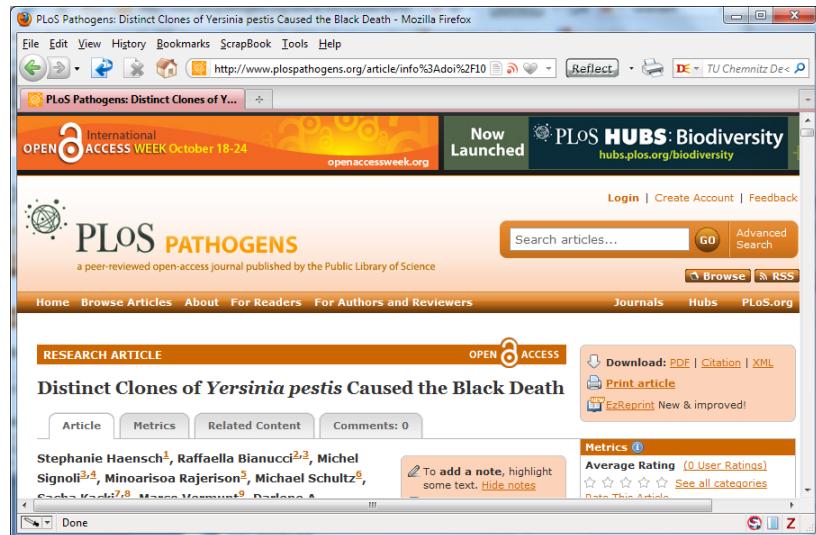

Science is Open: An Introduction to Open Access



Helmholtz Open Access Project

Open Access Paper: Example



Haensch, S. et al. 2010: Distinct clones of *Yersinia pestis* caused the Black Death. *PLoS Pathog* 6 (10): e1001134.
<http://dx.doi.org/10.1371/journal.ppat.1001134>.

OPEN ACCESS Freely available online

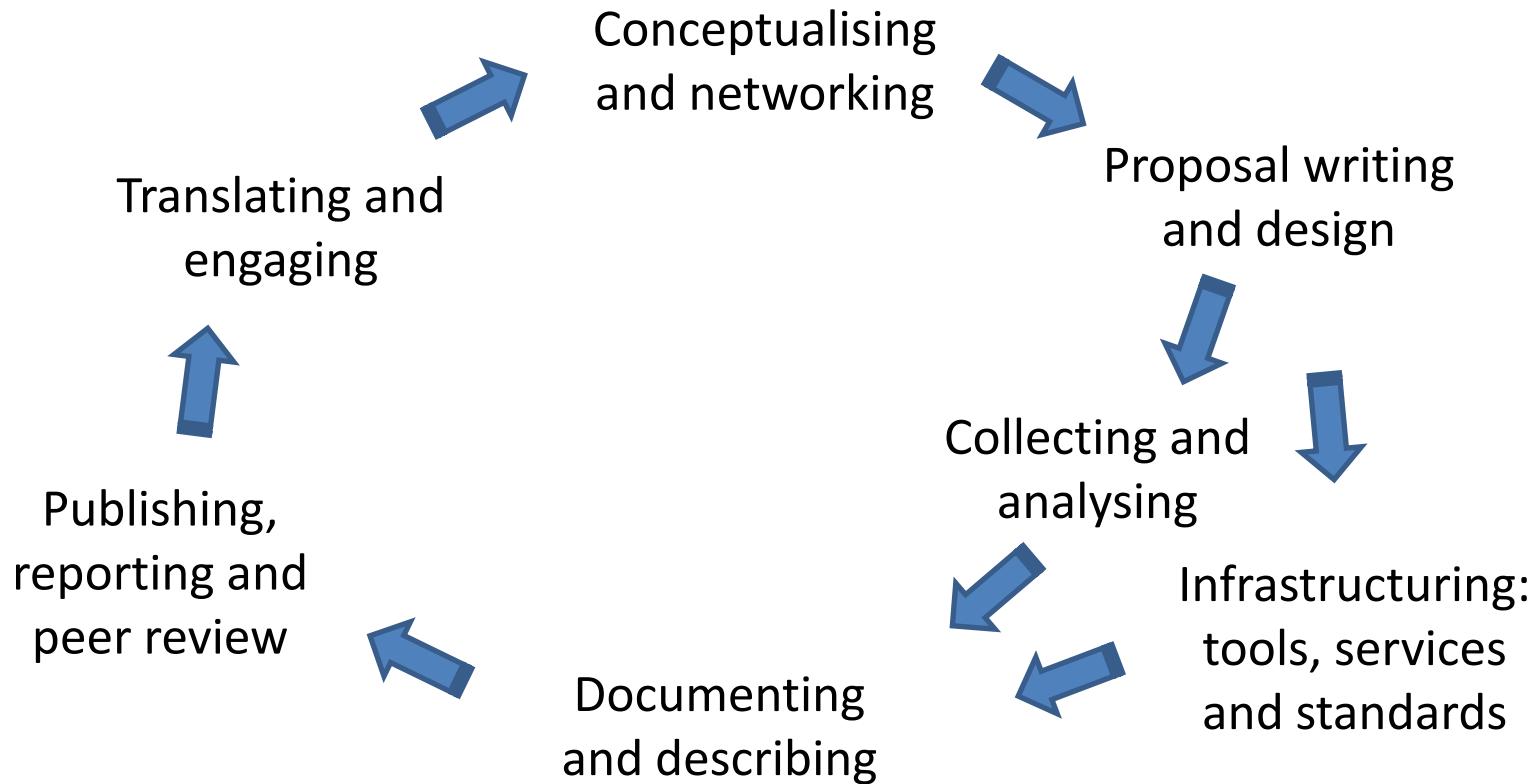
PLOS PATHOGENS

Distinct Clones of *Yersinia pestis* Caused the Black Death

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Scientific Process: Research Cycle



Source: *Open to All? Case studies of openness in research. RIN / NESTA, September 2010*

Open Access: Definitions

- Open Access publications:
 - scientific information is made freely available from internet servers
 - it can be read, downloaded, copied, printed, searched, text mined...
 - without financial, legal or technical barriers

- Types of open access information:
 - scholarly publications
 - peer-reviewed scholarly publications
 - Ph.D. theses
 - other publications ...
 - research data

Open Access: Origins

- Rise of the internet:
 - unprecedented possibilities for dissemination of information
 - potential for easier and cheaper access
- Traditional scientific journals:
 - considerable price increase („journal crisis“) is ongoing
 - e. g. annual subscription rate for „Biochimica et biophysica acta“:
€ 19,036*
- Advent of open access movement leads to
 - discussion of new business models in scientific publishing
 - changes in scholarly communication

*Source: KIT Library

Open Access: Berlin Declaration

- Berlin Declaration to Open Access to Knowledge in the Sciences and Humanities:
 - milestone of the open access movement
 - signed on 22 October 2003 by the Helmholtz Association and other research organisations
- „In accordance with the spirit of the Declaration of the Budapest Open Acess Initiative, the ECHO Charter and the Bethesda Statement on Open Access Publishing, we have drafted the Berlin Declaration to promote the Internet as a functional instrument for a global scientific knowledge base and human reflection and to specify measures which research policy makers, research institutions, funding agencies, libraries, archives and museums need to consider ...“

Open Access: „Green“ Road

- Following the „green“ road to open access (self-archiving):
 - researchers (or their libraries) deposit copies of the peer-reviewed articles they publish in a document server („repository“)
 - ask your local Helmholtz library for support
 - see listing of publishers' copyright policies: SHERPA/RoMEO
 - final manuscripts or layouted versions
 - institutional or subject-based repositories (arXiv, PubMed Central ...)
 - open access immediately or after an embargo period (i.e. publishers may recoup their investments)

Helmholtz Centres: Repositories

Helmholtz Centre	URL
AWI	http://epic.awi.de/
DESY	http://pubdb.desy.de/
DLR	http://elib.dlr.de/
FZJ	http://www.fz-juelich.de/zb/juwel/
GFZ	http://edoc.gfz-potsdam.de/gfz/
GSI	https://www.gsi.de/cgi-bin/dokumente/dokumana.pl
GKSS	http://zitmac05.gkss.de/fmi/xsl/publikat/Suchen.xsl

Helmholtz Centre	URL
HZB	http://www.helmholtz-berlin.de/angebote/bibliothek/literatur/veroeffentlichungsverzeichnis_en.html
HZI	http://hzi.openrepository.com/
IPP	http://edoc.mpg.de/
KIT	http://www.karola-online.de/
MDC	http://edoc.mdc-berlin.de/
all	http://www.helmholtz.de/en/news/publications/publication_database/

Repository Contents: Example

The screenshot shows a Firefox browser window with the URL <http://elib.dlr.de/view/type/thesis.html>. The page title is "electronic libraryDocument Type: Thesis - Mozilla Firefox". The main content area displays a search results page for "Document Type: Thesis". It shows a list of 1429 items, with several examples listed:

- Thim, Wenke (2010) *Wirtschaftlichkeitsbewertung verschiedener Modi der zukunftsweisenden Eisenbahnleit- und -sicherungstechnik ETCS anhand monetärer und nichtmonetärer Faktoren*, Diploma, Hochschule für Technik und Wirtschaft Dresden.
- Varet, Alexandre (2010) *Possible effects of new technologies and operational concepts on airport runway separation parameters*, Diploma, Institut für Flugforschung.
- Mohr, Steven (2010) *Objekt-orientiertes Design einer OSGi basierten, mobilen Middleware zur Aufnahme, Speicherung und Verarbeitung von Messdaten*, Bachelor, DHBW Mannheim.
- Kerl, Christian (2010) *Realisierung einer verteilten Bibliothek für wiederverwendbare dynamische Simulationsmodelle*, Bachelor, Duale Hochschule Baden-Württemberg Mannheim.

D'Amico, S. 2010: Autonomous formation flying in low earth orbit.
Ph.D. Thesis, TU Delft.



Open Access: „Golden“ Road

- Following the „golden“ road to open access:
 - researchers publish their articles in „open access“ journals
 - peer-reviewed articles are made available free of charge immediately on publication
 - articles are published under a Creative Commons licence
 - journal usually charges a publication fee
 - journals may have pure open access models or „hybrid“ models (journal operates on traditional subscription-to-read basis, authors have option to pay a fee for immediate open access to their published article, **but:** double payment by library subscription?)

Scientific Journals: Cost Models

Traditional journal:



Open access journal:



Example: New Journal of Physics



The image shows the homepage and a sample article page of the New Journal of Physics website.

New Journal of Physics
The open-access journal for physics
Connect your research to the world
www.njp.org

New Journal of Physics
The open-access journal for physics

The spinning ball spiral

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doi:10.1088/1367-2630/12/9/083004

Abstract. We discuss the trajectory of a fast revolving solid ball moving in a fluid of comparable density. As the ball slows down owing to drag, its trajectory follows an expanding spiral as long as the rotation speed remains constant at the initial value. However, when the ball slows down further, as affected by the drag, the bending of the trajectory increases, surprisingly. Later, the rotation speed decreases again, making the ball follow a second kind of spiral, also described in the paper. Finally, the use of these highly curved trajectories is shown to be relevant to sports.

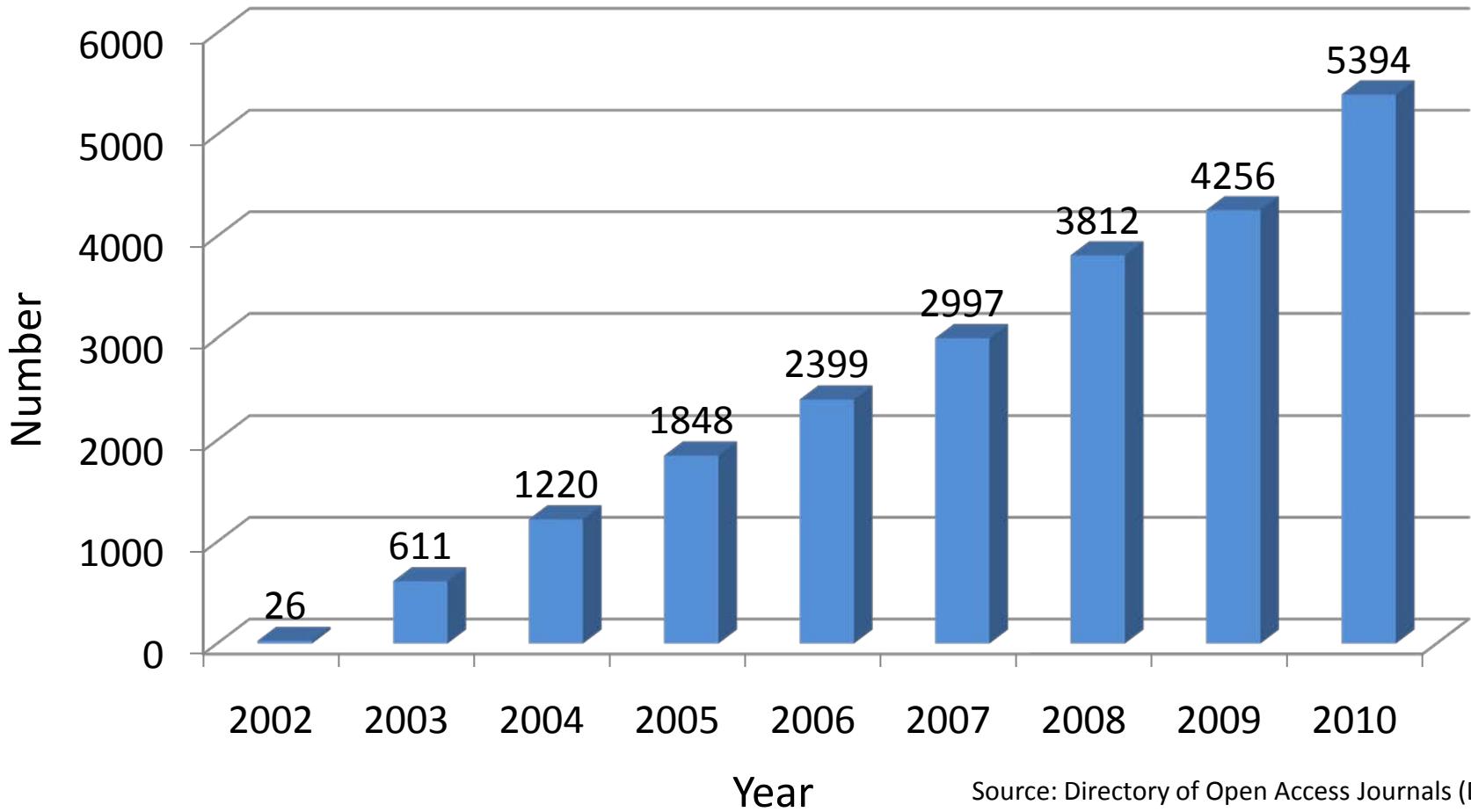
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4. Application to sports	9
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* Author to whom any correspondence should be addressed.
New Journal of Physics 12 (2010) 083004
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- pure open access journal publishing peer-reviewed research across the whole of physics
- financed by article publication charges
- founded in 1998
- <http://www.njp.org/>

Open Access Journals: Growth in Numbers



Source: Directory of Open Access Journals (DOAJ)

Open Access: Benefits

- wide dissemination of research results
- increased scientific discussion
- raised public perception of science
- better return on investment by public research funding

Open Access: Where to Search for Papers



- subject-based repositories

- BASE
<http://www.base-search.net/>

- Google Scholar
<http://scholar.google.com>

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MDC	Monika Eidt
UFZ	Ilka Rudolf
all	http://oa.helmholtz.de/ index.php?id=219

Open Access: Further Reading

- Berlin Declaration to Open Access
<http://oa.mpg.de/openaccess-berlin/berlindeclaration.html>
 - Listing of publishers' copyright policies
<http://www.sherpa.ac.uk/romeo/>
 - Creative Commons attribution license
<http://creativecommons.org/licenses/by/3.0/>
 - Directory of Open Access Journals (DOAJ)
<http://www.doaj.org/>
 - Open Access: Positionen, Prozesse, Perspektiven (in German)
<http://www.allianzinitiative.de/fileadmin/openaccess.pdf>
 - Getting your feet wet: an introduction to open access
http://www.rin.ac.uk/system/files/attachments/open_access_booklet_screen_0.pdf
 - Information platform open-access.net
http://open-access.net/de_en/
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Helmholtz Open Access Project

Thank you for listening!

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<http://oa.helmholtz.de/>