

Open Science

in wissenschaftlichen Einrichtungen

GEWISS Dialogforen Citizen Science | Hamburg, 04.05.2015

Heinz Pampel | Helmholtz-Gemeinschaft, Helmholtz Open Science Koordinationsbüro

AGENDA

- Definition und Beispiele
- Handlungsfelder
- Fokus: Open Research Data
- Herausforderungen

UNSERE MISSION

- Forschung zur **Lösung wichtiger Zukunftsfragen** von Gesellschaft, Wissenschaft und Wirtschaft – strategisch und langfristig orientiert
- Bau und Betrieb großer **Forschungsinfrastrukturen** („think big, act big“)
- Erkenntnisse zum **Nutzen** von Gesellschaft und Wirtschaft umsetzen

VON OPEN ACCESS ZU OPEN SCIENCE



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der Helmholtz-Zentren](#)

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22. Oktober 2003 Helmholtz-Geschäftsstelle

Berliner Erklärung über offenen Zugang zu wissenschaftlichem Wissen

Vorbemerkung

Das Internet hat die praktischen und wirtschaftlichen Bedingungen für die Verbreitung von wissenschaftlichem Wissen und kulturellem Erbe grundlegend verändert. Mit dem Internet ist zum ersten Mal die Möglichkeit einer umfassenden und interaktiven Repräsentation des menschlichen Wissens, einschließlich des kulturellen Erbes, bei gleichzeitiger Gewährleistung eines weltweiten Zugangs gegeben.

VON OPEN ACCESS ZU OPEN SCIENCE



The screenshot shows the top navigation bar of the Helmholtz website. On the left is the Helmholtz logo and a banner marking '20 Jahre'. The top right contains links for 'Kontakt', 'Impressum', 'Datenschutz', 'Newsletter', 'Sitemap', 'HelmholtzNET', and language options ('English', 'Русский', '中文'). A search bar with placeholder 'Suchbegriff' and a magnifying glass icon is also present. Below the header is a blue navigation bar with links for 'Über uns', 'Themen', 'Forschung', 'Helmholtz-Zentren & Netzwerke', 'Presse & Medien' (which is highlighted in white), and 'Jobs & Talente'.

Definition einer Veröffentlichung nach dem Prinzip des offenen Zugangs (Open Access-Veröffentlichung)

Der offene Zugang als erstrebenswertes Verfahren setzt idealerweise die aktive Mitwirkung eines jeden Urhebers wissenschaftlichen Wissens und eines jeden Verwalters von kulturellem Erbe voraus. Open Access-Veröffentlichungen umfassen originäre wissenschaftliche Forschungsergebnisse ebenso wie Ursprungsdaten, Metadaten, Quellenmaterial, digitale Darstellungen von Bild- und Graphik-Material und wissenschaftliches Material in multimedialer Form.

WICHTIGE LINKE

- Nachgefragt
- Wissenschaftsbild des Monats
- Online-Geschäftsbericht

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DIGITALE WISSENSCHAFT

OPEN  ACCESS Freely available online



The Expression of Emotions in 20th Century Books

Alberto Acerbi^{1,2*}, Vasileios Lampos³, Philip Garnett⁴, R. Alexander Bentley¹

1 Department of Archaeology and Anthropology, University of Bristol, Bristol, United Kingdom, **2** Centre for the Study of Cultural Evolution, Stockholm University, Stockholm, Sweden, **3** Department of Computer Science, University of Sheffield, Sheffield, United Kingdom, **4** Department of Anthropology, Durham University, Durham, United Kingdom

Abstract

We report here trends in the usage of “mood” words, that is, words carrying emotional content, in 20th century English language books, using the data set provided by Google that includes word frequencies in roughly 4% of all books published up to the year 2008. We find evidence for distinct historical periods of positive and negative moods, underlain by a general decrease in the use of emotion-related words through time. Finally, we show that, in books, American English has become decidedly more “emotional” than British English in the last half-century, as a part of a more general increase of the stylistic divergence between the two variants of English language.

Citation: Acerbi A, Lampos V, Garnett P, Bentley RA (2013) The Expression of Emotions in 20th Century Books. PLoS ONE 8(3): e59030. doi:10.1371/journal.pone.0059030

Editor: Sune Lehmann, Technical University of Denmark, Denmark

Received July 26, 2012; **Accepted** February 11, 2013; **Published** March 20, 2013

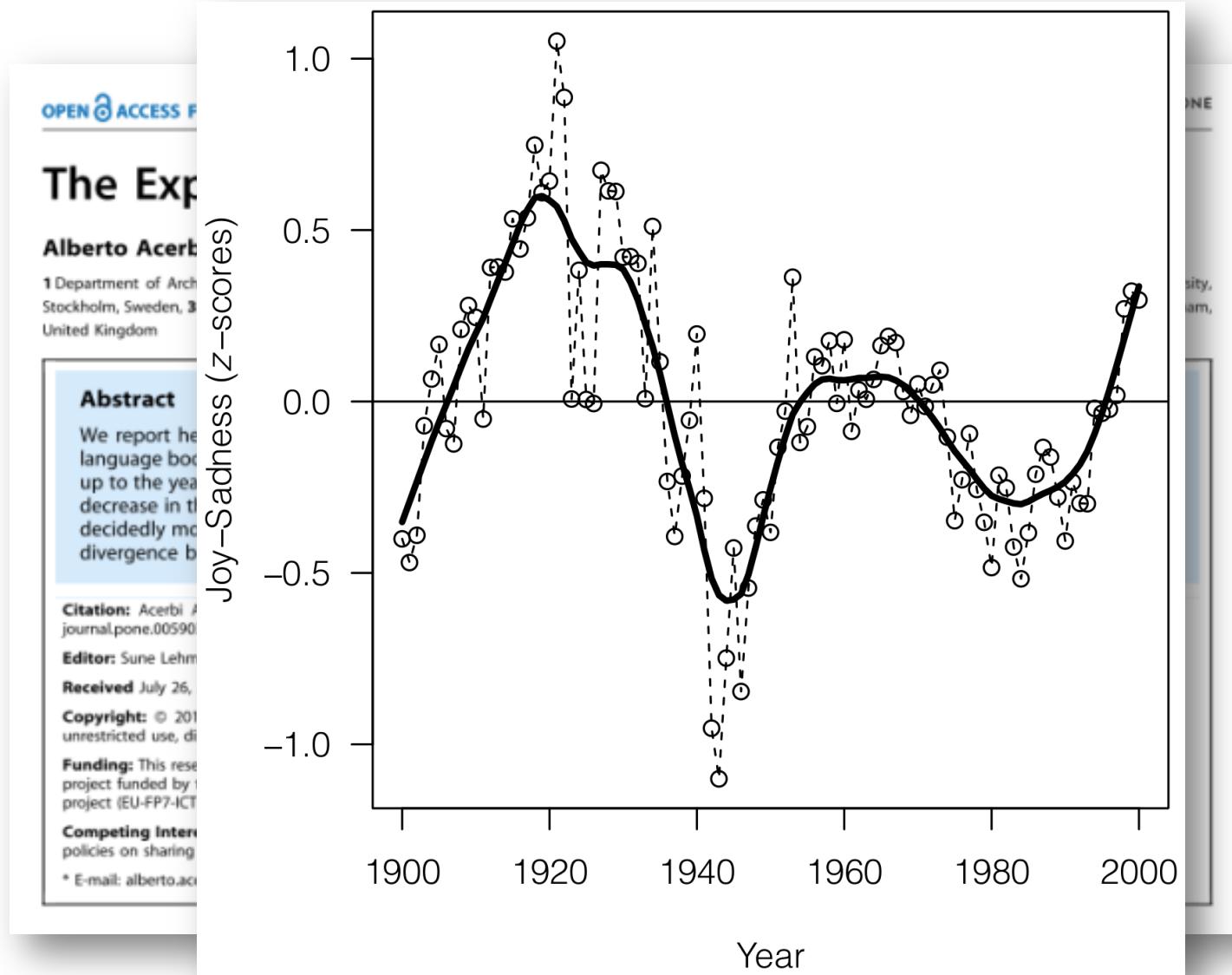
Copyright: © 2013 Acerbi et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Funding: This research was partially supported by the Leverhulme Trust “Tipping Points” program. A. Acerbi was initially supported by the “Uniquely Human” project funded by the Swedish Research Council, and then by a Newton International Fellowship. V. Lampos acknowledges the support from the TrendMiner project (EU-FP7-ICT n.287863). The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interests: Co-author R. Alexander Bentley is a PLOS ONE Editorial Board member. This does not alter the authors’ adherence to all the PLOS ONE policies on sharing data and materials.

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DIGITALE WISSENSCHAFT



Acerbi, A., Lampis, V., Garnett, P., & Bentley, R. A. (2013). The Expression of Emotions in 20th Century Books. (S. Lehmann, Ed.) PLoS ONE, 8(3), e59030. doi:10.1371/journal.pone.0059030

Tracking Individuals Shows Spatial Fidelity Is a Key Regulator of Ant Social Organization

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Ants live in organized societies with a marked division of labor among workers, but little is known about how this is generated. We use a tracking system to continuously monitor individually-tagged workers in six colonies of the ant *Camponotus fellah* over 41 days. Network analyses of over 9 million interactions revealed three distinct groups that differ in behavioral repertoires. Each group represents a functional behavioral unit with workers moving from one group to the next as they age. The rate of interactions was much higher within than between groups. The precise information on spatial and temporal distribution of all individuals permitted calculation of the expected rates of within- and between-group interactions. These values suggest that the network of interaction within colonies is primarily mediated by age-induced changes in the spatial location of workers.

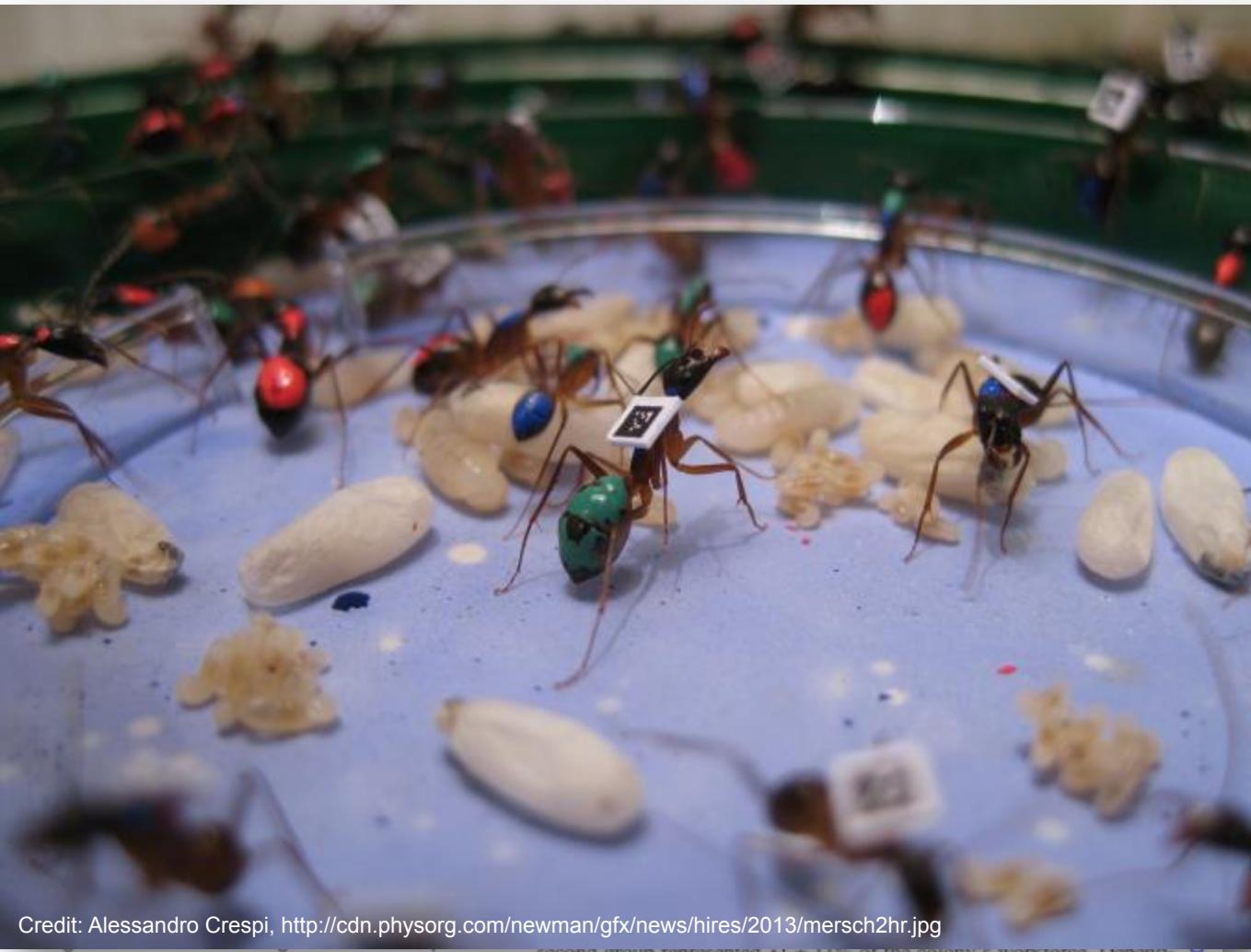
Ant colonies have long fascinated human beings with their complex and

second group represented $31 \pm 11\%$ of the colony's workforce. Depend-

icemag.org on May 21, 2013

Mersch, D. P., Crespi, A., & Keller, L. (2013). Tracking Individuals Shows Spatial Fidelity Is a Key Regulator of Ant Social Organization. *Science*, 9(10), 735–48. doi:10.1126/science.1234316 Supplementary data: <http://dx.doi.org/10.5061/dryad.8d8h7> Supplementary video: <http://youtu.be/UbRRS-eDL0o>

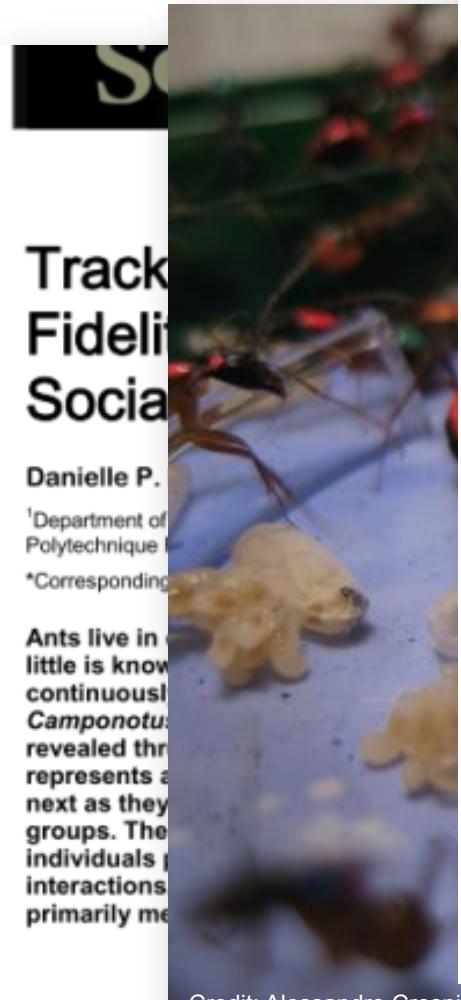
DIGITALE WISSENSCHAFT



So
Track
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Social
Danielle P.
¹Department of
Polytechnique
*Corresponding
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Credit: Alessandro Crespi, <http://cdn.physorg.com/newman/gfx/news/hires/2013/mersch2hr.jpg>

Mersch, D. P., Crespi, A., & Keller, L. (2013). Tracking Individuals Shows Spatial Fidelity Is a Key Regulator of Ant Social Organization. *Science*, 9(10), 735–48. doi:10.1126/science.1234316 Supplementary data: <http://dx.doi.org/10.5061/dryad.8d8h7> Supplementary video: <http://youtu.be/UbRRS-eDL0o>

DIGITALE WISSENSCHAFT



Tracking Fidelity Social

Danielle P.

¹Department of
Polytechnique

*Corresponding

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Mersch, D. P., Crespi, A., & Keller, L. (2013). Tracking Individuals Shows Spatial Fidelity Is a Key Regulator of Ant Social Organization. *Science*, 9(10), 735–48. doi:10.1126/science.1234316 Supplementary data: <http://dx.doi.org/10.5061/dryad.8d8h7> Supplementary video: <http://yout.be/UbRRS-eDL0o>

DIGITALE WISSENSCHAFT

The screenshot shows the Dryad Digital Repository website. At the top, there is a navigation bar with links for "About", "For researchers", "For organizations", "Contact us", "Login", and "Sign Up". There are also social media sharing icons for Twitter, Facebook, and RSS. A search bar is located at the top right.

The main content area displays a data package titled "tracking_data". It includes a "Submit data now" button and a "How and why?" link. Below this, there is a section for citation information:

When using this data, please cite the original article:
Mersch DP, Crespi A, Keller L (2013) Tracking individuals shows spatial fidelity is a key regulator of ant social organization. *Science*, online in advance of print. doi:10.1126/science.1234316

Additionally, please cite the Dryad data package:
Mersch DP, Crespi A, Keller L (2013) Data from: Tracking individuals shows spatial fidelity is a key regulator of ant social organization. Dryad Digital Repository. doi:10.5061/dryad.8d8h7

Below the citation information, there is a "Cite | Share" link. To the right, there is a "Search for data" section with a search bar and a "Go" button, along with links for "Advanced search" and "Be part of Dryad". The "Be part of Dryad" section includes links for "Learn more about: Membership, Submission integration, Pricing plans".

A sidebar on the left lists various metrics for the data package:

DOI	doi:10.5061/dryad.8d8h7/1
Pageviews	74
Downloaded	61 times
Keywords	division of labor, spatial fidelity, ants, social organization, social insect, tracking
Date Submitted	2013-04-19T16:05:34Z

Credit: Alessandro Crespi, <http://cdn.physorg.com/newman/gfx/news/hires/2013/mersch2hr.jpg>

Mersch, D. P., Crespi, A., & Keller, L. (2013). Tracking Individuals Shows Spatial Fidelity Is a Key Regulator of Ant Social Organization. *Science*, 9(10), 735–48. doi:10.1126/science.1234316 Supplementary data: <http://dx.doi.org/10.5061/dryad.8d8h7> Supplementary video: <http://youtu.be/UbRRS-eDL0o>

OPEN SCIENCE

- Selbstverständnis des AK Open Science der Helmholtz-Gemeinschaft:

Der Begriff Open Science bezeichnet einen kulturellen Wandel in der wissenschaftlichen Arbeitsweise und Kommunikation. Computergestütztes Arbeiten und die digitale Kommunikation ermöglichen einen effektiveren und offeneren Informationsaustausch innerhalb der Wissenschaft und fördern den Transfer der Ergebnisse in die Gesellschaft.

Der offene, d. h. durch möglichst wenige finanzielle, technische und rechtliche Hürden behinderte Zugang zu wissenschaftlichen Ergebnissen wie Publikationen, Forschungsdaten und wissenschaftlicher Software erweitert die Transparenz in der Wissenschaft, verbessert die Verfahren der Qualitätssicherung und erhöht durch eine verbesserte Informationsversorgung die Leistungsfähigkeit der Wissenschaft. Open Science dient somit immer auch der Verbesserung der guten wissenschaftlichen Praxis. Darüber hinaus fördert Open Science den Wissenstransfer in Gesellschaft, Wirtschaft und Politik.

OPEN SCIENCE

- „Intelligent

Terms	De
Accessible	„D ca
<i>Zugänglichkeit</i>	
Assessable	„Ir Da
<i>Verständlichkeit</i>	wi di
Intelligible	„C al
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will require proper background
also depend on those who wish to

must be maintained in order to
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OPEN SCIENCE

- „Intelligent Openness“

Terms	Definition
Accessible <i>Zugänglichkeit</i>	„Data must be located in such a manner that it can readily be found and in a form that can be used.“
Assessable <i>Verständlichkeit</i>	„In a state in which judgments can be made as to the data or information's reliability. Data must provide an account of the results of scientific work that is intelligible to those wishing to understand or scrutinise them. Data must therefore be differentiated for different audiences.“
Intelligible <i>Bewertbarkeit</i>	„Comprehensive for those who wish to scrutinise something. Audiences need to be able to make some judgment or assessment of what is communicated. They will need to judge the nature of the claims made. They should be able to judge the competence and reliability of those making the claims. Assessability also includes the disclosure of attendant factors that might influence public trust.“
Useable <i>Nachnutzbarkeit</i>	„In a format where others can use the data or information. Data should be able to be reused, often for different purposes, and therefore will require proper background information and metadata. The usability of data will also depend on those who wish to use them.“
Boundaries <i>Grenzen</i>	„There are legitimate boundaries of openness which must be maintained in order to protect commercial value, privacy, safety and security.“

The Royal Society. (2012). Science as an open enterprise. Online: http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/projects/sape/2012-06-20-SAOE.pdf

HANDLUNGSFELDER

- Open Access – Zugang und Nachnutzung zu textuellen Publikationen
- Open Research Data – Zugang und Nachnutzung zu Forschungsdaten
- Open Research Software – Zugang und Nachnutzung zu wissenschaftlicher Software
- Nationale und internationale Vernetzung zum Thema Open Science

Arbeitskreises Open Science in der Helmholtz-Gemeinschaft (2015): Open Science – Chancen, Herausforderungen und Handlungsfelder. Online: http://oa.helmholtz.de/fileadmin/user_upload/redakteur/Dokumente/helmholtz_open_science_definition_open_science.pdf

HANDLUNGSFELDER

- Open Access – Zugang und Nachnutzung zu textuellen Publikationen
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- Open Research Software – Zugang und Nachnutzung zu wissenschaftlicher Software
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Arbeitskreises Open Science in der Helmholtz-Gemeinschaft (2015): Open Science – Chancen, Herausforderungen und Handlungsfelder. Online: http://oa.helmholtz.de/fileadmin/user_upload/redakteur/Dokumente/helmholtz_open_science_definition_open_science.pdf

WISSENSCHAFTSPOLITISCHER RAHMEN

- DFG: „Vorschläge zur Sicherung guter wissenschaftlicher Praxis“, 1997
- Allianz: „Berliner Erklärung über offenen Zugang zu wissenschaftlichem Wissen“, 2003
- OECD: „Principles and Guidelines for Access to Research Data from Public Funding“, 2007
- EC-Report: „Riding the Wave“, 2010
- Allianz: „Grundsätze zum Umgang mit Forschungsdaten“, 2010
- The Royal Society: „Science as an open enterprise“, 2012
- USA: OSTP Public Access Memo, 2013
- G8: Science Ministers Statement , 2013
- EC: Open Research Data Pilot 2020, 2014-
- Open-Access-Strategie der Bundesregierung, 2014-

WISSENSCHAFTSPOLITISCHER RAHMEN

- DFG: „Vorschläge zur Sicherung guter wissenschaftlicher
- Wir werden eine Strategie für den digitalen Wandel in der Wissenschaft initiieren, z.B. um Zugang und Nutzbarkeit von komplexen Forschungsdaten zu verbessern. Gemeinsam mit den Ländern werden wir einen Rat für Informationsinfrastrukturen gründen, in dem sich die Akteure des Wissenschaftssystems über die Erarbeitung disziplinen- und institutionenübergreifender Strategien und Standards verständigen. Zudem wollen wir virtuelle Forschungsumgebungen stärken, die es Forscherinnen
- ...
- Open-Access-Strategie der Bundesregierung, 2014-

10

RELEVANZ DES THEMAS

- Data Policies von Förderorganisationen
 - Beispiel: DFG

Wenn aus Projektmitteln systematisch Forschungsdaten oder Informationen gewonnen werden, die für die Nachnutzung durch andere Wissenschaftlerinnen und Wissenschaftler geeignet sind, legen Sie bitte dar, ob und auf welche Weise diese für andere zur Verfügung gestellt werden. Bitte berücksichtigen Sie dabei auch - sofern vorhanden - die in Ihrer Fachdisziplin existierenden Standards und die Angebote existierender Datenrepositorien oder Archive.

RELEVANZ DES THEMAS

- Data Policies von Förderorganisationen
 - Beispiel: European Commissson

29.3 Open access to research data

OPTION for actions participating in the open Research Data Pilot: Regarding the digital research data generated in the action ('data'), the beneficiaries must:

- (a) *deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:*
 - (i) *the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;*
 - (ii) *other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan' (see Annex 1);*
- (b) *provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).*

RELEVANZ DES THEMAS

- Data Policies von Journals
 - Beispiel: Nature Publishing Group
 - „[...] authors are required to make materials, data and associated protocols promptly available to readers without undue qualifications.“
 - Beispiel: PLOS
 - „PLOS journals require authors to make all data underlying the findings described in their manuscript fully available without restriction, with rare exception.“

SICHT DER WISSENSCHAFT

- Mangelnde Zugänglichkeit und fehlende Möglichkeiten der Nachnutzung von Forschungsdaten werden bemängelt
- Potenzial offener Forschungsdaten wird betont
- „Data Sharing“ ist jedoch mehrheitlich nicht etabliert
- Vorbehalte
 - „legal issues“
 - „misuse of data“
 - „incompatible data types“
 - „insufficient time“
 - „lack of funding“

Kuipers, T., & Van der Hoeven, J. (2009). Insight into digital preservation of research output in Europe. Survey Report. Retrieved from http://www.parse-insight.eu/downloads/PARSE-Insight_D3-4_SurveyReport_final_hq.pdf

Tenopir, C. et al. (2011). Data Sharing by Scientists: Practices and Perceptions. PLoS ONE, 6(6), e21101. doi:10.1371/journal.pone.0021101

SICHT DER WISSENSCHAFT

- Fehlende Anreize

EDITORIAL

nature
biotechnology

Credit where credit is overdue

A universal tagging system that links data sets with the author(s) that generated them is essential to promote data sharing within the proteomics and other research communities.

Science progresses most rapidly when researchers provide access to their data. This is not only good scientific practice. It facilitates

But data quality is only part of the problem in overcoming the community's reticence about disclosure. For many researchers, the software

SICHT DER WISSENSCHAFT

- F

Michaela Mundt

02.10.1998

Weiterbildung zur Wissenschaftlichen Dokumentarin

Feldseminar im Daten- und Rechenzentrum des Geoforschungszentrums Potsdam

20. Juli-2. Oktober 1998

Der DOI (digital object identifier)

ein verlagsorientiertes Indexierungswerkzeug auch anwendbar auf Datensätze?

Internetstudie zur möglichen Anwendbarkeit des DOI

für die im ICDP-Clearinghouse angebotenen Daten

Nature Biotechnology. (2009). Credit where credit is overdue. Nature Biotechnology, 27(7), 579. doi:10.1038/nbt0709-579

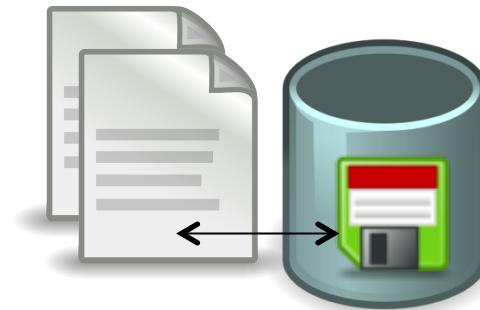
Mundt, M. (1998). Der DOI (digital object identifier) ein verlagsorientiertes Indexierungswerkzeug auch anwendbar auf Datensätze? : Internetstudie zur möglichen Anwendbarkeit des DOI für die im ICDP-Clearinghouse angebotenen Daten. Potsdam. doi:10.2312/GFZ.misc.370184

VERÖFFENTLICHUNGSSTRATEGIEN

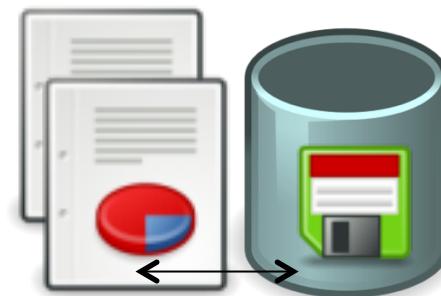
- Veröffentlichung der Forschungsdaten als eigenständiges Informationsobjekt in einem Daten-Repository
- Veröffentlichung der Forschungsdaten als textuelle Dokumentation im Rahmen eines begutachteten „Data Papers“
- Veröffentlichung der Forschungsdaten als Ergänzung zu einem begutachteten Artikel („enriched publication“)



doi:XX.XXXX/XXX.XX



doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX



doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

VERÖFFENTLICHUNGSSTRATEGIEN

- Beispiel 1:

LETTER

doi:10.1038/nature10968

Antarctic ice-sheet loss driven by basal melting of ice shelves

H. D. Pritchard¹, S. R. M. Ligtenberg², H. A. Fricker³, D. G. Vaughan¹, M. R. van den Broeke² & L. Padman⁴

Accurate prediction of global sea-level rise requires that we understand the cause of recent, widespread and intensifying^{1,2} glacier acceleration along Antarctic ice-sheet coastal margins³. Atmospheric and oceanic forcing have the potential to reduce the thickness and extent of floating ice shelves, potentially limiting their ability to buttress the flow of grounded tributary glaciers⁴.

series of repeat-track satellite laser altimetry¹. The laser altimeter on NASA's ICESat satellite¹⁴ was primarily designed to detect height change on the ice sheets. It has several advantages over satellite radar altimetry (which is traditionally used for this purpose): an orbit that samples all major Antarctic ice shelves; smaller footprints with well-constrained locations and closer along-track spacing and negligible

Pritchard, H. D., Ligtenberg, S. R. M., Fricker, H. A., Vaughan, D. G., van den Broeke, M. R., & Padman, L. (2012). Antarctic ice-sheet loss driven by basal melting of ice shelves. *Nature*, 484(7395), 502–5. doi:10.1038/nature10968

VERÖFFENTLICHUNGSSTRATEGIEN

- Beispiel 1:

LETTER

doi:10.1038/nature10968

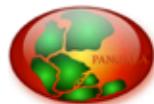
Antarctic ice-sheet loss driven by basal melting of ice shelves

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28. Rignot, J. C. & Saenko, O. A. Human-induced change in the Antarctic Circumpolar Current. *J. Clim.* **18**, 3068–3073 (2005).
 29. Pritchard, H. D. et al. Corrected ICESat altimetry data, surface mass balance, and firm elevation change on Antarctic ice shelves. <http://dx.doi.org/10.1594/PANGAEA.775984> (PANGAEA Data Publisher for Earth & Environmental Science, 2012).
 30. Timmermann, R. et al. A consistent dataset of Antarctic ice sheet topography, gravity anomalies, and global bathymetry. *Earth Syst. Sci. Data Discuss.* **3**, 231–257

Pritchard, H. D., Ligtenberg, S. R. M., Fricker, H. A., Vaughan, D. G., van den Broeke, M. R., & Padman, L. (2012). Antarctic ice-sheet loss driven by basal melting of ice shelves. *Nature*, 484(7395), 502–5. doi:10.1038/nature10968

VERÖFFENTLICHUNGSSTRATEGIEN



PANGAEA®

Data Publisher for Earth & Environmental Science

Not logged in (log in or sign up)

Data Description

Citation: Pritchard, Hamish; Ligtenberg, Stefan R M; Fricker, Helen; van den Broeke, Michiel R; Vaughan, David G; Padman, Laurie (2012): Corrected ICESat altimetry data, surface mass balance, and firn elevation change on Antarctic ice shelves. doi:10.1594/PANGAEA.775984

Abstract: Accurate prediction of global sea-level rise requires that we understand the cause of recent, widespread and intensifying glacier acceleration along Antarctic ice-sheet coastal margins. Floating ice shelves buttress the flow of grounded tributary glaciers and their thickness and extent are particularly susceptible to changes in both climate and ocean forcing. Recent ice-shelf collapse led to retreat and acceleration of several glaciers on the Antarctic Peninsula. However, the extent and magnitude of ice-shelf thickness change, its causes and its link to glacier flow rate are so poorly understood that its influence on the future of the ice sheets cannot yet be predicted. Here we use satellite laser altimetry and modelling of the surface firn layer to reveal for the first time the circum-Antarctic pattern of ice-shelf thinning through increased basal melt. We deduce that this increased melt is the primary driver of Antarctic ice-sheet loss, through a reduction in buttressing of the adjacent ice sheet that has led to accelerated glacier flow. The highest thinning rates (~7 m/a) occur where warm water at depth can access thick ice shelves via submarine troughs crossing the continental shelf. Wind forcing could explain the dominant patterns of both basal melting and the surface melting and collapse of Antarctic ice shelves, through ocean upwelling in the Amundsen and Bellingshausen Seas and atmospheric warming on the Antarctic Peninsula. This implies that climate forcing through changing winds influences Antarctic Ice Sheet mass balance, and hence global sea-level, on annual to decadal timescales.

Related to: Pritchard, Hamish; Ligtenberg, Stefan R M; Fricker, Helen; van den Broeke, Michiel R; Vaughan, David G; Padman, Laurie (2012): Antarctic ice sheet loss driven by basal melting of ice shelves. (PDI-1401), *Nature*, submitted

Project(s): ice2sea (ice2sea)

Coverage: Median Latitude: -71.800000 * Median Longitude: -175.100000 * South-bound Latitude: -80.800000 * West-bound Longitude: 53.000000 * North-bound Latitude: -66.300000 * East-bound Longitude: -5.900000

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Size: 2 datasets



Download Data

Download ZIP file containing all datasets as tab-delimited text (use the following character encoding: ISO-8859-1: ISO Western (PANGAEA default))

Open Science

VERÖFFENTLICHUNGSSTRATEGIEN

- Beispiel 2:

The screenshot shows the Global Carbon Project website. At the top, there's a navigation bar with links to ESSP, DIVERSITAS, IGBP, IHDP, and WCRP. Below the navigation is a banner featuring a globe with white diamond markers. The main content area has a sidebar on the left with links to Carbon Neutral, About GCP, Activities, Meetings, Publications, Science, Research Programs, and Internet Resources. The main content area displays the "Global Carbon Budget Data" page. It includes a section titled "Data Sources" with text about the annual update and links to datasets. A table titled "Summary Main Data Sources" is shown, with columns for Component and Source.

Global Carbon Project

ESSP DIVERSITAS IGBP IHDP WCRP

Home Search Contact Us Site Map | Carbon Budget RECCAP Urbanization

Carbon Neutral

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Activities

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HIGHLIGHTS Compact | Full
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Global Carbon Budget Data

Data Sources

The annual update of the Global Carbon Budget is possible thanks to many institutions, observational networks and modeling groups around the world.

All datasets and modeling output to complete the Global Carbon Budget 2012 are described in detail in Le Quere et al. (2012) [<http://bit.ly/Uy8GTQ>]

All datasets contributing to this year's update have been integrated in one single file. It is archived at CDIAC doi: http://dx.doi.org/10.3334/CDIAC/GCP_V2012 (Excel, 263kb)

Summary Main Data Sources

Component	Source
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http://dx.doi.org/10.3334/CDIAC/GCP_V2012

VERÖFFENTLICHUNGSSTRATEGIEN

• Beispiel

The screenshot shows the Global Carbon Project website with a sidebar on the left containing links like Home, Search, Contact Us, and various research categories. The main content area displays the citation for a scientific paper:

Earth Syst. Sci. Data, 5, 165–185, 2013
www.earth-syst-sci-data.net/5/165/2013/
doi:10.5194/essd-5-165-2013
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The global carbon budget 1959–2011

C. Le Quéré¹, R. J. Andres², T. Boden², T. Conway³, R. A. Houghton⁴, J. I. House⁵, G. Marland⁶, G. P. Peters⁷, G. R. van der Werf⁸, A. Ahlström⁹, R. M. Andrew¹⁰, L. Bopp¹¹, J. G. Canadell¹², P. Chais¹³, S. C. Doney¹⁴, C. Enright¹⁵, P. Friedlingstein¹⁶, C. Huntingford¹⁷, A. K. Jain¹⁸, C. Jourdain¹⁹, E. Kato²⁰, R. F. Keeling¹⁷, K. Klein Goldewijk^{18,20,21}, S. Levin²¹, P. Levy¹⁴, M. Lomas²², B. Poulet²³, M. R. Raupach¹¹, J. Schwinger^{22,24}, S. Sitch²⁵, B. D. Stocker^{25,27}, N. Viovy²⁰, S. Zaehle²⁸, and N. Zeng²⁹

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¹⁸PBL Netherlands Environmental Assessment Agency, The Hague/Bilthoven, the Netherlands
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Received: 20 November 2012 – Published in Earth Syst. Sci. Data Discuss.: 2 December 2012
Revised: 11 March 2013 – Accepted: 14 March 2013 – Published: 8 May 2013

Published by Copernicus Publications.

<http://dx.doi.org/>

<http://dx.doi.org/10.5194/essd-5-165-2013>

VERÖFFENTLICHUNGSSTRATEGIEN

- Beispiel

The screenshot shows the homepage of the Global Carbon Project. The top navigation bar includes "Home", "Search", and "Contact Us". A sidebar on the left lists "Carbon Neutral", "About GCP", "Activities", "Meetings", "Publications", "Science", "Research Programs", and "Internet Resources". The main content area features a "HIGHLIGHTS" section with links to "Compact | Full Index | Presentation | Contributions". Below this is a large section titled "Global Carbon Data" with a sub-section "Data Sources". This section contains links to various datasets and modeling groups, including "The annual update of the Global carbon budget 1959–2012" by Le Quéré et al. (2012) and "All datasets contributing to the Global Carbon Budget" by CDIAC.

<http://dx.doi.org/>

This screenshot shows a journal article from "Earth Syst. Sci. Data" (Volume 5, pages 165–185, 2013). The article is titled "The global carbon budget 1959–2012" and is authored by C. Le Quéré, R. J. Andres, T. Boden, T. Conway, R. A. Houghton, J. I. H. G. P. Peters, G. R. van der Werf, A. Ahlström, R. M. Andrew, L. Bopp, J. C. S. Donley, C. Enright, P. Friedlingstein, C. Huntingford, A. K. Jain, C. R. Keeling, K. Klein Goldewijk, S. Levin, P. Levy, M. Lomas, M. R. Raupach, J. Schwinger, S. Sitch, B. D. Stocker, N. Viovy, and S. Z. Tyndall Centre for Climate Change Research, University of East Anglia, Norwich, NR4 7TJ, UK; Carbon Dioxide Information Analysis Center (CDIAC), Oak Ridge National Laboratory, Tennessee, USA; National Oceanic & Atmospheric Administration, Earth System Research Laboratory, Boulder, Colorado 80305, USA; Woods Hole Research Centre (WHRC), Falmouth, Massachusetts 02540, USA; Cabot Institute, Dept. of Geography, University of Bristol, Bristol, UK; Research Institute for Environment, Energy, and Economics, Appalachian State University, North Carolina 28608, USA; Center for International Climate and Environmental Research – Oslo (CICERO), Faculty of Earth and Life Sciences, VU University Amsterdam, Amsterdam, The Netherlands; Department of Physical Geography and Ecosystem Science, Lund University, Lund, Sweden; Laboratoire des Sciences du Climat et de l'Environnement, CEA-CNRS-UVSQ, Gif-sur-Yvette Cedex, France; Global Carbon Project, CSIRO Marine and Atmospheric Research, Casuarina, Australia; Woods Hole Oceanographic Institution (WHOI), Woods Hole, Massachusetts 02543, USA; College of Engineering, Mathematics and Physical Sciences, University of Exeter, EX4 4QF, UK; Centre for Ecology and Hydrology (CEH), Wallingford, OX10 8B, UK; Department of Atmospheric Sciences, University of Illinois, Urbana-Champaign, IL 61801, USA; Center for Global Environmental Research (CGER), National Institute for Environmental Studies, Tsukuba, Japan; University of California, San Diego, Scripps Institution of Oceanography, La Jolla, CA 92093-0244, USA; PBL Netherlands Environmental Assessment Agency, The Hague/Bilthoven, The Netherlands; Department of Innovation and Environmental Sciences (IMEW) Utrecht University, Institute for History and Culture (OOGC), Utrecht University, Utrecht, The Netherlands; National Center for Atmospheric Research (NCAR), Boulder, Colorado, USA; Centre for Terrestrial Carbon Dynamics (CTCD), Sheffield University, Sheffield, UK; Geophysical Institute, University of Bergen, Bergen, Norway; Bjerknes Centre for Climate Research, Bergen, Norway; College of Life and Environmental Sciences, University of Exeter, EX4 4QF, UK; Climate and Environmental Physics, Physics Institute, University of Bern, 3012 Bern, Switzerland; Oeschger Center for Climate Change Research, University of Bern, Bern, Switzerland; Max-Planck-Institut für Biogeochemie, P.O. Box 600164, Hans-Knöll-Str. 10, 07743 Jena, Germany; Department of Atmospheric and Oceanic Science, University of Maryland, College Park, MD 20742, USA; now at: Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

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Received: 20 November 2012 – Published in Earth Syst. Sci. Data Discuss.: 20 December 2012 | doi:10.5194/essd-5-165-2013

Revised: 11 March 2013 – Accepted: 14 March 2013 – Published: 8 May 2013

Published by Copernicus Publications.

<http://dx.doi.org/0.5194/essd-5-165-2013>

This screenshot shows a commentary article from "nature climate change" (Volume 3, pages 4–6, 2013) titled "The challenge to keep global warming below 2 °C". The authors are Glen P. Peters, Robbie M. Andrew, Tom Boden, Josep G. Canadell, Philippe Ciais, Corinne Le Quéré, Gregg Marland, Michael R. Raupach, and Charlie Wilson. The article discusses the latest carbon dioxide emissions and their impact on global warming. It states that "The latest carbon dioxide emissions continue to track the high end of emission scenarios, making it even less likely global warming will stay below 2 °C. A shift to a 2 °C pathway requires immediate significant and sustained global mitigation, with a probable reliance on net negative emissions in the longer term." The article is published online on 02 December 2012. The journal's URL is http://dx.doi.org/10.1038/nclimate1783.

<http://dx.doi.org/10.1038/nclimate1783>

VERÖFFENTLICHUNGSSTRATEGIEN

- Beispiel

- Beispiel 2



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Earth Syst. Sci. Data, 5, 165–185, 2013
www.earth-syst-sci-data.net/5/165/2013/
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Open Access Earth System Science Data

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Gesundheit | Umwelt | Geschichte

TOP-KLIMASÜNDER

Die Welt pustet munter weiter CO₂ in die Atmosphäre

Besonders China, Indien und die USA heizen dem Klimawandel weiter kräftig ein. Nur radikale Klimaschutzziele würden helfen. Forscher fürchten eine Erwärmung um fünf Grad.

Während der CO₂-Ausstoß in Europa und den USA im vergangenen Jahr zurückgegangen ist, legte er in Schwellenländern wie China und Indien deutlich zu. Das berichtet ein internationales Forscherteam in den Magazinen *Nature Climate Change* und *Earth System Science Data*. Global stiegen die Kohlenstoffdioxid-Emissionen 2011 demnach um drei Prozent auf 34,7 Milliarden Tonnen. Während China ein Plus von knapp zehn Prozent und Indien einen Zuwachs um 7,5 Prozent verzeichnete, pustete die EU 2,8 Prozent und in die USA 1,8 Prozent weniger CO₂ in die Atmosphäre. Die neuen Werte wurden mit denen aus dem Jahr 2010 verglichen.

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For Authors & Referees About the journal

DATUM 03.12.2012

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ARTIKEL DRUCKEN Drucken

SCHLAGWORTE Europa, Klimawandel, Philippe Ciais, Corinne Le Quéré, CDU | Peter Altmann, CO2 | Entwicklungsländer

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- VENEZUELA Was bleibt von der Rettung aus?
- FOTOS DER TRAUER Bilder aus den Trauerfeiern
- WULFF-AFFÄRE Ankündigung einer Untersuchung
- SEXISMUS-DEBATTE Sexismus in der Politik: Kritik an Gauck
- DIETER PFAFF Haltung

NEU IM RESSORT

- LABORSCHLIESUNG Schulen dürfen nicht Schule r

1038/nclimate1783

1783

HELMHOLTZ GEMEINSCHAFT

FORSCHUNGSDATEN-REPOSITORIEN

- re3data.org – Registry of Research Data Repositories

The screenshot shows the re3data.org website's search interface. At the top, there is a navigation bar with links for Home, Search, Browse, Suggest, FAQ, About, Schema, Contact, and Imprint. Below the navigation bar, the title "re3data.org" and subtitle "REGISTRY OF RESEARCH DATA REPOSITORIES" are displayed. The main section is titled "Search for Repositories" and indicates "(873 Reviewed Repositories)". A search bar contains the query "geosciences". Below the search bar are three dropdown menus: "Subject", "Content Type", and "Country". The "Country" dropdown is set to "Germany". There are also several checkboxes for filters: "Certificates", "Open Access", "Persistent Identifier", and "Include Repositories not yet reviewed by re3data.org". A "Clear" button is located at the bottom right of this filter section. Below the filter section, it says "48 results (filtered) (1 - 25)" with a dropdown menu, and a "Sort by" dropdown set to "weight". The results are shown in a table with columns for "PANGAEA", "Subjects", "Content types", and "Countries". The first result is "PANGAEA Publishing Network for Geoscientific and Environmental Data". It lists subjects like Atmospheric Science and Oceanography, Biology, Geochemistry, Mineralogy and Crystallography, etc., and content types like Archived data, Audiovisual data, Images, Plain text, Standard office documents. The country listed is Germany. A note below states: "The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions." At the bottom of the page, there is a footer with social media icons and the text "The World Data Center for Remote Sensing of the Atmosphere".

Pampel, H. et al. (2013). Making Research Data Repositories Visible: The re3data.org Registry. PLOS ONE, 8(11), e78080. doi:10.1371/journal.pone.0078080

simple
search box

filters

results

Search for Repositories (873 Reviewed Repositories)

geosciences



Search

Subject

Add subjects

Content Type

Add content types

Country (of the responsible institutions)

Add countries

+ Germany



Certificates



Open Access



Persistent Identifier



Include Repositories not yet reviewed by re3data.org

Clear

48 results (filtered) (1 – 25)

icons

« 1 2 »

Sort by weight

PANGAEA

Publishing Network for Geoscientific and Environmental Data



Subjects: Atmospheric Science and Oceanography Biology Geochemistry, Mineralogy and Crystallography Geochemistry, Mineralogy and Crystallography

Geology and Palaeontology Geology and Palaeontology Geophysics Geophysics and Geodesy Geosciences (including Geography)

Life Sciences Natural Sciences Oceanography

Content types: Archived data Audiovisual data Images Plain text Standard office documents

Countries: Germany

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General information

Name of repository	PANGAEA
Additional name	Publishing Network for Geoscientific and Environmental Data
Repository URL	http://www.pangaea.de
Subjects	Q Atmospheric Science and Oceanography Q Biology Q Geochemistry, Mineralogy and Crystallography Q Geochemistry, Mineralogy and Crystallography Q Geology and Palaeontology Q Geology and Palaeontology Q Geophysics Q Geophysics and Geodesy Q Geosciences (including Geography) Q Life Sciences Q Natural Sciences Q Oceanography
Description	The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions.
Content types	Q Archived data Q Audiovisual data Q Images Q Plain text Q Standard office documents
Keywords	Q Earth Science Q Environmental Science
Repository type	disciplinary
Research data repository language(s)	eng
Data and/or service provider	dataProvider

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General information

Name of repository	PANGAEA
Additional name	Publishing Network for Geoscientific and Environmental Data
Repository URL	http://www.pangaea.de
Subjects	Q Atmospheric Science and Oceanography Q Biology Q Geochemistry, Mineralogy and Crystallography Q Geochemistry, Mineralogy and Crystallography Q Geology and Palaeontology Q Geology and Palaeontology Q Geophysics Q Geophysics and Geodesy Q Geosciences (including Geography) Q Life Sciences Q Natural Sciences Q Oceanography
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Content types	Q Archived data Q Audiovisual data Q Images Q Plain text Q Standard office documents
Keywords	Q Earth Science Q Environmental Science
Repository type	disciplinary
Research data repository language(s)	eng
Data and/or service provider	dataProvider

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HERAUSFORDERUNGEN

- Anreize für Forschende weiterentwickeln
- Aus- und Weiterbildung für Wissenschaft und Informationsinfrastruktur fördern
- Ausbau der Forschungsdaten-Repositorien vorantreiben
- Nachhaltige Finanzierungs- und Geschäftsmodelle für Forschungsdaten-Repositorien entwickeln



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VERNETZUNG

- Schwerpunktinitiative "Digitale Information"
 - <http://www.allianzinitiative.de>
- Helmholtz Open Science Newsletter:
 - <http://oa.helmholtz.de/bewusstsein-schaerfen/mailingliste.html>
- Helmholtz Open Science Webinar zu Forschungsdaten
 - <http://oa.helmholtz.de/bewusstsein-schaerfen/workshops/webinare-zu-forschungsdaten>
- Wiki Forschungsdaten:
 - <http://forschungsdaten.org>
- Mailingliste „Umgang mit Forschungsdaten“:
 - <http://tinyurl.com/datenliste>

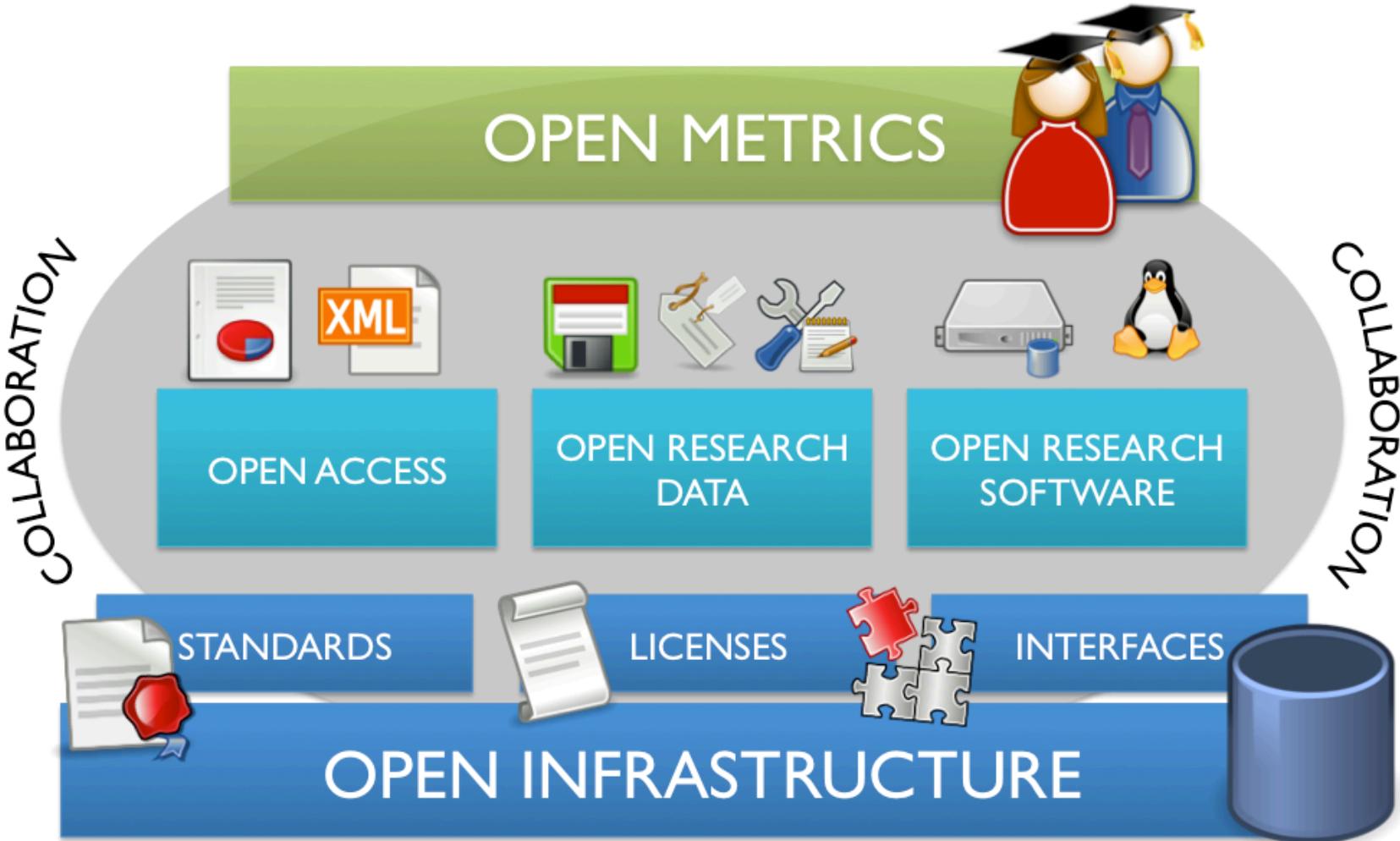
Danke für Ihre Aufmerksamkeit!

heinz.pampel@oa.helmholtz.de

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