uc3m

Universidad Carlos III de Madrid



Open Science and Open Access to scholarly information

Library and Information Science Department



Contents

LESSON 1: Where to find reliable information

- <Data, information and knowledge.</pre>
- <Competences in information.
- Sources of information: typology and location.
- Evaluation of information resources: OPEN







Contents for today's session

- < What is Open Science / Open Access
- < Where to find reliable information in Open
- < Find scholarly publications and Data in the OPEN
- Practice with this information resources to find information on your topic...

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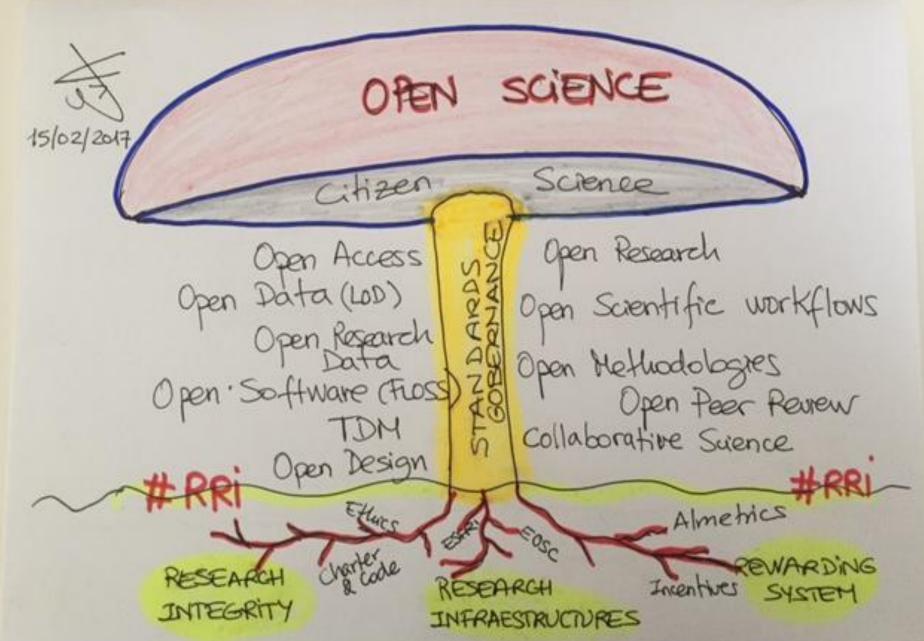
What is open science?

Open science commonly refers to efforts to make the output of publicly funded research more widely accessible in digital format to the scientific community, the business sector, or society more generally ... to promote long-term research as well as innovation.

OECD Sept 2015







What's Open Science?

Michael Nielsen (2011) "Open science is **the idea** that scientific knowledge of all kinds should be openly shared as early as is practical in the discovery process."

OECD (2015): "Open science commonly refers to efforts to make the output of publicly funded research more widely accessible in digital format to the scientific community, the business sector, or society more generally ... to promote long-term research as well as innovation."

Research Information Network (2010): "Science carried out and communicated in a manner which allows others to contribute, collaborate and add to the research effort, with all kinds of data, results and protocols made freely available at different stages of the research process."

<u>Wikipedia (2016):</u> "Open science is **the movement** to make scientific research, data and dissemination accessible to all levels of an inquiring society, amateur or professional".

<u>FOSTER Project (2014-2016)</u>: "Open Science is the practice of science in such a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable reuse, redistribution and reproduction of the research and its underlying data and methods".

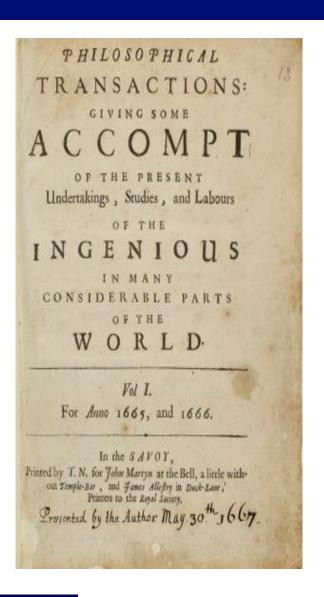
<u>Benedikt Fecher & Sascha Friesike</u> (2014): "Open Science is an umbrella term encompassing a multitude of assumptions about the future of knowledge creation and dissemination.



A long history...

XVII century: Science revolution

- <First science academies</pre>
- <1665 Henry Oldenburg first editor of *Philosophical Transactions of the Royal Society*, the first academic journal devoted to science
- <Today over thousands of journals
- <...but we need maybe now a 2nd Science Revolution





Key factors for Open Science



- < Digital revolution
- Explosion of new tools to communicate science
- < Data deluge
- More "scientific culture" among general public
- More pressure on science to have an impact on society



#AllAboutOpen

- < Open Software (FOSS)
- < Open Access
- < Open Education (OERs, MOOCs)
- < Open Data and LOD
- < Open knowledge
- < Creative Commons Licensing
- < Open design
- Web 2.0 Open methods (colaboration, wiki: Open notebook science)
- < And... Open Science/Open Research





From Open Access to Open Science... Open Data & Open...ness (Implications)

Retrieved 2014-08-08

The Lancet, Volume 377, Issue 9768, Pages 849 - 862, 5 March 2011 doi:10.1016/S0140-6736(10)60667-8 (1) Cite or Link Using DOI

2011 < Previous Article | Next Article >

This article can be found in the following collections: <u>Infectious Diseases</u> (<u>Infectious diseases-other</u>)
Published Online: 16 November 2010

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Ebola haemorrhagic fever

Dr Heinz Feldmann MD a D Edwar, Thomas W Geisbert PhD C

Summary

Ebola viruses are the causative agents of a severe form of viral haemorrhagic fever in man, designated Ebola haemorrhagic fever, and are endemic in regions of central Africa. The exception is the species Reston Ebola virus, which has not been associated with human disease and is found in the Philippines. Ebola virus constitutes an important local public health threat in Africa, with a worldwide effect through imported infections and through the fear of misuse for biological terrorism. Ebola virus is thought to also have a detrimental effect on the great ape population in Africa. Case-fatality rates of the African species in man are as high as 90%, with no prophylaxis or treatment available. Ebola virus infections are characterised by immune suppression and a systemic inflammatory response that causes impairment of the vascular, coagulation, and immune systems, leading to multiorgan failure and shock, and thus, in some ways, resembling septic shock.

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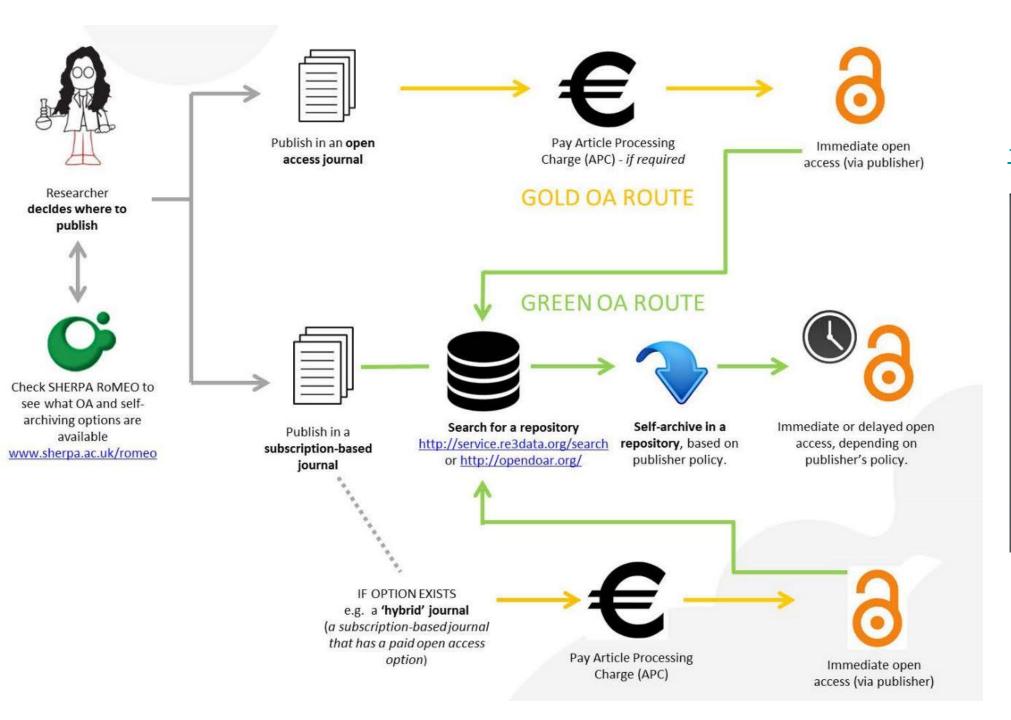
Closed Access Means People Die



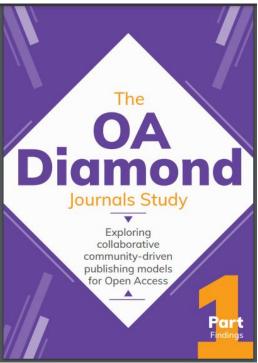


Open Access to publications

- Free, immediate, online access to the results of research
- Free to reuse e.g. to build tools to mine the content
- < Two options:
 - Green route: self-archiving Open Access copy in repository
 - Gold route: paying APCs to ensure publishers makes copy open
- Journals' OA polices from publishers SHERPA RoMEO www.sherpa.ac.uk/romeo

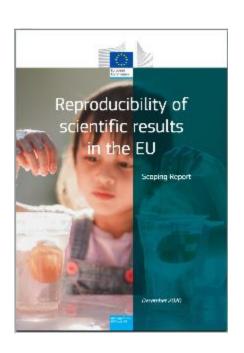


10.5281/zenodo.4558704



OpenAIRE Factsheets

Then... why Open Science?



- ✓ Greater visibility and impact for authors & projects
- Makes research networked & interconnected
- ✓ Networked research generates serendipity by default
- Speeds up innovation & discovery, takes ideas to the market & solutions to societal challenges
- You can access relevant literature not behind pay walls
- Ensures research is transparent and reproducible
- New collaborations and research partnerships
- Ensure long-term access to your outputs
- Help increase the efficiency of research
- ✓ Directly contributes to ECONOMIC GROWTH !!!

REPRODUCIBILITY !!!





Open Data (PSI and research data)

"Open data and content can be freely used, modified and shared by anyone for any purpose"

http://opendefinition.org

Tim Berners-Lee's proposal for five star open data - http://5stardata.info

- make your stuff available on the Web (whatever format) under an open licence
- make it available as structured data (e.g. Excel instead of a scan of a table)
- use non-proprietary formats (e.g. CSV instead of Excel)
- use URIs to denote things, so that people can point at your stuff
- link your data to other data to provide context



Example of debate: Open Access

1. WHAT IS OPEN ACCESS?

Open access (OA) refers to the practice of providing online access to **scientific information** that is free of charge to the end-user and reusable. 'Scientific' refers to all academic disciplines. In the context of research and innovation, 'scientific information' can mean:

- peer-reviewed scientific research articles (published in scholarly journals) or
- 2. research data (data underlying publications, curated data and/or raw data).

H2020 Guidelines to the Rules on Open Access to Scientific Publications and Open Access to research Data.

What is OPEN ACCESS (whatch the video)



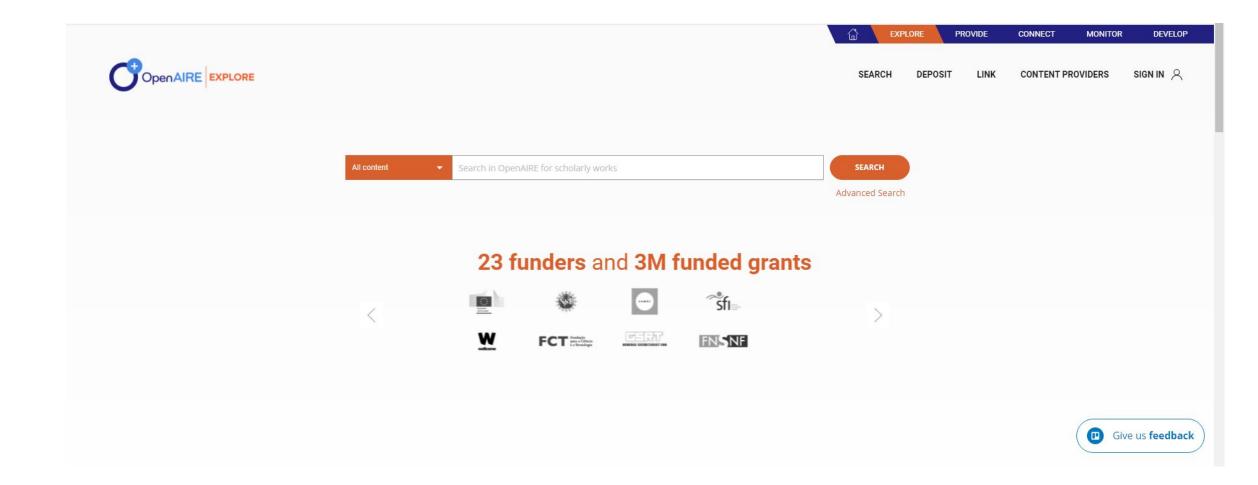
https://www.youtube.com/watch?v=L5rVH1KGBCY

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13

51

FEEDBACK 💭

To read "in the Open": Unpaywall

Chrome extension



Mobile Web Adoption in Top Ranked

The Journal of Academic Librarianship

Volume 42, Issue 4, July 2016, Pages 329-339

University Libraries: A Preliminary Study

Paula Torres-Pérez ^a ☑, Eva Méndez-Rodríguez ^b 🎗 ☑, Enrique Orduna-Malea ^c ☑

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https://doi.org/10.1016/j.acalib.2016.05.011

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Abstract

This paper aims to study the level of adoption of mobile access to the academic libraries in the best universities in the world as well as the quality of services offered in order to ascertain if the quality of academic apps and mobile websites are at the level of the overall web impact of world-class universities. For the top 50 universities according to the Ranking Web of Universities (2014), we determined whether there is a mobile website or app for their libraries. Finally we evaluated the services offered against a list of 14 indicators. The results show that 88%

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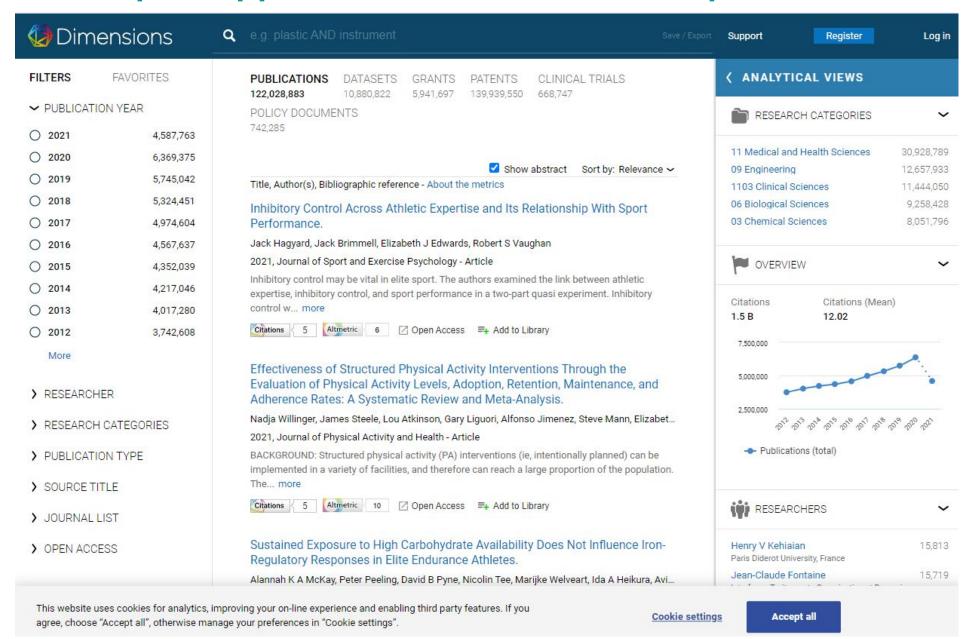
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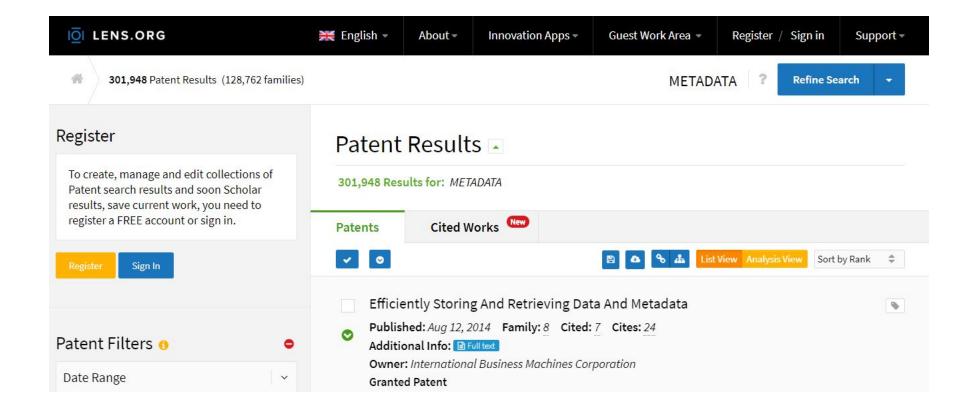
Core: https://core.ac.uk



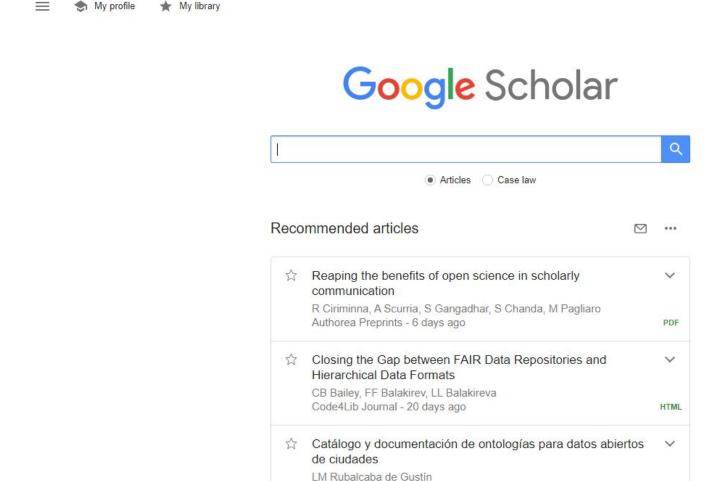
Dimensions: https://app.dimensions.ai/discover/publication



LENS: https://www.lens.org



And of course... GOOGLE Scholar: https://scholar.google.com/



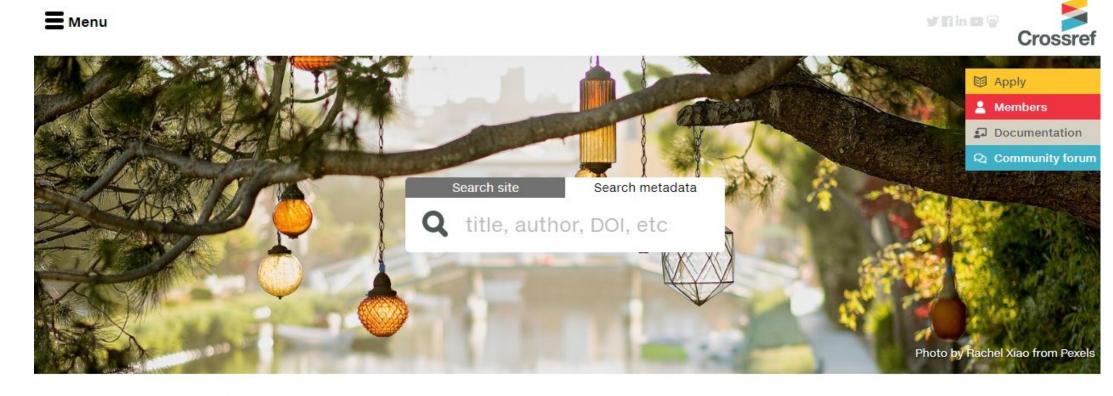
oa.upm.es - 20 days ago

PDF



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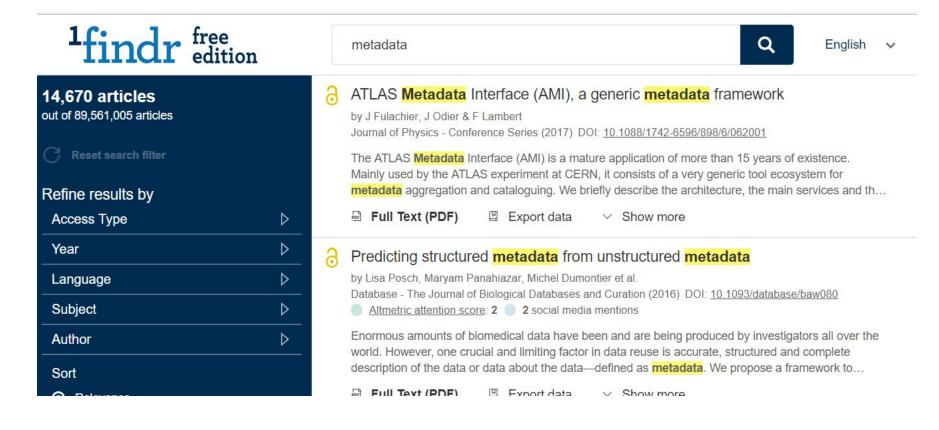
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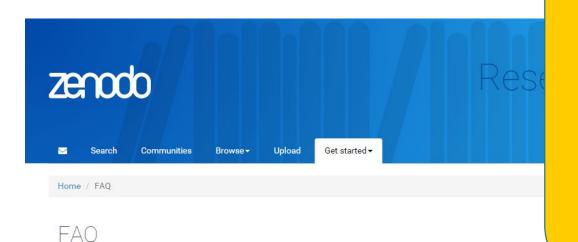
1Findr: https://1findr.1science.com



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- Publications and datasets
 - Citables (DOI)
- Link to funding agency (grant): publications, data, software

What are the size limits in Zenodo?

We currently accept files up to 2GB (you can have several 2GB files per upload); there is no size limit on communities. However, we don't want to turn away larger use cases. The current infrastructure has been tested with 10GB files, so possibly we can raise the file size limit per community or for the whole of Zenodo if needed. If you would like to upload larger files, please contact us, and we will do our best to help you. Please be aware that we cannot offer infinite space for free, so donations from heavy users towards sustainability are encouraged. Since we target the long-

tail of science, we want public user uploads to always be free.

See also OpenAIRE FAQ for general information on Open Access and European Commission funded research.

· What can I upload?

All research outputs from all fields of science are welcome. In the upload form you can choose between types of files: publications (book, book section, conference paper, journal article, patent, preprint, report, thesis, technical note, working paper, etc.), posters, presentations, datasets, images (figures, plots, drawings, diagrams, photos), software, videos/audio and interactive materials such as lessons. We do check every piece of content being uploaded to ensure it is research related. Please see further information in our Terms of Use and Policies.

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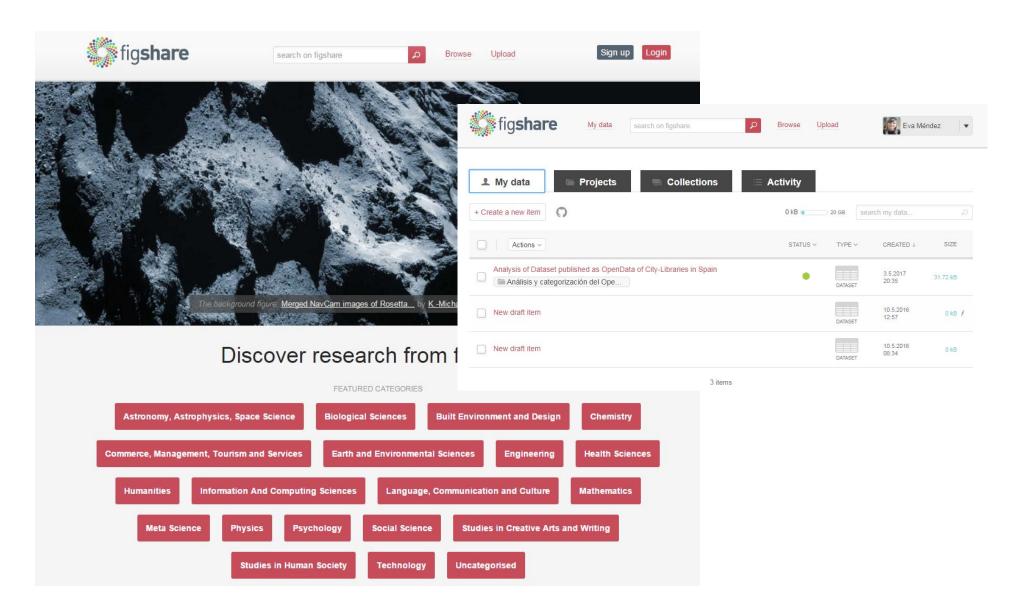
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· Why do you allow closed access uploads?

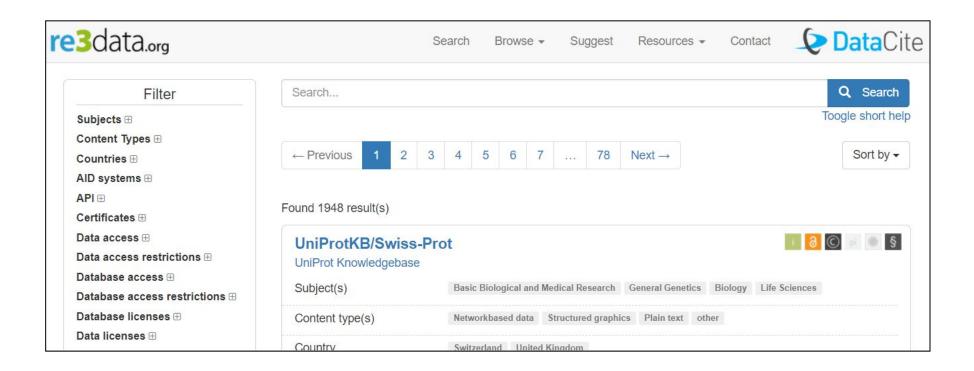
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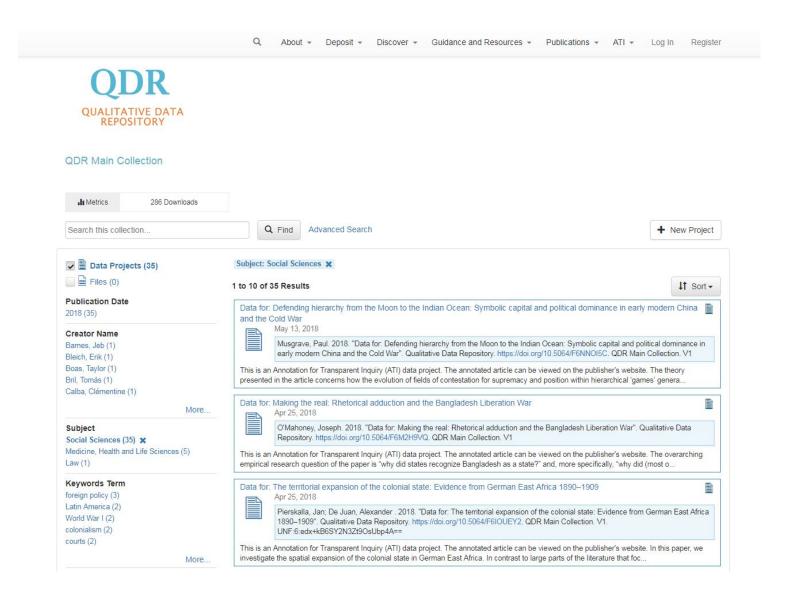


Re3data: http://service.re3data.org

Data repositories by discipline/topic



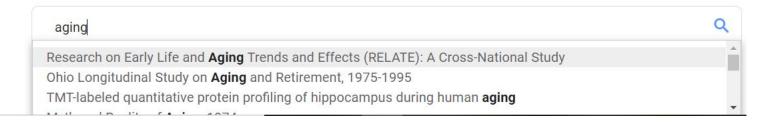
Search for qualitative data https://qdr.syr.edu



And Google

https://toolbox.google.com/datasetsearch

Google Dataset Search Beta



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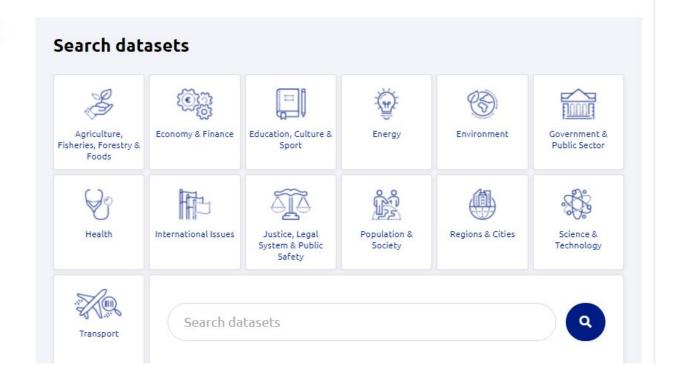
Search for Open Gov Data (Europe) https://data.europa.eu



The official portal for European data

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Catalogues Countries Datasets



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WORK IN YOUR TABLE: Search for Open Information for your essay



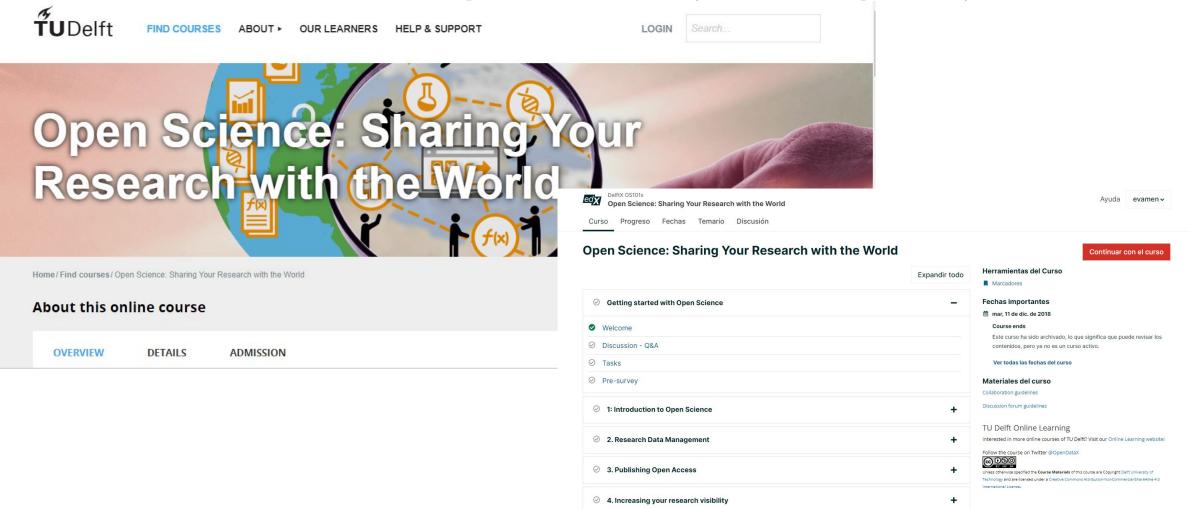
- Use all the resources mentioned in this lesson to find Open/free information about your essay's topic
- Look for reliable Open Data, Open Access publications
- < Evaluate them
- Will you use them in your Academic/Scholarly work?

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https://www.edx.org/course/open-science-sharing-your-research-with-the-world