betriebsstrukturdaten, Marktposition des Betriebs, Mitbestimmung, Personalstruktur, Pers Qualifikationsgruppen, Entlohnung, Arbeitsbedingungen sowie methodische Fragen und Information
Untersuchungsgegenstand	Betriebe
Sektor	Öffentlich und privat
Branchen	Keine Branchenauswahl
Untersuchungsgebiet	Deutschland

Durchführung

| Vorbereitende Maßnahmen | Dem Projekt vorgeschaltet war eine Pilotstudie im Rahmen einer rund 1000 Befragte umfassende Panels (SOEP) 2007. Darin wurden aktuell erwerbstätige und arbeitslos gemeldete Personen nac Betriebsstätte gefragt. Die angegebenen Adressen wurden bereinigt, so dass im Anschluss die B |

Sampling

| Auswahlverfahren | Ausgangspunkt waren die Befragten des ALLBUS 2008, die zum Zeitpunkt der Befragung in ein abhängig beschäftigt waren. Insgesamt waren dies 1.101 Personen. Davon machten 943 Pers genannten Adressen wurden anschließend in einer Recherche überprüft. 719 Adressen konnte entsprechenden Betriebe wurden kontaktiert. In 194 Fällen konnte schließlich ein Interview reali sich auf Betriebe, in denen zwei Beschäftigte an der ALLBUS Personenbefragung teilgenommer Personalverantwortlicher oder Betriebsleiter befragt. |
| Maßnahmen zur Erhöhung der Response | Es wurden gezielt Interviewer eingesetzt, die eine langjährige Erfahrung mit Betriebsstudien hab |

Ebene	Anzahl Einheiten	Anzahl Personen pro Ebene (min.)	Anzahl Personen pro Ebene (max.)	Anteil erh. Mitglieder/Betr... (min.)	Anteil erh. Mitglieder/Betrieb (max.)
Betriebe	194				

RDM Resolution

Resolution

Resolution on Research Data Management

Bielefeld University is firmly committed to supporting its academics in implementing the '**Principles and guidelines on handling research data at Bielefeld University**' from 19 July 2011 to promote a quality-assuring research data management.

1. The Rektorat requests applicants to take advantage of the university's advisory services – above all during the preparatory stage of any funding proposal requiring a data management plan (e.g. for the German Research Foundation, DFG)

2. The Rektorat encourages academics to publish their research data through a registered research data archive within their discipline, or, if this is not available, through the research data repository of Bielefeld University. Publication should take the interests of persons and companies into account and be based on binding licensing conditions.

To fulfil **Point 1,** the **Coordination Centre** for Research Data at the Bielefeld University Library offers comprehensive advisory services on data management planning and continuous data documentation.

In line with **Point 2**, Bielefeld University Library supports faculties and academia to interlink existing data services with the worldwide network of data archives. At the same time, the institutional repository **PUB – Publikationen an der Universität Bielefeld** offers services for the publication of research data. Directories such as the DFG-funded "**Registry of Research Data Repositories**" also list appropriate locations for depositing data.

(adopted by the Rektorat in its session held on 12 November 2013)

Institutional Repository

Institutional Repository

Institutional Repository

Eyetracking-Experiment zu situativen Einflüssen auf Gerechtigkeitsurteile

Friedhoff S, Liebig S, May M, Sauer C, Schneider S, Valet P (2014)
SFB 882. doi:**10.4119/unibi/sfb882.2014.8**

DOI   **10.4119/unibi/sfb882.2014.8**

Research Data   *Mark*

Details

Authors   **Friedhoff, Stefan**[UniBi] ; **Liebig, Stefan**[UniBi] ; **May, Meike**[UniBi] ; **Sauer, Carsten**[UniBi] ; **Schneider, Simone**[UniBi] ; **Valet, Peter**[UniBi]

Department   SFB 882 Von Heterogenitäten zu Ungleichheiten
                            SFB 882 Teilprojekt A6

Abstract:

Ziel des Experimentes war es die Aufmerksamkeit der Befragten bei der Beantwortung von Vignetten zum Thema Einkommensgerechtigkeit unter bestimmten Rahmenbedingungen zu verfolgen. Die Experimentellen Bedingungen waren (1) Bezahlung vor dem Experiment / Bezahlung nach dem Experiment. (2) Kooperatives Priming (Scrambled Sentence Test)/Neutrales Priming. Die Befragten müssen im Vignettenmodul das Einkommen

Export

[0] Marked Publication
Open Data PUB

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JOURNAL EXAMPLE: NATURE

nature
International weekly journal of science

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Archive > Volume 515 > Issue 7527 > Editorial > Article

NATURE | EDITORIAL

Data-access practices strengthened

19 November 2014

PDF   Rights & Permissions

In our continued drive for reproducibility, *Nature* and the Nature research journals are strengthening our editorial links with the journal *Scientific Data* and enhancing our data-availability practices. We believe that this initiative will improve support for authors looking for appropriate public repositories for their research data, and will increase the availability of information needed for the reuse and validation of those data.

In 2013, Nature journals introduced new editorial measures to promote reproducibility, and we continue to evaluate their impact and refine our policies. Our newly strengthened data-availability practices (go.nature.com/o5ykhe) reflect our preference that data be deposited in public repositories, and encourage researchers to expand on work published in the Nature journals by publishing further information in *Scientific Data*.

JOURNAL EXAMPLE: SCIENTIFIC DATA

SCIENTIFIC DATA

About *Scientific Data*

Scientific Data is an open-access, peer-reviewed publication for descriptions of scientifically valuable datasets. Our primary article-type, the **Data Descriptor**, is designed to make your data more discoverable, interpretable and reusable.

Selecting a repository

Although *Scientific Data* mandates the release of the datasets that accompany our manuscripts, we do not ourselves host data. Instead, we encourage submission of datasets to community-recognized data repositories where possible, and recommend deposition in fig**share** or the Dryad Digital Repository when no community resource is available or (at least temporarily) if the most appropriate repository does not support confidential peer-review. For more information on this policy please see below, and our related blog post.

▶ Please see our list of recommended data repositories

Authors often present more than one kind of data in a Data Descriptor. As our articles link directly to each data record, publishing with us can facilitate the linking together of disparate types of data, and in such cases we recommend that each dataset be archived in the resource to which it is best suited. For example, raw and derived gene-expression data might best be deposited in ArrayExpress or GEO; however, the results of a principal component analysis, control qPCRs or blots, or associated phenotypic assays could be stored in, e.g., fig**share** or the Dryad Digital Repository.

View data repositories

- Life sciences:
  - nucleic acid sequence; protein sequence; molecular & supramolecular structure; neuroscience; omics; taxonomy & species diversity; life-science community resources
- Chemistry & chemical biology
- Environmental & geoscience
- Physics, astrophysics & astronomy
- Social sciences
- General science

Life sciences

Nucleic acid sequence

Sequence information should be deposited following the MIxS guidelines.

Simple genetic polymorphisms or structural variations should be submitted to dbSNP or dbVar (please note that these repositories cannot accept sensitive data derived from human subjects); the NCBI Trace Archive may be used for capillary electrophoresis data, while SRA accepts NGS data only.

| DNA DataBank of Japan (DDBJ) | view BioSharing entry |
| EMBL Nucleotide Sequence Database (ENA) | view BioSharing entry |

JOURNAL EXAMPLE: F1000 RESEARCH

F1000Research — Open for Science

General Terms

7. Data availability

All articles in *F1000Research* that report original results should include the source data underlying the results, together with details of any software used to process the results. It is essential that others can see the source data in order to be able to replicate the study and analyse the data, as well as in some circumstances, reuse it. Failure to provide the source data for publication without g[...]e[...] any reason[...] article being rejected. For detailed information about the type of data authors need to include when publishing an article in *F1000Research*, where the data can be stored, and how they should be presented see our Data Preparation guidelines

We recognize that there may be cases where openly sharing data may not be feasible (because of ethical or security considerations, or data protection issues). If you think that this applies to your article, please let the editorial team know at the submission stage, as we have policies in place to allow the publication of papers associated with such data, whilst maintaining the appropriate level of security.

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Data associated with *F1000Research* articles are made available, where possible, under the terms of a Creative Commons Public Domain Dedication (CC0 license). This facilitates and encourages re-use and helps prevent the problems of attribution stacking when combining multiple datasets each authored by multiple authors that use multiple different licences.

Referee reports that are published with a given article are also available under the CC BY license.

Hosting

4. Data Hosting

Data must be hosted by a stable and recognised open repository. Using such a repository ensures that your dataset continues to be available in a useable form in the future.

If there is a suitable subject-specific repository for your data, please deposit them there and include the Accession Number(s) or other Identifiers and database details in your manuscript. For some data types, such as genetic sequences and protein structures, it is essential that the data are deposited in GenBank and Protein Data Bank, respectively. For X-ray crystal structures, please also submit your validation reports. If there is no obvious subject-specific repository for your data, we will be happy to advise on suitable options.

For all other data, prepare the files according to the guidelines above and then submit to us along with your manuscript. We will need to know which file types you have and the approximate total size of your datasets. We will then arrange with you the best way to transfer the data to us. We will review and deposit the data on your behalf in the most suitable stable data repository. Please **do not** directly submit your data to an unstructured repository (e.g. figShare), as we have arrangements with several repositories that allow us to select the most suitable one for your data. This enables us to properly crosslink your data with the article and also allows readers to have the benefit of previewing your data within your article (for an example, see the data files in http://f1000research.com/articles/1-3/v1).

4.1 Non-exhaustive list of *F1000Research*-approved repositories

Below is a list of repositories that have already been approved for hosting data alongside an *F1000Research* article. If you are an author who wishes to use a repository not already on this list, or you manage a repository that you would like included on the list, please contact us.

Please include the name of the repository used at the end of the manuscript, along with details indicated in the 'What to add to manuscript' column.

Institutional Repositories

F1000Research can accept papers with the underlying data being hosted by an approved institutional data repository, such as Edinburgh DataShare. For other institutional repositories, please contact us

Call for Papers: IFLA Journal special issue on Research Data Services

Submission Deadline: **16 May 2016**

Libraries and archives around the world are applying the principles of library and archival sciences to address challenges and provide new services related to research data management. Librarians are helping researchers address needs throughout the research data lifecycle, for example, by conducting assessment and outreach, consulting on data management plans and metadata, incorporating data into information literacy instruction and collection management, and providing data publication and preservation services.

IFLA Journal invites papers for a special issue focused on research data services and libraries across all continents. The issue will be published in October 2016 as Volume 42:3. In particular, the main goal of the special issue is to gather the latest theory, research, and state-of-the-art practices from libraries that are informing and innovating effective data services.

Each issue of IFLA Journal is made available Open Access upon publication on IFLA's website. Authors are also encouraged to make the accepted version of their manuscripts available in their personal or institutional repositories.

Guest Editors:

Wolfram Horstmann
Director
Göttingen State and University Library

Michael Witt
Head, Distributed Data Curation Center
Purdue University Libraries

V. CONCLUSION

Summary

- Research is about obervations of nature, collecting and documenting evidence, and communication

- Research heritage is food for thought in communication and reproducibility

- Text and data are currently separated and need to be brought together to build an integrated corpus for knowledge networks, i.e. research heritage

- Information professions need to transform together to tackle the challenge

- Librarians, archivists and documentalists should form data specialists, engage in ongoing activities and support data curation

Tomorrow's Research Heritage integrates nature & books

- „A natureza é o único livro que oferece grande conteúdo em todas as folhas. "

- „Die Natur ist das einzige Buch, das auf allen Blättern großen Gehalt bietet."

Goethe

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Thank you for your attention