OPEN SCIENCE DALLA A ALLA Z
2-L'ALTERNATIVA OPEN

Elena Giglia

Elena Giglia
Perugia, 27 febbraio 2020
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@egiglia

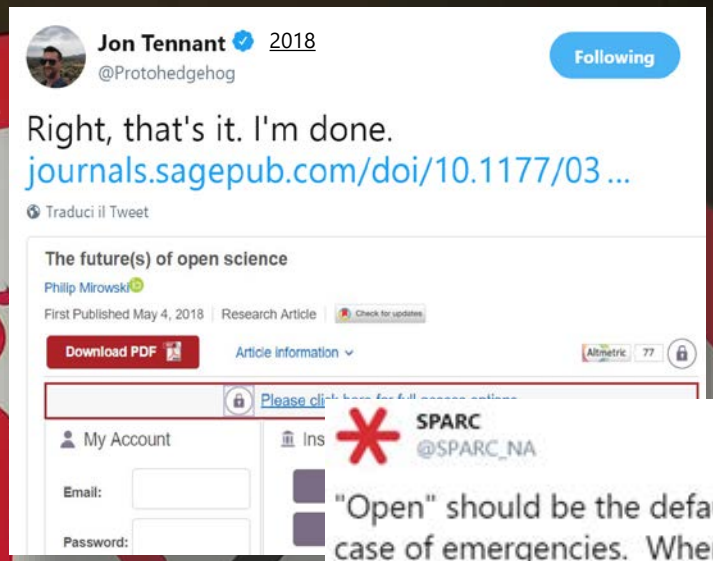
In questo modulo impareremo:

1. Open Science è solo la scienza, fatta bene
2. come potete aprire tutti i passi del ciclo della ricerca

MESSAGGI CHIAVE

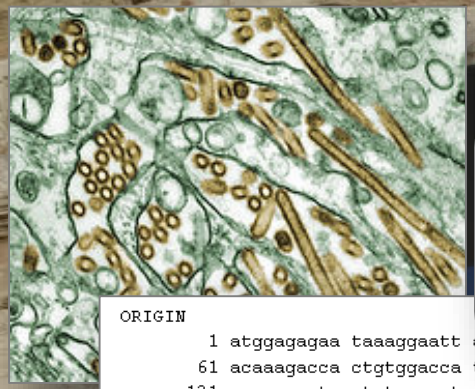
- C'è una comunità lì fuori che vi sostiene (soprattutto giovani ricercatori)
- potete fare un passo alla volta...
- ...ma fatelo, provateci!...

Open Science



…PERCHÉ NON FUNZIONA, COSÌ COM'È…

…una storia italiana



Display Settings: GenBank Send:

Influenza A virus (A/Cygnus olor/Italy/742/2006(H5N1)) polymerase basic protein 2 (PB2) gene, complete cds

GenBank DQ533586.1
FASTA Graphics

Go to:

```
LOCUS       DQ533586              2280 bp    cRNA    linear   VRL 01-DEC-2008
DEFINITION  Influenza A virus (A/Cygnus olor/Italy/742/2006(H5N1)) polymerase
            basic protein 2 (PB2) gene, complete cds.
ACCESSION   DQ533586
VERSION     DQ533586.1  GI:95020630
```

```
ORIGIN
        1 atggagagaa taaaggaatt ac
       61 acaaagacca ctgtggacca tatggccata atcaagaaat acacatcagg aagacaggag
      121 aagaaccctg ctctcagaat gaaatggatg atggcaatga aatatccaat cacagcggac
      181 aagagaataa tagagatgat tcctgaaagg aatgaacaag gacagacact ctggagcaag
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      361 aaggttgaaa ggttaagaca tggaaccttc ggtcccgttc atttccgaaa ccaagttaaa
      421 atacgccgcc gagttgatac aaatcctggc catgcagatc tcagtgctaa agaagcacaa
      481 gatgtcatca tggaggtcgt tttcccaaat gaagtgggag ctagaatatt gacttcagaa
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      721 gaacagatgt acactccagg cggagaagta agaaatgacg atgttgacca gagtttgatc
      781 attgctgcca gaaacattgt taggagagca acggtatcag cggatccact ggcatcactg
      841 ctggagatgt gttacagcac acaaattggt gggataagga tggtggacat ccttaggcaa
      901 aatccaactg aggaacaagc tgtggatata tgcaaagcag caatgggtct gaggattagt
      961 tcatccttta gctttggagg cttcactttc aaaagaacaa gtggatcatc catcacgaag
     1021 gaagaggaag tgcttacagg caacctccaa acattgaaaa taagagtaca tgaagggtat
     1081 gaggaattca caatggttgg gcagagggca acagctatcc tgaggaaagc aactagaagg
     1141 ctgattcagt tgatagtgag tggaagaaac gaacaatcaa tcgctgaggc aatcattgta
     1201 gcaatggtgt tctcacagga ggattgcatg ataaaagcag tacgaggcga tctgaatttc
     1261 gtaaacagag caaaccaaag attaaacccc atgcatcaac tcctgagaca ttttcaaaag
     1321 gacgcaaaag tgctatttca gaattgggga actgaaccca ttgataatgt catggggatg
     1381 atcggaatat tacctgacat gactcccagc acagaaatgt cactgagagg agtaagagtt
     1441 agtaaaatgg gagtagatga gtattccagc actgagagag tagttgtaag cattgaccgc
     1501 ttcttaaggg ttcgagacca gcgggggaac gtactcttat ctcccgaaga ggtcagcgaa
     1561 acccagggaa cagagaagtt gacaataaca tattcatcat caatgatgtg ggaaatcaac
     1621 ggtcctgagt cagtgcttgt taacacttac caatggatca tcagaaactg ggagaccgtg
     1681 aaaattcagt ggtctcagga ccccacgatg ttgtacaata agatggagtt tgaaccgttc
```

… nel 2006 Ilaria Capua depositò la sequenza del virus H5N1 (influenza aviaria) in GenBank , sfidando l'OMS.
…l'OMS adottò poi il suo approccio trans-disciplinare per le strategie pre-epidemiche, che riguarda la salute di tutti

… un po' di Zen…

Much of scientific work is made up of **collaboration rather than competition.** Science exhibits the nature of **networks, not that of Olympic games**. **Concern of quality** has been **replaced by an obsession for competition. Competition means "doping"**

Scholarly communication is a distributed process of knowledge creation that requires a great conversation.

Scholarly communication is changing. Two questions:

1) **What will it be like?** The question can be framed in two ways:

The first is the "scriptorium way" when press was invented:

how to adapt the present to the (yet unknown) future.

Open Access debate has followed this path.

The second way, more fundamentally, strongly foregrounds the notion of "scientific communication": **WHAT DOES IT NEED TO WORK BEST?**

- **a set of useful, credible, peers;**
- **"crystals" of knowledge**

2) **Who will control it?**

Scholars must regain possession of their own work (and its evaluation)

SKILLS AND SERVICES NEEDED FOR THE GREAT CONVERSATION SHOULD SERVE ITS OBJECTIVES, NOT THE REVERSE.

… se si costruisse da zero

björn.brembs.blog

Oct 05

The Scholarly Commons: From Profiteering To Servicing

http://bjoern.brembs.net/2017/10/academic-publishers-profiteering-servicing/

In: Science Politics • Tags: bidding, infrastructure, publishers, services

These days, many academic publishers can be considered mere Pinos: 'Publishers in name only'. Instead of making scholarly work, commonly paid for by the public, public, as the moniker 'publisher' would imply, in about 80% of the cases, they put them behind a paywall. As if that weren't infuriating enough, profits and paywall costs add up such that the final cost to the taxpayer is tenfold higher than if each article were just made, you know, public.

The only reason scholarship is in this embarrassing calamity is historical baggage. Nobody in their right mind would construct scholarly communication in the current way if they had to design it from scratch.

So how would one design our scholarly communication infrastructure from scratch, without historical baggage? To do that, one would have to start by defining the basic functionalities of this infrastructure. Importantly, the infrastructure would have to cover all of scholarships output: our narratives (text, audio, video) as well as our data

NESSUNO SANO DI MENTE LA COSTRUIREBBE COSÌ SE DOVESSE PARTIRE DA ZERO

…un po' di ispirazione…

The best thing about **Internet** is that it's **open.** In every field **it let us share and innovate.**

In science, **OPENNESS IS ESSENTIAL.**

Open science doesn't mean ignoring economic reality.

Of course **we need business models to be sustainable**. But that **doesn't mean we have to carry on doing things the way they have always been done.**

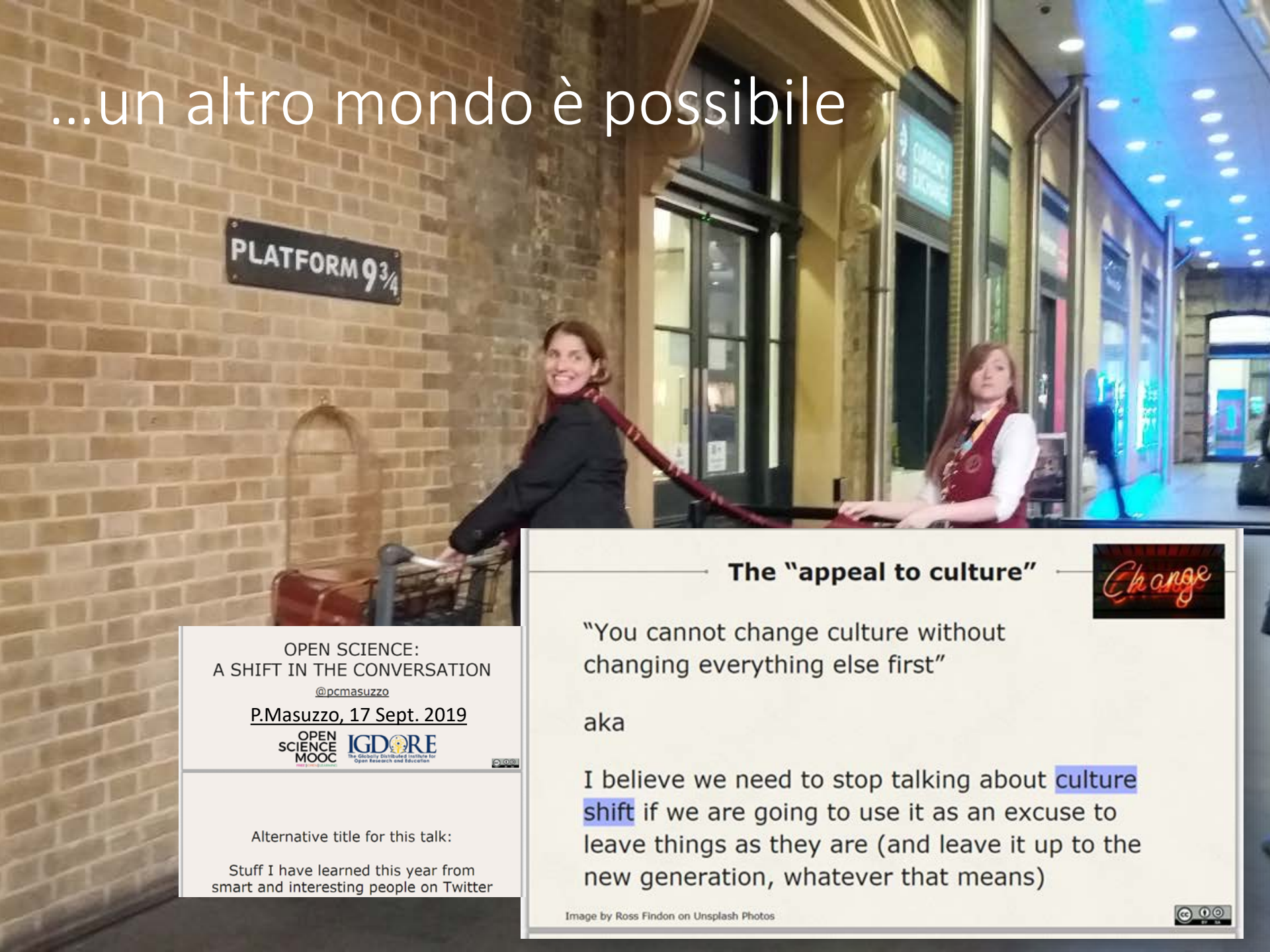
So, wherever you sit in the value chain, whether you're a researcher or an investor or a policy maker, my message is clear:
let's invest in collaborative tools that let us progress…

Let's tear down the walls that keep learning sealed off.

And let's make science open.

N. Kroes, Let's make science open, giugno 2012

…un altro mondo è possibile



OPEN SCIENCE:
A SHIFT IN THE CONVERSATION

@pcmasuzzo

P.Masuzzo, 17 Sept. 2019

OPEN SCIENCE MOOC

IGDORE
The Globally Distributed Institute for Open Research and Education

Alternative title for this talk:

Stuff I have learned this year from smart and interesting people on Twitter

The "appeal to culture"

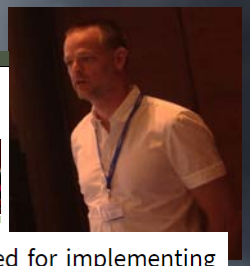
"You cannot change culture without changing everything else first"

aka

I believe we need to stop talking about culture shift if we are going to use it as an excuse to leave things as they are (and leave it up to the new generation, whatever that means)

Image by Ross Findon on Unsplash Photos

Utopia?...



Jan 16

Why Academic Journals Need To Go

Jan. 2018

In: Science Politics • Tags: decentralized, infrastructure, journals, standards

In his fantastic Peters Memorial Lecture on occasion of receiving CNI's Paul Evan Peters award, Herbert Van de Sompel of Los Alamos National Laboratory described my calls to

Coincidentally, journal subscriptions also usurp most of the funds required for implementing Herbert's solutions – the round wheels. Canceling subscriptions hence serves two main purposes: removing the main obstacle for scholars using modern information technology and freeing up funds to implement said technology: removing the square wheels and replacing them with round wheels. Subscription journals are the keystone in the current scholarly communication arch: remove them and it all falls apart. Any journal-like functionality that scholars value is easily recreated with modern technology, but with new functionalities and few, if any, of the current disadvantages and unintended consequences.

björn.brembs.blog

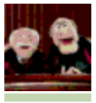
‹ Prev Next ›

May 20

Why Haven't We Already Canceled All Subscriptions?

In: Science Politics • Tags: infrastructure, money, subscriptions

May 20, 2016



The question in the title is serious: of the ~US$10 billion we collectively pay publishers annually world-wide to hide publicly funded research behind paywalls, we already know that only between 200-800 million go towards actual costs. The rest goes towards

[...]

SE TUTTI I SOLDI SE NE VANNO IN ABBONAMENTI NON RESTA NULLA PER CREARE ALTERNATIVE...

...NUOVA INFRASTRUTTURA PER SCAMBIARE RICERCHE

SE APERTE=GRATIS

VUOI CHIUDERE? = PAGHI

Il vostro compito

DA QUESTA SLIDE IN POI, PROVATE A PENSARE:
«COME POSSO APPLICARLO ALLA MIA RICERCA»?

Open Science

SOCIÉTÉS NUMÉRIQUE ÉDITION SCIENTIFIQUE

Science ouverte : la révolution nécessaire

Jan. 8, 2020

'Open Science' stands for the transition to a new, more open and participatory way of conducting, publishing and evaluating scholarly research. Central to this concept is the goal of increasing cooperation and transparency in all research stages. This is achieved, among other ways, by sharing research data, publications, tools and results as early and open as possible.

Qeios | Open Access | Lic. Info | Cite

https://doi.org/10.32388/838962

Open Science

Open Science leads to more robust scientific results, to more efficient research and (faster) access to scientific results for everyone. This results in turn in greater societal and economic impact.

https://www.accelerateopenscience.nl/what-is-open-science/

Jeff Rouder
@JeffRouder

What is Open Science? It is endeavoring to preserve the rights of others to reach independent conclusions about your data and work.

Traduci il Tweet

21:47 - 5 dic 2017

Open Science Depends on Open Minds

Neelie Kroes

Iscriviti 851

Open Science @openscience · 5 h

"Being open and transparent is an ongoing practice and not a check box at the end." - @biocrusoe #openscience

Sept. 19, 2019

Open Science @opens

#OpenScience is science by anyone, and for everyone.

Open Science = Open Outputs + Open Infrastructure X Culture (change)

Access, reuse & discoverability

Evaluation & Researcher behaviour

C. Mac Callum, UKSG, April 2018

Open Science

Jon Tennant
107.241 Tweet

Following

[Open] Science is a Human Right

Article 27

1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to **share in scientific advancement and its benefits**.
2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

1) Toda persona tiene derecho a participar libremente en la vida cultural de la comunidad, a gozar de las artes y a participar en el **progreso científico y en los beneficios que de él resulten**.
2) Toda persona tiene derecho a la protección de los intereses morales y materiales que le correspondan por razón de las producciones científicas, literarias o artísticas de que sea autora.

https://www.un.org/en/universal-declaration-human-rights/

Sept. 21, 2019

@protohedgehog

17 February 2020

Science/African Union: A World Congress in Addis Ababa on 25/26 February to affirm "the right to science globally"

Open Science

https://www.fosteropenscience.eu/foster-taxonomy/open-science-definition

Open Science | Research Data Management | Legal Issues | Text And Data Mining | TDM Methods | Research Workflow | RRI

Click to download taxonomies

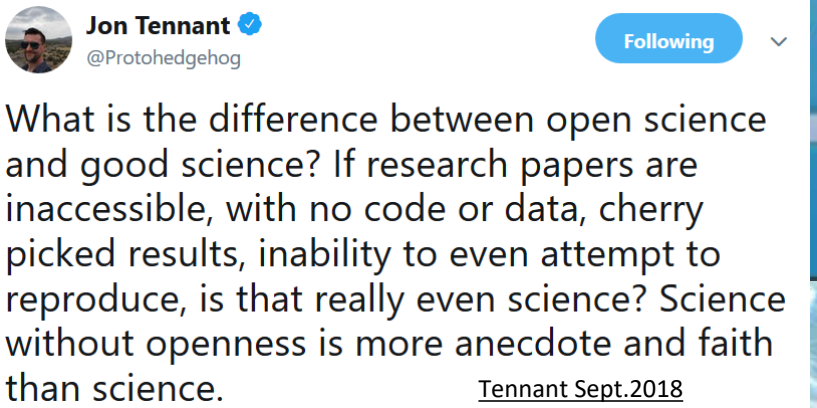
- **Open Science**
  - Open Access
    - Open Access Definition
    - Open Access Initiatives
    - Open Access Routes
      - Gold Route
      - Green Route
    - Open Access Use and Reuse
  - **Open Data**
    - Open Big Data
    - Open Data Definition
    - **Open Data Journals**
    - Open Data Standards
    - Open Data Use and Reuse
    - Open Government Data
  - Open Reproducible Research
    - Definition of Open Reproducible Research
    - Irreproducibility Studies
    - Open Lab/Notebooks
    - Open Science Workflows
    - Open Source in Open Science
    - Reproducibility Guidelines
    - Reproducibility Testing
  - Open Science Definition
  - Open Science Evaluation
    - Open Metrics and Impact
      - Altmetrics
      - Bibliometrics
      - Semantometrics
      - Webometrics
    - Open Peer Review
  - Open Science Guidelines
  - Open Science Policies
    - Organisational mandates
      - Funders policies
      - Governmental policies
      - Institutional policies
    - Subject policies
      - Open Access policies
      - Open Data Policies
  - Open Science Projects
  - Open Science Tools
    - Open Repositories
    - Open Services
    - Open Workflow Tools

Open Sc

Princip larship

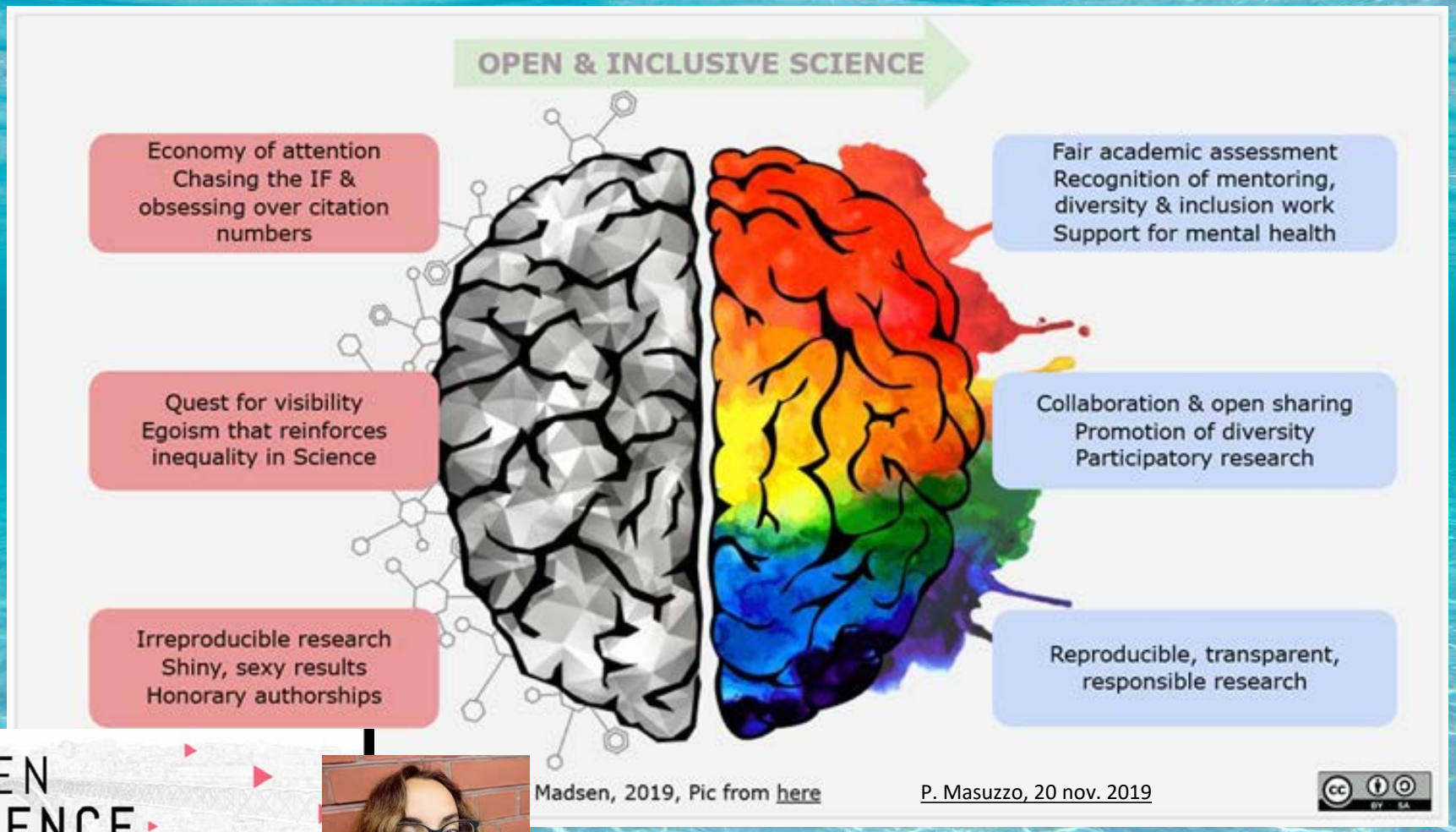
Clip sl

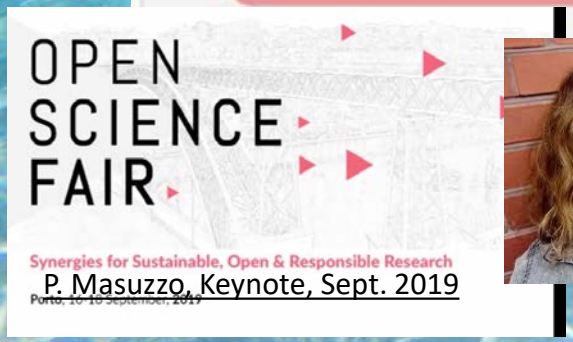
Transparency	Accountability	Inclusivity
Responsibility	Community & Collaboration	Visibility
Rigour	Equality	Public good



Tony Ross-Hellauer, 2017

Open and inclusive science





P. Masuzzo, Keynote, Sept. 2019

Open Science è funziona

Open Science

Open Science is a burning issue in the scientific community, which is gaining increasing attention by the non-scientific community as well. Innovators, engineers, tech developers, both from private and public sectors are embracing the open science and open innovation concepts. And policy makers and citizens are increasingly embracing the concept of open science as a tool for making science more accessible, the scientific process more inclusive and the outputs of science more readily available.

Thus, Open Science can be a game changer for achieving the Sustainable Development Goals, particularly in Africa, least developed countries, landlocked developing countries, and Small Island Developing States. UNESCO has a crucial role to play in raising awareness and leading the global dialogue on Open Science, ensuring that Open Science practices meet their potential in bridging the world's STI gaps.

Open Science and SDG

UNITED NATIONS

Roundtable Discussion on a Global Science Commons

Outcome Document

United Nations Headquarters, Monday, 18 November 2019

Nov. 18, 2019

The participants reached a consensus on the following views

I. Open Science is an accelerator of the Sustainable Development Goals (SDGs).

II. Publicly funded science should be Open Science.

III. We are not on track to achieve the SDGs. We must work collaboratively toward the goals of humanity laid out in the SDGs.

IV. The importance of Open Access (OA) is key takeaway from the 2019 Global Sustainable Development Report.

V. Open Science must be inclusive. Important relevar
cited research.

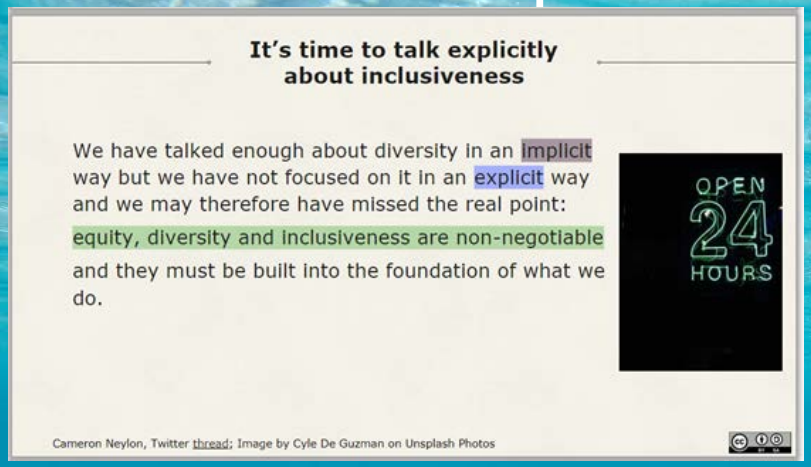
VI. Incentives for research should be aligned with open
humanity.

VII. Open Science requires the opening of barriers to a s
processes. Libraries are natural information/data br
processes, and their role is essential.

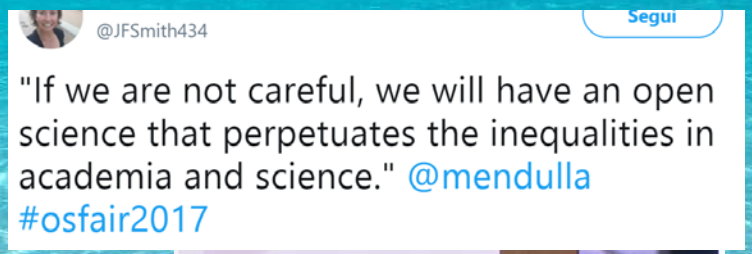
Roadmap to a Science Commons

1. There cannot be a Science Commons without Open Science. A Science Commons can be viewed as the framework organized around principles, universal values and the architecture of open research.
   - The principles should apply to all scientists who receive public research funding wherever they are located. Outputs of the global, publicly funded research should be:
     - universally available (no lock-in and not sold as a premium service)
     - as open as possible, as closed as needed
     - as distributed as possible, as centralized as needed
     - FAIR (findable, accessible, interoperable and reusable).
   - Open Science must be guided by universal values:
     - inclusiveness and respect for diversity
     - equitable practice reciprocity and complementarity
     - universally shared benefits, and
     - opportunities for scientific education and social participation.

Open [collaborative] Science



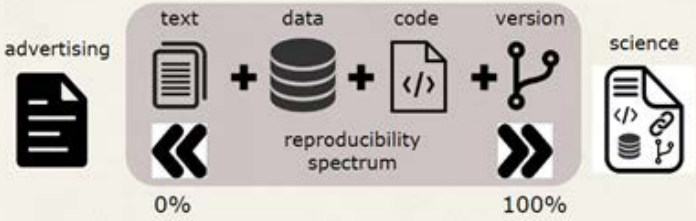
Manifesto



Oct. 19, 2019
46.24 Inclusive Open Science, 7 Sept. 2017

Open Science

Let's please stop living in the past



research outputs now encompass far more than can be expressed in the 17th century construct of a research paper

scholars deserve to be given credit for the many contributions they make above and beyond articles (peer-reviews, data, code, protocols...)

Image from https://www.teepublic.com, Eric the clown, Seinfeld

We need to hear more #failtales

But it's more than just the way science is presented in talks.

It's also about how we write about it: stories to promote the results we got in a few pages that hide the biggest truth of them all:

#failtales are everywhere.

And that's absolutely OK.

When we reject failure, we create a culture of punishment, artificial rewards, and scientific bias. When we embrace failure, we cultivate a culture of acceptance, tolerance, and learning. Which one would you prefer?

Embracing Failure as an Intrinsic Part of Science #Failtales - Jon Tennant

OPEN SCIENCE FAIR

Synergies for Sustainable, Open & Responsible Research

Porto, 16-18 September, 2019

P. Masuzzo, Keynote, Sept. 2019

Open science

Open Science MOOC @OpenScienceMOOC · 18 set

"It's about your work, your scholarship, and your ideas that are important, and deserve to be open."

Our latest video with @etothczifra of @DARIAHeu explores #OpenAccess in the Arts and Humanities, and is very inspiration and informative!

YOUR IDEAS DESERVE TO BE OPEN!

E.Toth-Czifra, 18 Sept. 2019

Open science: 8 pilastri

- Rewards and Incentives
- Research Indicators and Next-Generation Metrics
- Future of Scholarly Communication
- European Open Science Cloud
- FAIR Data
- Research Integrity
- Skills and Education
- Citizen Science

Open science è un processo

PERSPECTIVE ARTICLE Provisionally accepted The full-text will be published soon. Notify me

Front. Big Data | doi: 10.3389/fdata.2019.00043

Open science, open data and open scholarship: European policies to make science fit for the 21st century

Jean-Claude Burgelman[1*], Corina Pascu[1*], Katarzyna Szkuta[2], Rene Von Schomberg[1], Athanasios Karalopoulos[2], Konstantinos Repanas[1] and Michel Schouppe[1]

[Nov.2019]

Transition to open science is a multidimensional and multistage process. There is value and risk of being a first mover, but there is higher risk of being a follower. The European Commission has taken

Open Science and its role in universities:
A roadmap for cultural change

May 29 2018

Open Science: Opportunities, challenges and cultural change in universities

Open Science is not about dogma; it is about greater efficiency and productivity, more transparency and a better response to interdisciplinary research needs

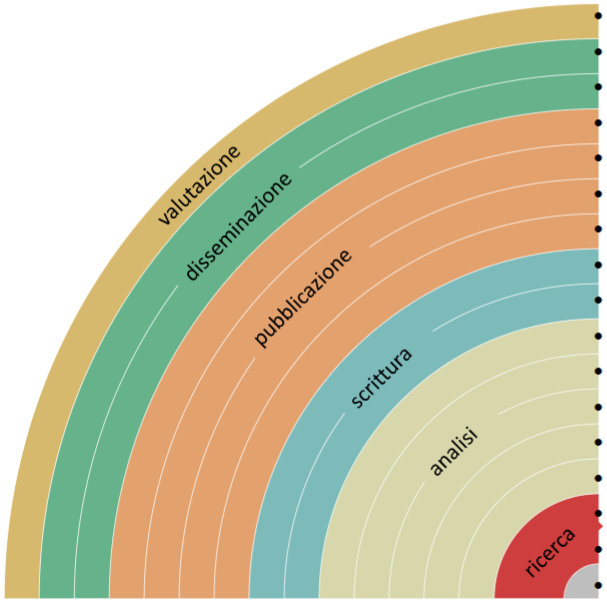
the importance of Open Science where "new kno
created through global collaborations involving t
of people from across the world and from all walk
The Commissioner therefore called for drawing u

t. A transition to Open Science is a process, not a single event. Such a
ansition at the institutional level, we suggest universities should develop

transition will take years to effect, not months or days. To
a programme of cultural change, which is necessary t

Open science un passo per volta…

Come puoi rendere Open ogni passo della ricerca…



- aggiungendo misure di impatto alternative, es. altmetrics
- comunicando sui social media, es. Twitter
- condividendo poster e presentazioni, es. su FigShare
- utilizzando licenze aperte, es. Creative Commons BY
- depositando in archivi o pubblicando su riviste Open
- provando la open peer review, es. PubPeer o F1000
- condividendo preprints, es. su OSF, arXiv o bioRxiv
- con formati leggibili dalle macchine, es. Jupyter o CoCalc
- con la scrittura collaborativa, es. Overleaf o Authorea
- condividendo protocolli e workflow, es. su Protocols.io
- condividendo note di laboratorio, es. OpenNotebookScience
- condividendo software, es. su GitHub con licenza GNU/MIT
- condividendo i dati, es. su Dryad, Zenodo o Dataverse
- pre-registrando esperimenti, es. su OSF o AsPredicted
- commentando pagine web, es. su Hypothes.is o Pund.it
- usando bibliografie condivise, es. su Zotero
- condividendo progetti di ricerca, es. su RIO Journal

Open Science: what's in it for me (Torino, 8 e 9 marzo 2018)

Report, marzo 2018

Open per…

Lisa Matthias ha ritwittato

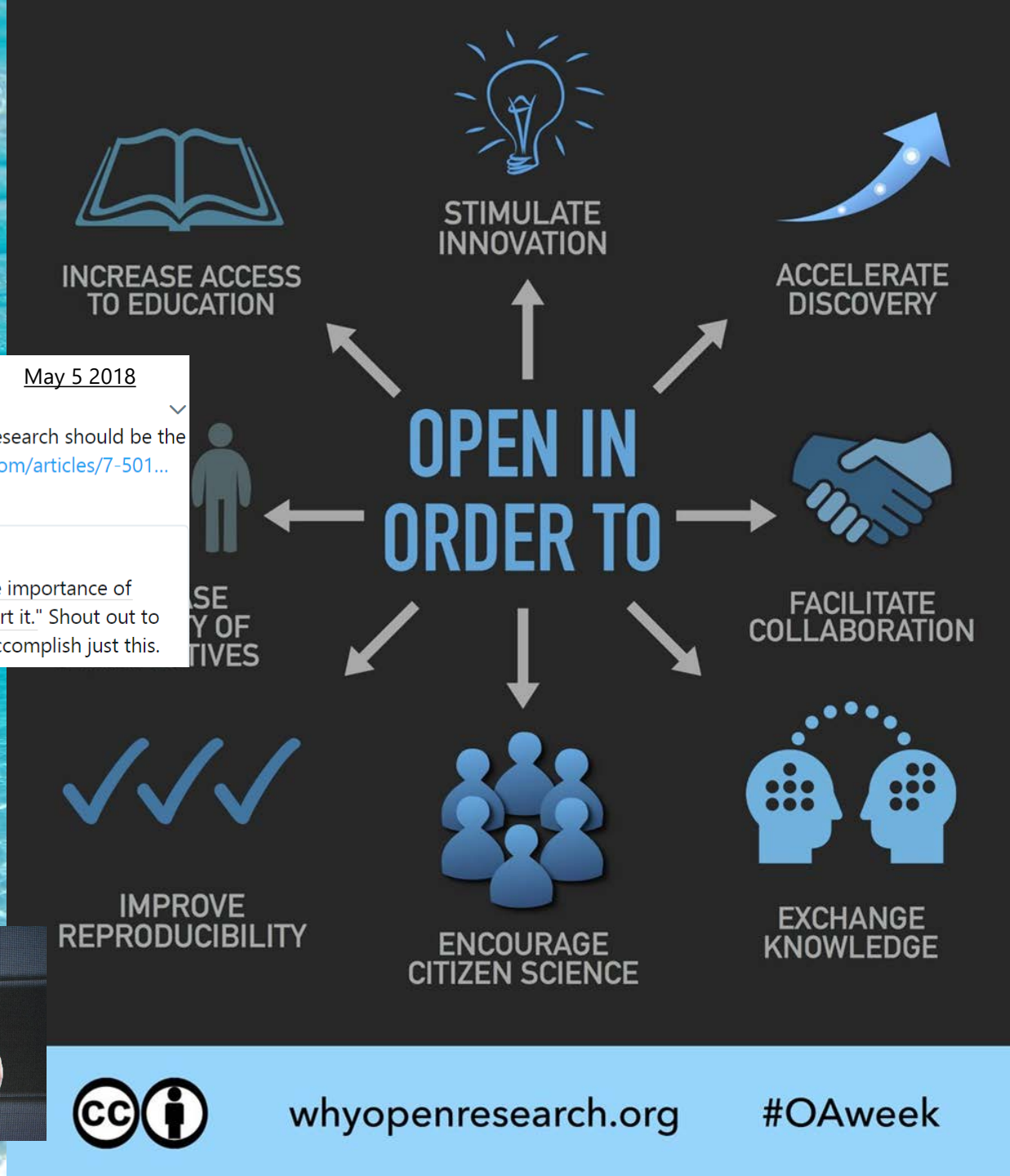
May 5 2018

Open Science MOOC @OpenSci_MOOC · 5 mag

As stated by Ashley Farley of the Gates Foundation, "Open research should be the norm. Knowledge should be a public good." f1000research.com/articles/7-501… HT @devinberg @kyleniemeyer

> **Ashley Farley** @ashleydfarley
> "Educate our undergraduate and graduate students on the importance of open knowledge dissemination & the practices that support it." Shout out to the @OpenSci_MOOC who is building the framework to accomplish just this.

…starting from ECR



Open per legge…

Feb 17, 2020

eurodoc
The European Council of Doctoral Candidates and Junior Researchers

Researchers call on EU institutions to ensure free circulation of scientific knowledge

Brussels, 17 February 2020 - Joint statement

European Council of Doctoral Candidates and Junior Researchers (Eurodoc), Marie Curie Alumni Association (MCAA), and Young Academy of Europe (YAE), who together represent researchers at all career stages across Europe and abroad, **call on the European Commission to propose legislation ensuring that publicly funded scientific knowledge can circulate freely without embargoes or restrictions** to accelerate discovery, strengthen European research, and to tackle global challenges.

Uniform legislation on a European level would harmonise and clarify rules by removing barriers which today prevent scientific knowledge from circulating freely in all of Europe. This could take the form of a directive establishing the nonwaivable legal right for researchers to share publicly funded peer-reviewed research findings without embargo periods or other restrictions (e.g. on the use of open licenses). Several related examples of national legislation that can act as inspiration already exist across Europe, including in the Netherlands, Belgium, France and Germany.

By establishing this legal right, researchers will be able to publish in any journal or outlet and still comply with open access mandates such as 'Plan S' by following the 'repository route', as this right would supersede any restrictive policies some publishers may have. It thus will ensure that any researcher in Europe who wishes to deposit their author-accepted manuscript in an open access repository without an embargo and using an open license will always have the legal right to do so. We believe that such legislation would greatly benefit researchers, science, and broader society.

Signed by Eva Hnátková (President, Eurodoc), Matthew DiFranco (Chair, MCAA), and Mangala Srinivas (Chair, YAE) on 17 February 2020. This statement is released under a CC BY license.
Contact: policy@mariecuriealumni.eu

Appendix on European legislative context

- Article 179 in the Treaty on the Functioning of the European Union: *(1)* ***The Union shall have the objective*** *of strengthening its scientific and technological bases by achieving a European research area in which researchers,* ***scientific knowledge and technology circulate freely****, and encouraging it to become more competitive, including in its industry, while promoting all the research activities deemed necessary by virtue of other Chapters of the Treaties.* [boldface added]
- May 2016 Council of the EU conclusions calling for the removal of barriers to ensure immediate open access to scientific publications.

PARLAMENTO ITALIANO · Vai a camera.it · YouTube · Senato TV · Parlamento

MENU

webtv.camera.it

Sei in: WebTV > Archivio > Evento

Mercoledì 26 Settembre 2018 Settembre ore 15:00

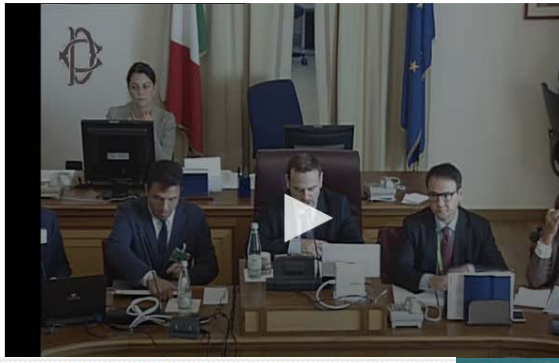
Audizioni su valorizzazione Pompei e accesso all'informazione scientifica

Sept-Oct 2018

VIDEO COMPLETO
15:00 · scarica · link · embed

DESCRIZIONE

La Commissione Cultura ha svolto le seguenti audizioni:
alle **ore 15** Vincenzo Marrazzo, presidente del Distretto turistico "Pompei, Monti Lattari, Valle del Sarno", nell'ambito della discussione della risoluzione n. 7-00007 Gallo, sulla valorizzazione dell'area culturale circostante il sito di Pompei;
alle **ore 15.45** rappresentanti dell'Infn (Istituto Nazionale di fisica nucleare), dell'Aie (Associazione italiana editori) e dell'Aisa (Associazione italiana per la promozione della scienza aperta), nonché di Gino Roncaglia e Roberto Delle Donne, nell'ambito dell'esame in sede referente della proposta di legge recante "Modifiche all'articolo 4 del decreto-legge 8 agosto 2013, n. 91, convertito, con modificazioni, dalla legge 7 ottobre 2013, n. 112, in materia di accesso aperto



LAVORI PREPARATORI DEI PROGETTI DI LEGGE · APPROFONDIMENT

Atto Camera: 395

Proposta di legge: GALLO: "Modifiche all'articolo 4 del decreto-legge 8 agosto 2013, n. 91, convertito con modificazioni, dalla legge 7 ottobre 2013, n. 112, in materia di accesso aperto all'informazione scientifica" (395)

Iter | Testi | Emendamenti | Esame in Commissione | Discussione in Assemblea | Dossier | Votazioni | OpenData

Documentazione degli uffici

Dossier	Titolo	Note
Dipartimento Cultura CU0023 (7 settembre 2018)	Interventi in materia di accesso aperto all'informazione scientifica	Schede di lettura

Open Science: 2 messaggi

Science was founded on openness.

We closed it down.

It’s time to open it up again.

OPEN SCIENCE MOOC
FREE | OPEN | LEARNING

J. Tennant Oct. 16, 2019

…è il modo migliore per aprirsi al territorio, PMI, start up…

(trasferimento tecnologico = brevetto???)

Un altro mondo è possibile?

B. Rentier, 2019

… un altro mondo è possibile SE…

https://zenodo.org/record/34079#.WOOwY2fOPIU

OPEN ACCESS NETWORK AUSTRIA OANA

VALTO
Valtioneuvoston julkaisuar

Bernard Rentier
@bernardrentier

Ce mercredi 2 mai
décret au monde,
liégeois» imposan
encourageant) l'#
Belgique, donnant
sécurité juridique.
ère nouvelle en re

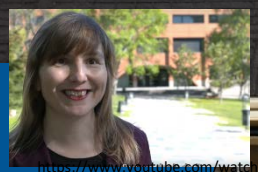
Jean-Claude M
Unanimité moi
décret #opena
législation qui veut placer la science à portée de tous, un texte
fondateur essentiel pour nos chercheurs et pour l'avancée du

https://twitter.com/bernardrentier/status/991791603315630080

Francia - National Plan, July 2018

NATIONAL PLAN
FOR OPEN SCIENCE

4TH JULY 2018



https://www.youtube.com/watch?v=C9a3Ap3yyak

Amsterdam Call for Action on Open Science

http://english.eu2016.nl/documents/reports/2016/04/04/amsterdam-call-for-action-on-open-science

Removing barriers to open science

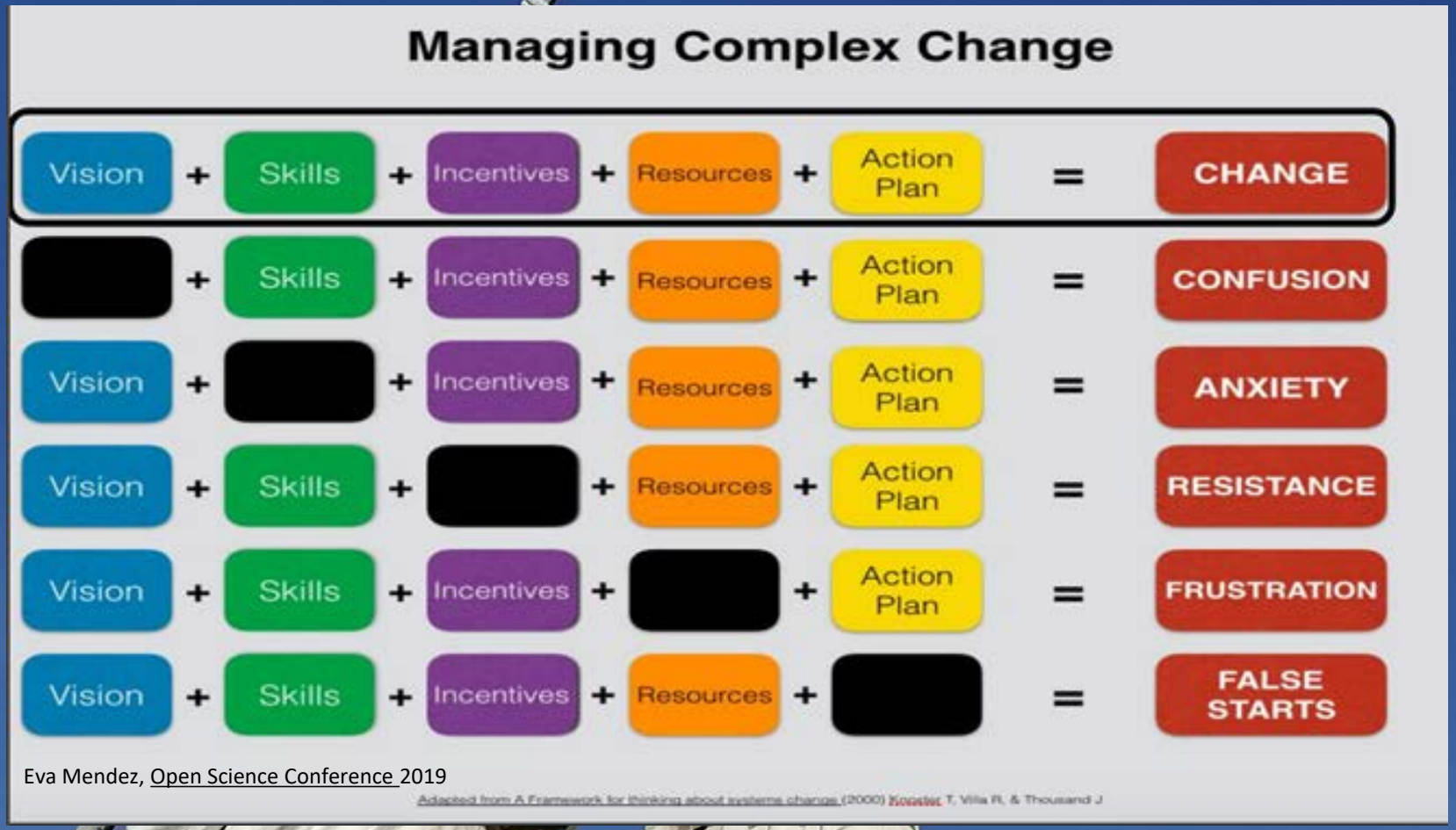
Developing research infrastructures

Fostering and creating incentives for open science

Mainstreaming and further promoting open science policies

Stimulating and embedding open science in science and society

… un altro mondo è possibile SE …



… [nuovi girocatori: MIUR] [???]

«COORDINAMENTO-STRATEGIA»

NATIONAL PLAN OPEN SCIENCE

COMMISSIONE OPEN SCIENCE (CRUI, ANVUR, CUN, AIB, AIE, AISA, IOSSG, ICDI)

… un nuovo modo di fare ricerca…

Box 1. Some Research Practices that May Help Increase the Proportion of True Research Findings

- Large-scale collaborative research
- Adoption of replication culture
- Registration (of studies, protocols, analysis codes, datasets, raw data, and results)
- Sharing (of data, protocols, materials, software, and other tools)
- Reproducibility practices
- Containment of conflicted sponsors and authors
- More appropriate statistical methods
- Standardization of definitions and analyses
- More stringent thresholds for claiming discoveries or "successes"
- Improvement of study design standards
- Improvements in peer review, reporting, and dissemination of research
- Better training of scientific workforce in methods and statistical literacy

PLOS | MEDICINE

Brow

OPEN ACCESS

ESSAY

How to Make More Published Research True

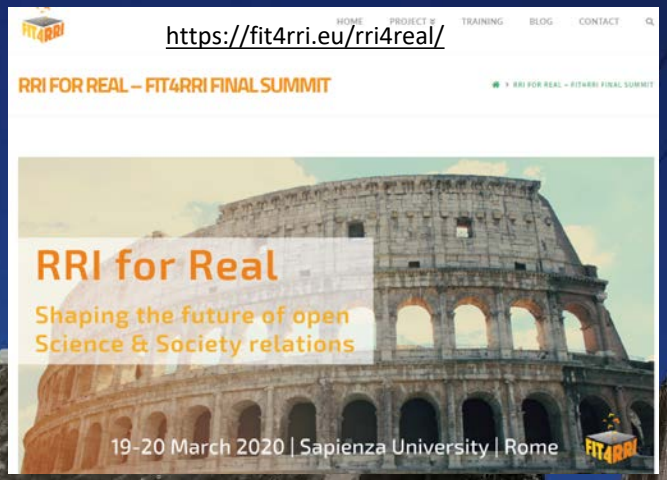
John P. A. Ioannidis

Published: October 21, 2014 • https://doi.org/10.1371/journal.pmed.1001747

2017

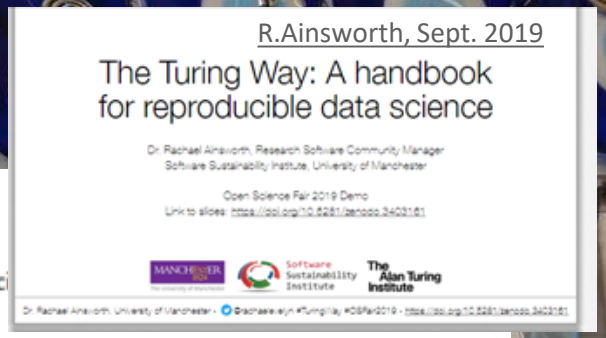
http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001747

… essendo responsabili…



Open Science fosters
- RESPONSIBLE RESEARCH
- RESEARCH INTEGRITY

…essendo riproducibili



The Turing Way

Welcome to the Turing Way

The Turing Way is a lightly opinionated guide to reproduci

Our goal is to provide all the information that researchers need at the start of their projects to ensure that they are easy to reproduce at the end.

This also means making sure PhD students, postdocs, PIs, and funding teams know which parts of the "responsibility of reproducibility" they can affect, and what they should do to nudge data science to being more efficient, effective, and understandable.

A bit more background

Reproducible research is necessary to ensure that scientific work can be trusted. Funders and publishers are beginning to require that publications include access to the underlying data and the analysis code. The goal is to ensure that all results can be independently verified and built upon in future work. This is sometimes easier said than done. Sharing these research outputs means understanding data management, library sciences, sofware development, and continuous integration techniques: skills that are not widely taught or expected of academic researchers and data scientists.

The Turing Way is a handbook to support students, their supervisors, funders, and journal editors in ensuring that reproducible data science is "too easy not to do". It will include training material on version control, analysis testing, open and transparent communication with future users, and build on Turing Institute case studies and workshops. This project is openly developed and any and all questions, comments and recommendations are welcome at our GitHub repository: https://github.com/alan-turing-institute/the-turing-way.

https://the-turing-way.netlify.com/introduction/introduction.html

…valutando in modo diverso

1. **Research output**
   - Research activity
   - Publications
   - Datasets
   - Open source
   - Funding
2. **Research Process**
   - Stakeholder engagement/citizen science
   - Collaboration & interdisciplinarité
   - Research integrity
   - Risk management
3. **Service & Leadership**
   - Leadership
   - Academic standing
   - Peer review
   - Networking
4. **Research Impact**
   - Communication & dissemination
   - IP (patents, licenses)
   - Societal impact
   - Knowledge exchange
5. **Teaching and supervision**
   - Teaching
   - Mentoring
   - Supervision
6. **Professional Experience**
   - Continuing professional development
   - Project management
   - Personal qualities

MOLTEPLICI CRITERI

B. Rentier, June 2019

« MATRIX, NOT METRICS »

Open Science will never prevail without a thorough revisiting of the way evaluations of researchers are conducted

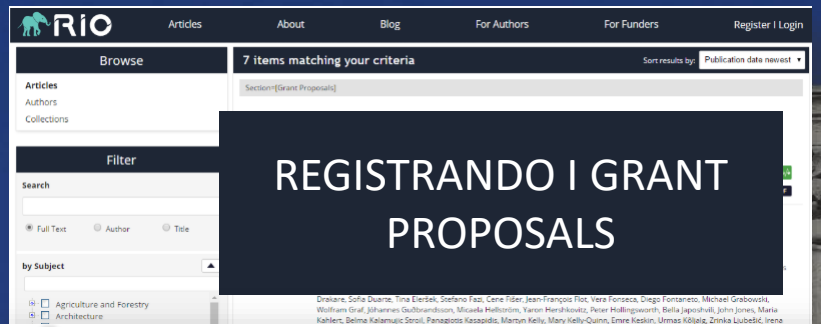
Bernard Rentier

OAI11 - CERN-UNIGE Workshop on Innovations in Scholarly Communication
Geneva, June 20, 2019

OS-CAM, the Career Assessment Matrix

	R1	R2	R3	R4
Research output	+	++	+++	++++
Research Process	+	+++	++++	++++
Service & Leadership		+	+++	++++
Research Impact	+	++	+++	++++
Teaching and supervision	(++)	+	++	++++
Professional Experience		+	+++	++++

…aprendo l'intero ciclo



REGISTRANDO I GRANT PROPOSALS

https://osf.io/registries/

https://aspredicted.org/

PREREGISTRANDO LO STUDIO SU OSF Registries o AsPredicted

Create a new AsPredicted pre-registration

See your existing AsPredicteds (e.g. approve, make public)

Your email address (used in AsPredicted)

SEE OWN

What's an AsPredicted?

It is a standardized pre-registration that requires only what's necessary to separate exploratory from confirmatory analyses. You will easily generate a pre-registration document that takes less effort to evaluate than it takes to evaluate the published study itself.

About Terms of use

How does it work?

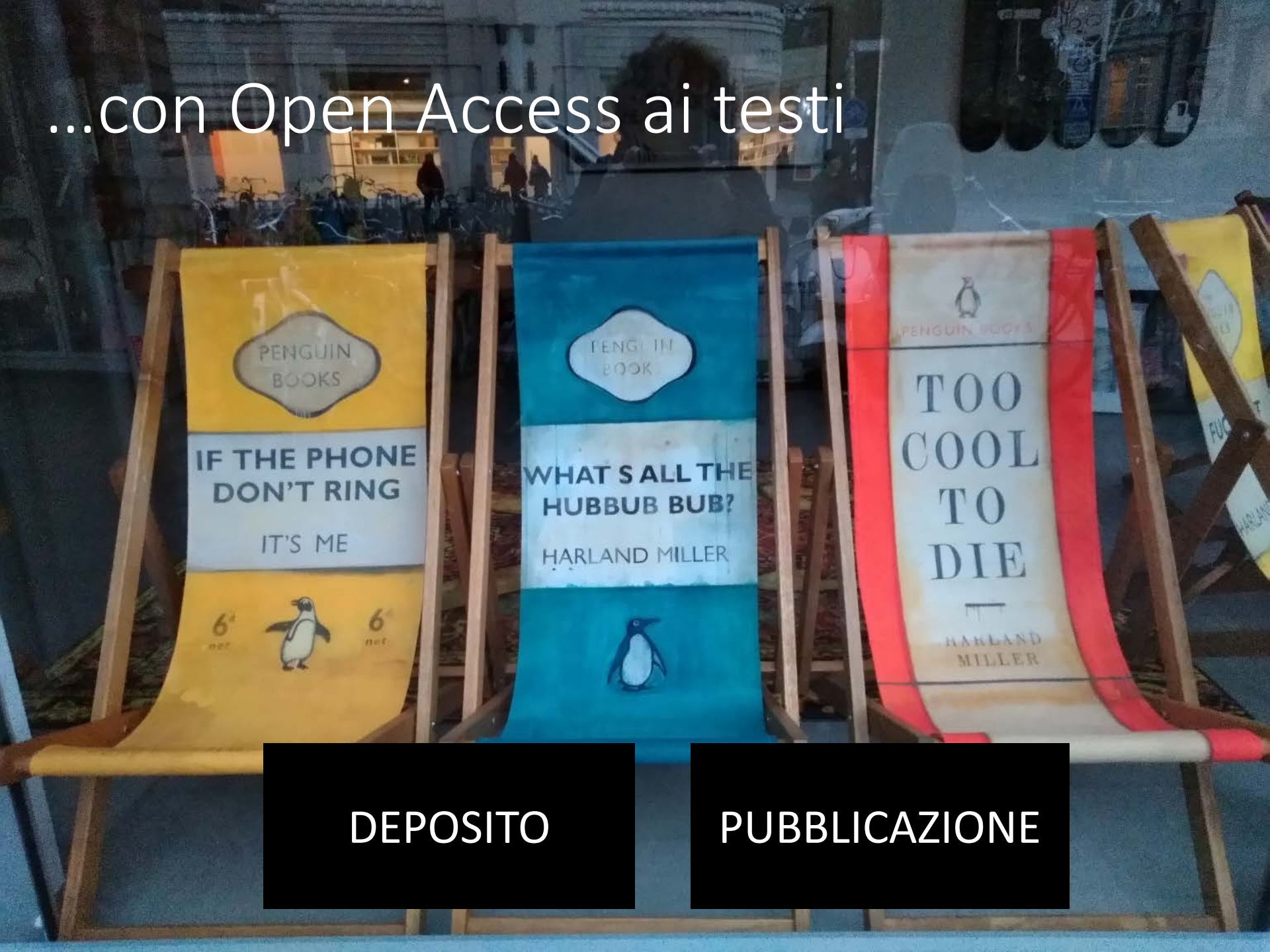
- One author briefly answers 9 questions.
- All participating authors receive an email asking for approval.
- If everyone approves, it is saved and stays private until an author acts to make it public, or it remains private forever. (Why?)
- Authors may share anonymous .pdf with reviewers.
- If made public, a single-page .pdf is generated. That document can be used as a supplement. (See sample)
- The .pdf contains a unique URL that allows for one-click verification. That URL can be included in the paper.
- The .pdf is automatically stored in the web-archive. (See sample)
- There are no accounts, userids, or passwords.

What if things don't go "as predicted"

You can just say so in the paper:

- "Contrary to expectations, we found that..."
- "Unexpectedly, we also found that..."
- "In addition to the analyses we pre-registered we also ran..."
- "We encountered an unexpected situation, and followed our Standard Operating Procedure" (.pdf)

…con Open Access ai testi



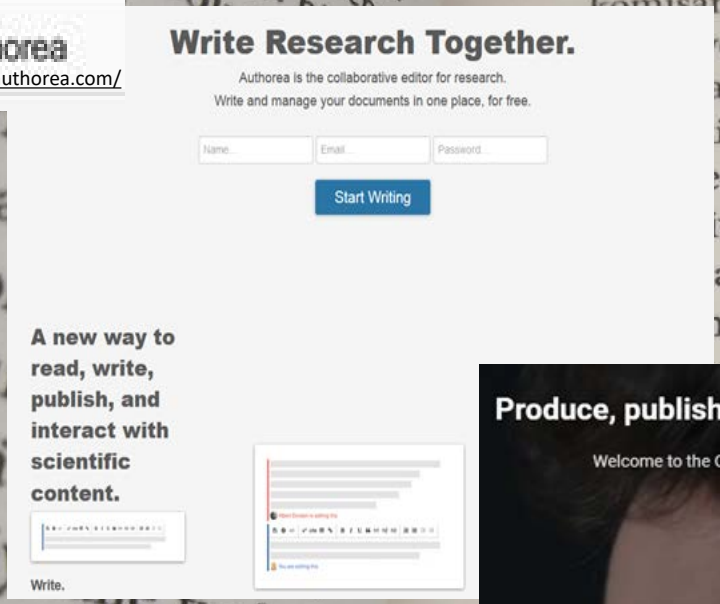
DEPOSITO

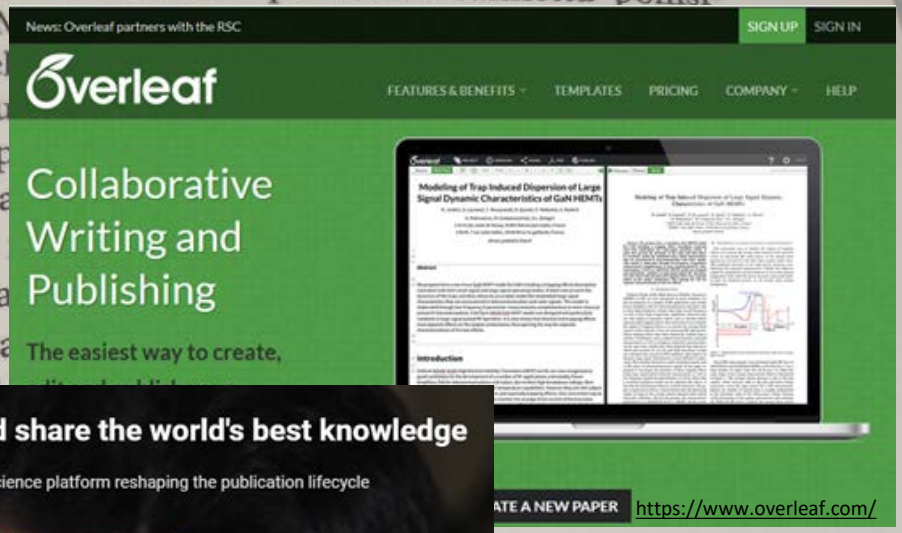
PUBBLICAZIONE

...scrivendo in modo diverso

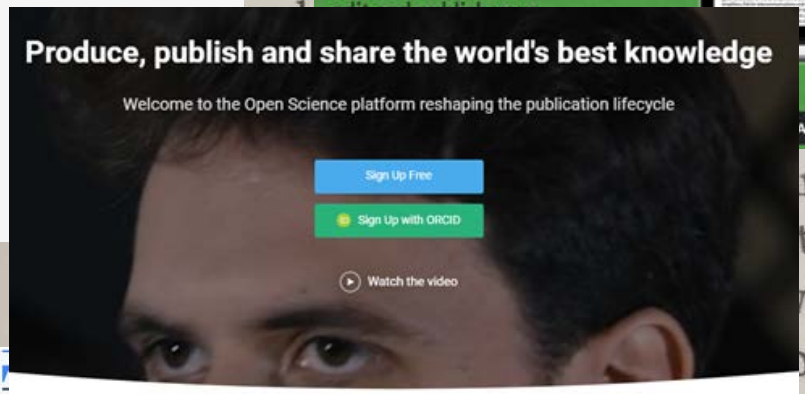
Authorea

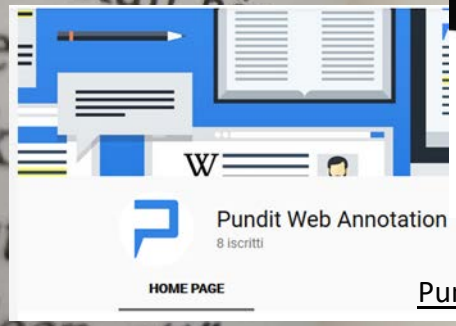
https://www.authorea.com/





https://www.overleaf.com/



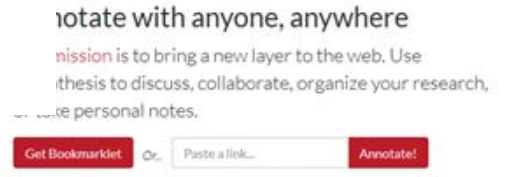


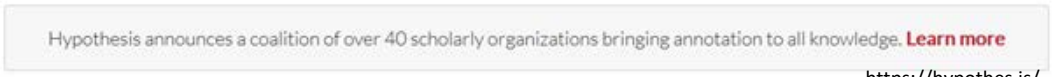
PundIT video

Signatory of DORA

ORCID Member Organization

https://www.geios.com



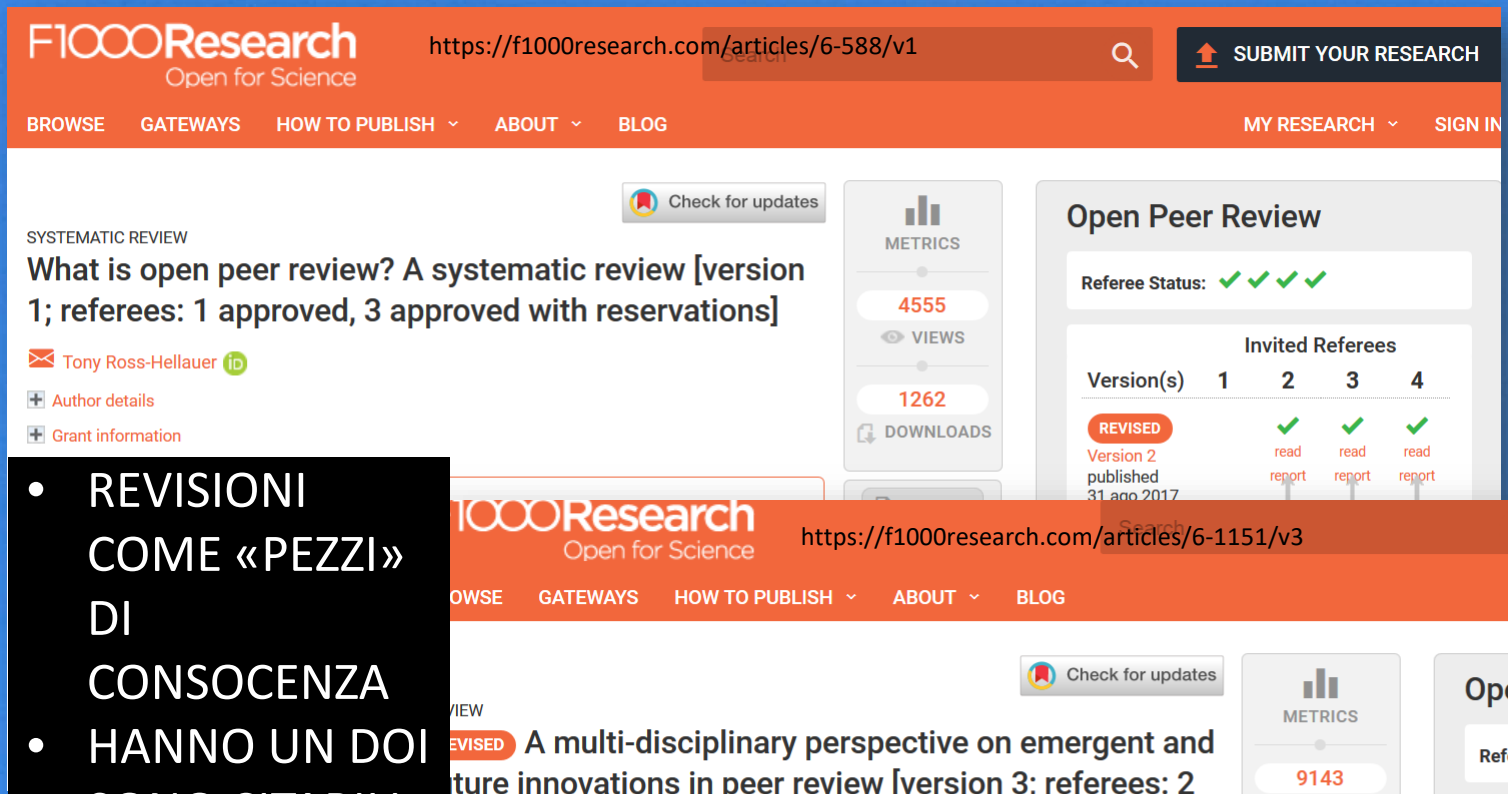


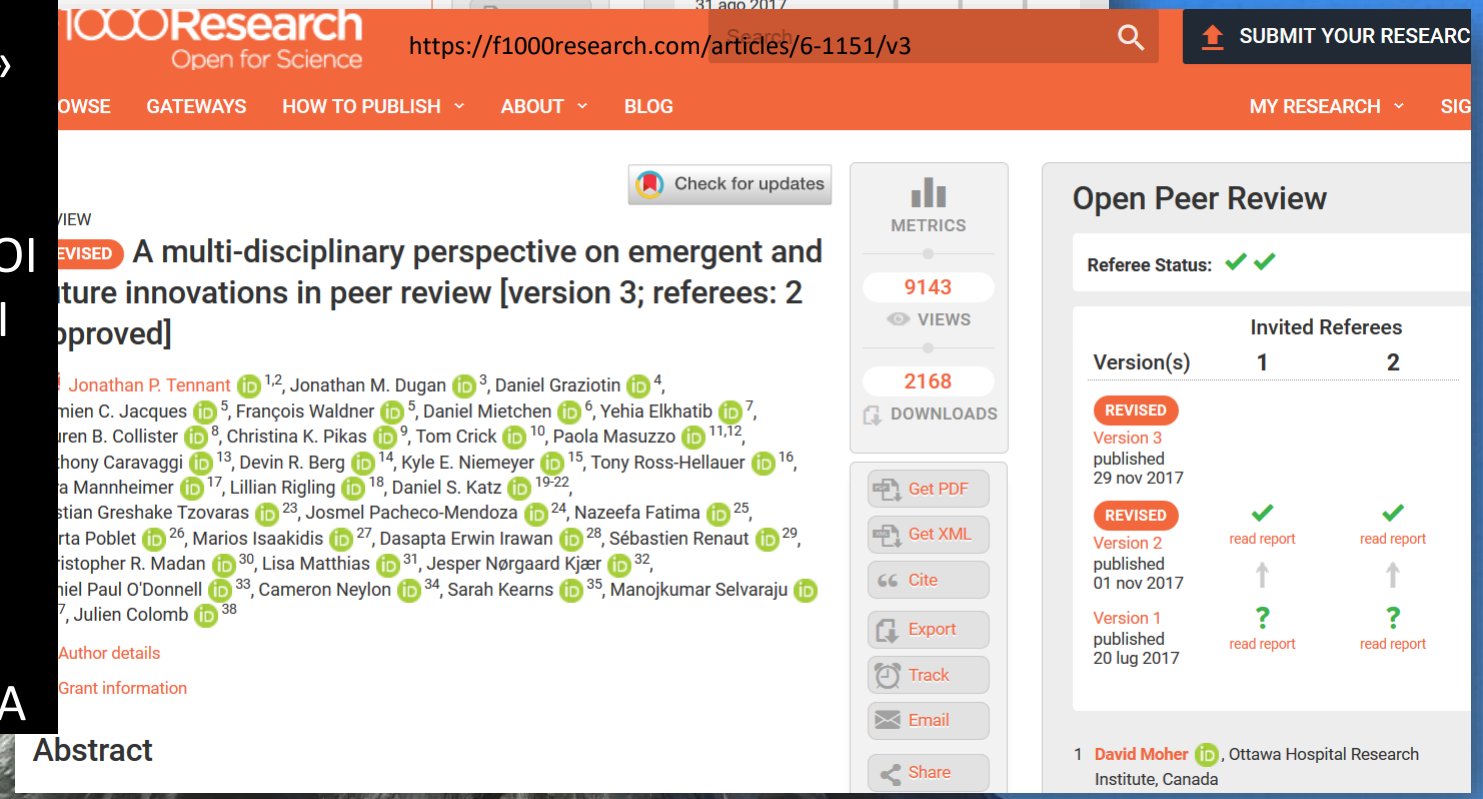
https://hypothes.is/

SCRITTURA COLLABORATIVA, ANNOTAZIONI, PIATTAFORME DI PUBBLICAZIONE

… con revisioni aperte

- REVISIONI COME «PEZZI» DI CONSOCENZA
- HANNO UN DOI
- SONO CITABILI
- DEVONO ESSERE VALUTATE COME «PRODOTTI» DELLA RICERCA





[Open PeerReview in pratica]

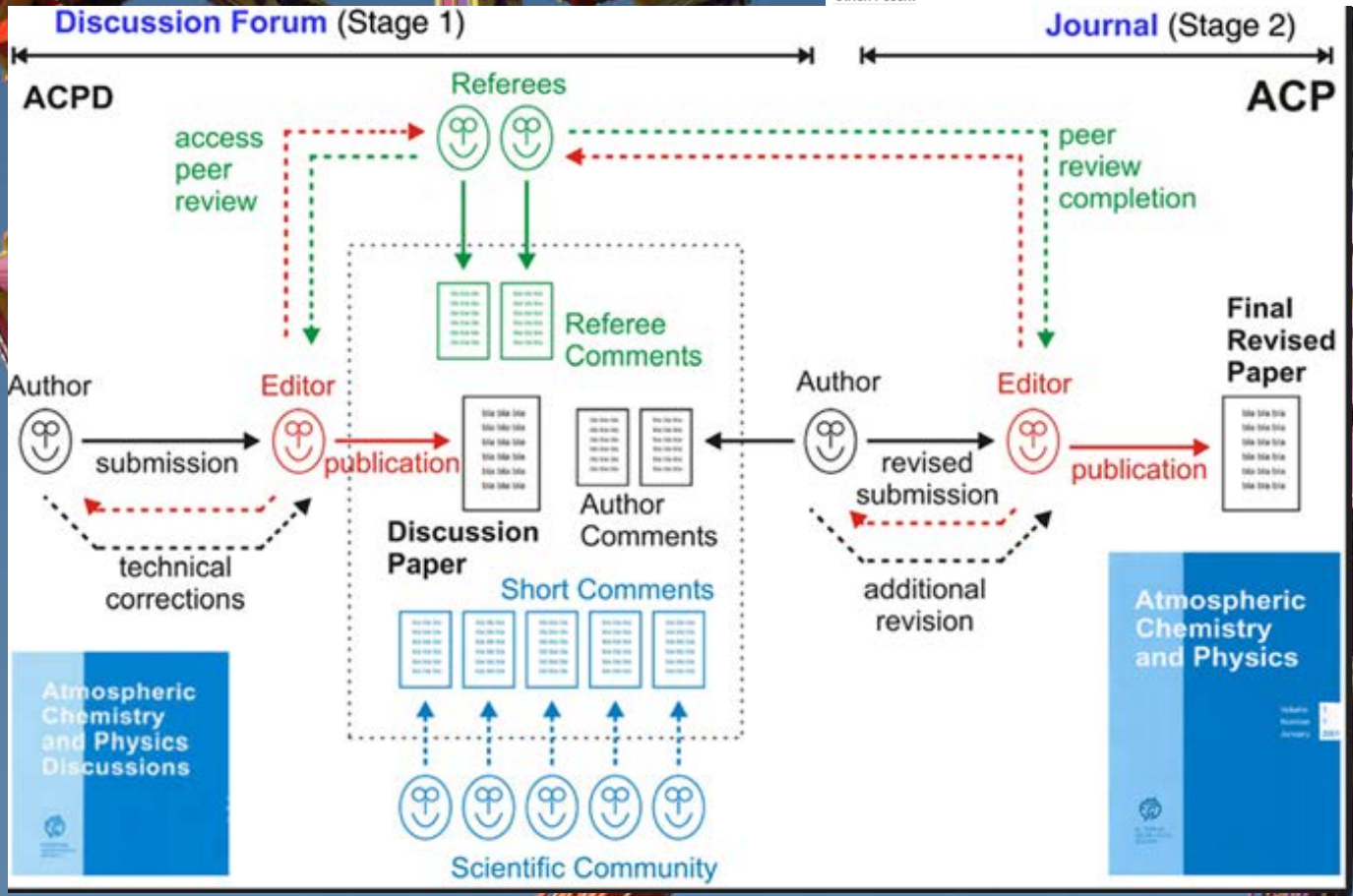
REVIEW ARTICLE

Front. Comput. Neurosci., 05 July 2012 | https://doi.org/10.3389/fncom.2012.00033

Multi-stage open peer review: scientific evaluation integrating the strengths of traditional peer review with the virtues of transparency and self-regulation

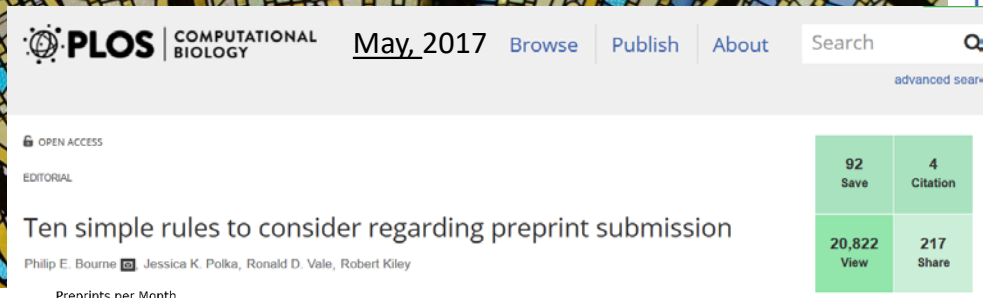
Ulrich Pöschl*

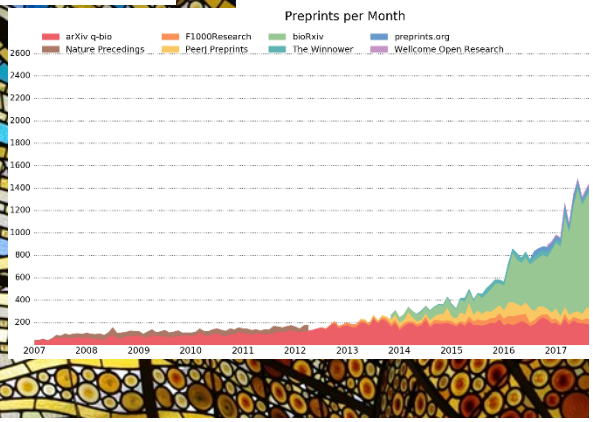
Poschl 2012



… non solo articoli…

PREPRINT
e OPEN NOTEBOOK





Il valore dei preprint:
- **pubblicazione immediata** dei risultati
- priorità scientifica
- - elimina il «limbo» di attesa post submission
- FOCUS SUL CONTENUTO E NON SUL CONTENITORE

Rule 1: Preprints speed up dissemination

Rule 2: Preprints should be licensed and formatted to facilitate reuse

Rule 3: Preprints provide a record of priority

Rule 4: Preprints do not ad to being scooped

ule 5: Preprints provide ccess to scholarly ntent that would herwise be lost

ule 6: Preprints do not ply low quality

ule 7: Preprints support e rapid evaluation of ntroversial results

Rule 8: Preprints do not typically preclude publication

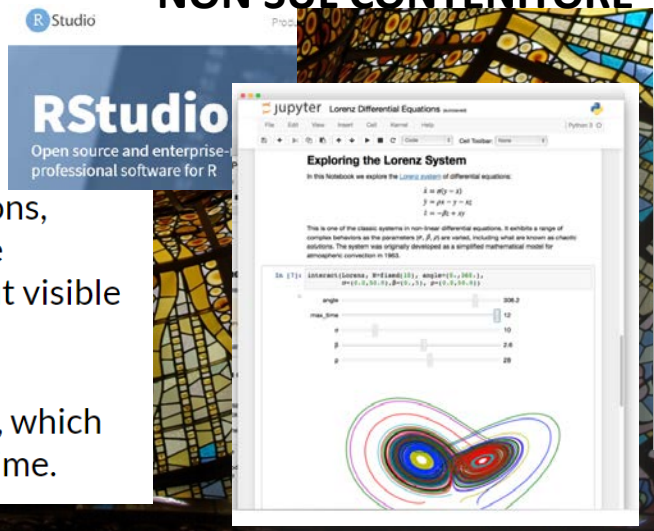
Rule 9: Preprints can further inform grant review and academic advancement

Rule 10: Preprints—one shoe does not fit all

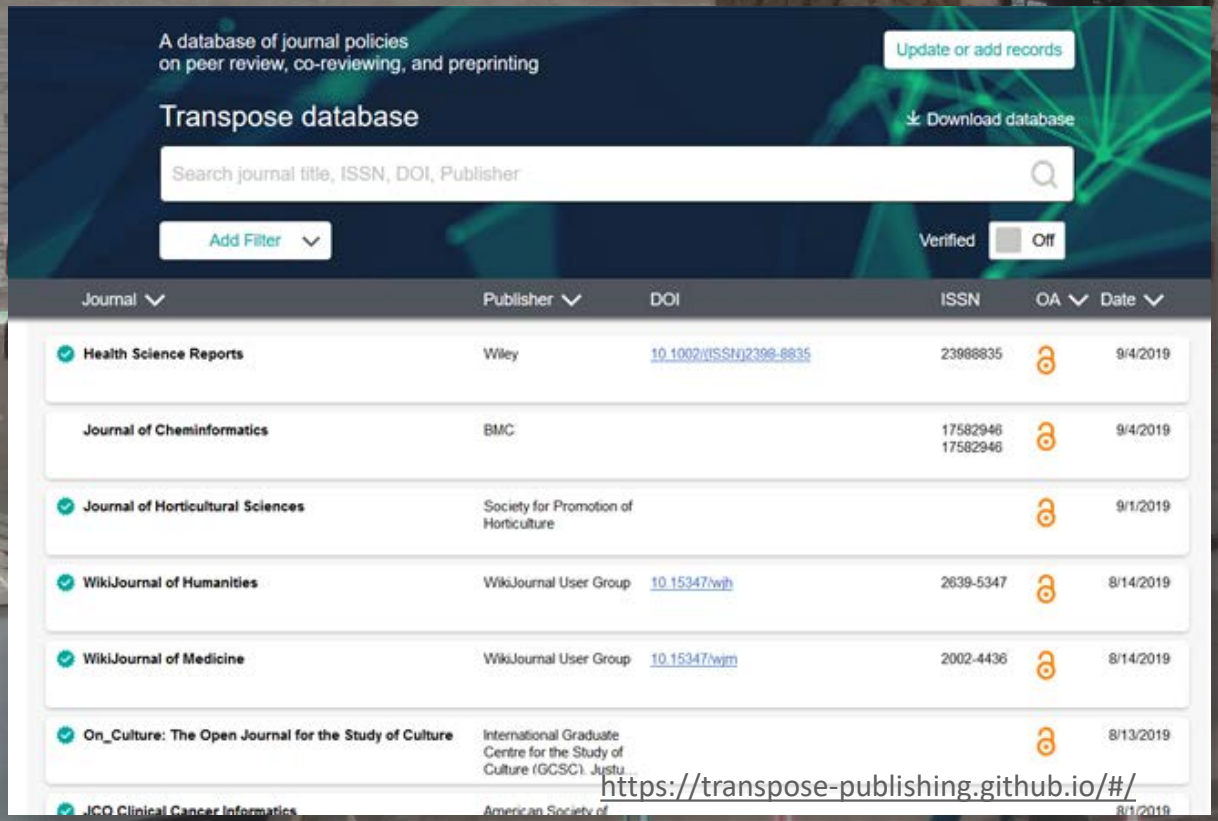
What is an Open Notebook?

Open Notebooks are documents that contain equations, visualisations, narrative text and live code that can be executed independently and interactively, with output visible immediately beneath the input.

They bring together analysis descriptions and results, which can be executed to perform the data analysis in real time.



[con nuove politiche delle riviste]



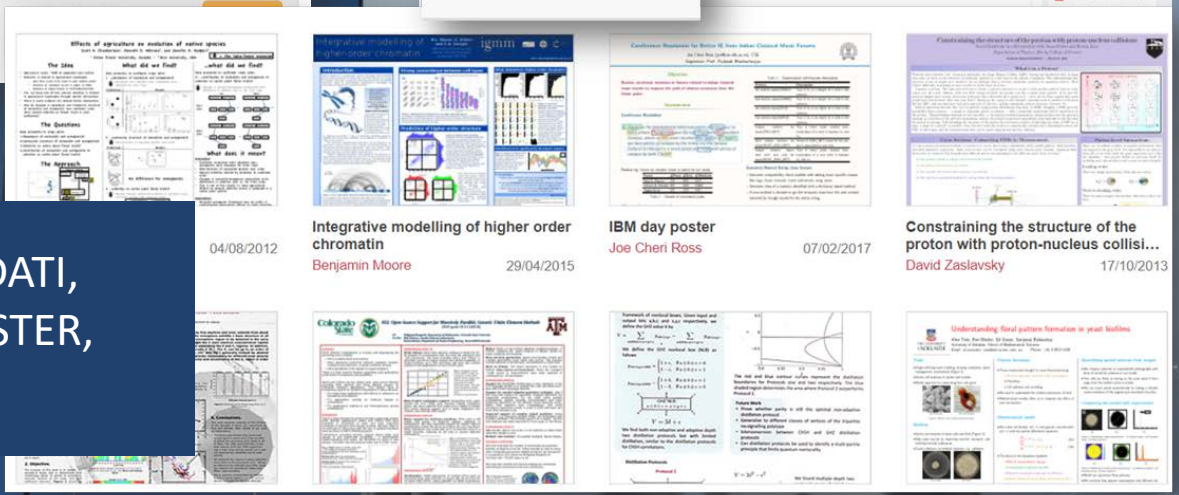
…e non solo testi…

https://github.com/

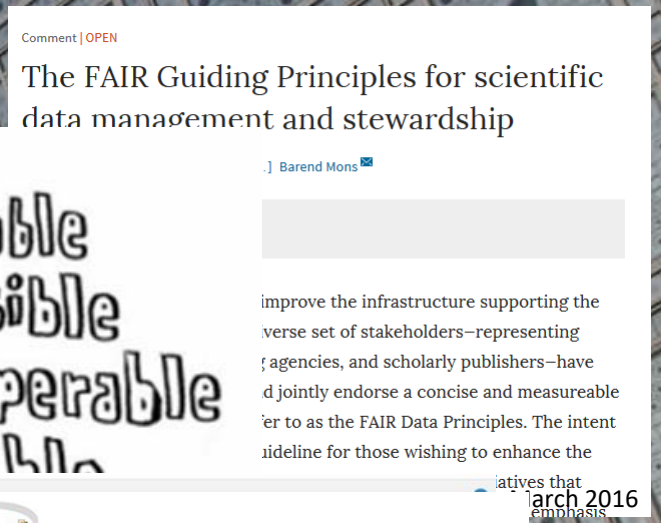
https://zenodo.org/

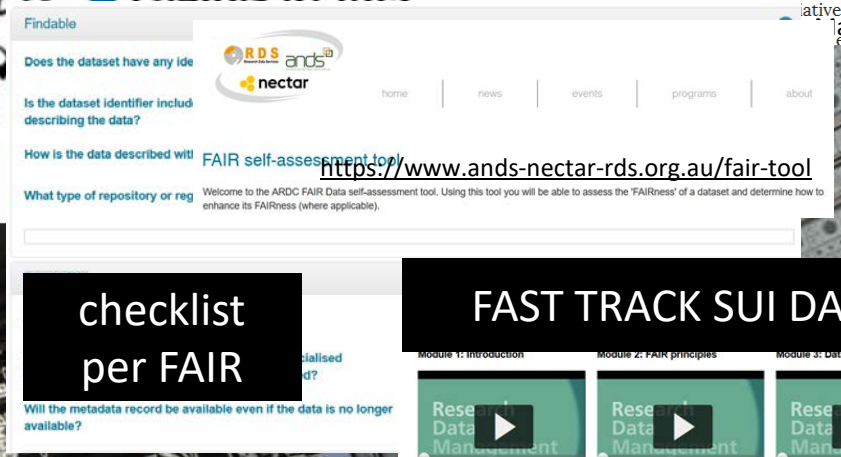
https://www.protocols.io/

SI POSSONO DEPOSITARE DATI, SOFTWARE, IMMAGINI, POSTER, INTERI PROTOCOLLI



...con dati FAIR...

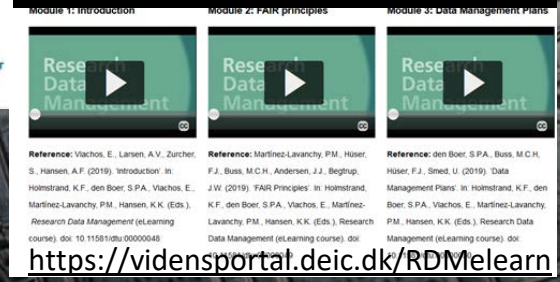




https://www.ands-nectar-rds.org.au/fair-tool

checklist per FAIR

FAST TRACK SUI DATI



https://vidensportal.deic.dk/RDMelearn

F=METADATI, IDENTIFICATIVI PERSISTENTI…

A= CONSERVAZIONE SUL LUNGO PERIODO

I=FORMATI APERTI, INTEROPERABILI

R=DOCUMENTAZIONE E LICENZE

…e con un Data Management Plan

- UN MODO STRUTTURATO DI PENSARE AI VOSTRI DATI: raccolta, conservazione, descrizione, condivisione
- DICHIARAZIONE DI COME VI IMPEGNATE A GESTIRE I DATI
- living document, va aggiornato
- **…E VA MESSO IN PRATICA…**

[PER QUALE MOTIVO?]

The Vienna Declaration on the European Open Science Cloud

Vienna, 23 November 2018

PERCHÉ ORA ABBIAMO EOSC

Vienna, Nov.23, 2018

We, Ministers, delegates and other participants attending the launch event of the European Open Science Cloud (EOSC):

1. Recall the challenges of data driven research in pursuing excellent science as stated in the "EOSC Declaration" signed in Brussels on 10 July 2017.

2. Reaffirm the potential of the European Open Science Cloud to transform the research landscape in Europe. Confirm that the vision of the European Open Science Cloud is that of a research data commons, inclusive of all disciplines and Member States, sustainable in the long-term.

3. Recognise that the implementation of the European Open Science Cloud is a process, not a project, by its nature iterative and based on constant learning and mutual alignment. Highlight the need for continuous dialogue to build trust and consensus among scientists, researchers, funders, users and service providers.

4. Highlight that Europe is well placed to take a global leadership position in the development and application of cloud services for Science. Rea and open to the world, reaching out over time to

SEAMLESS ACCESS TO OPEN BY DEFAULT
FAIR DATA

5. Recall that the Council roadmap and the federated

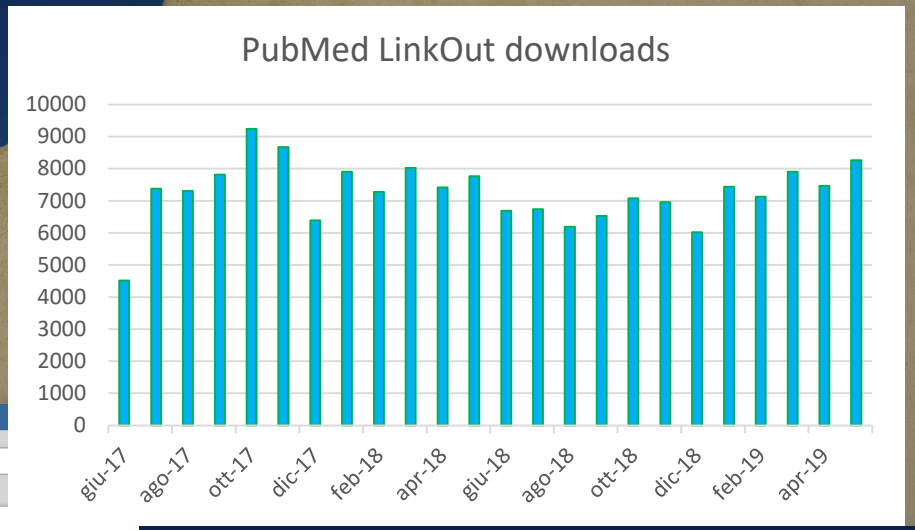
9. Call for the European Open Science Cloud to provide all researchers in Europe with seamless access to an open-by-default, efficient and cross-disciplinary environment for storing, accessing, reusing and processing research data supported by FAIR data principles.

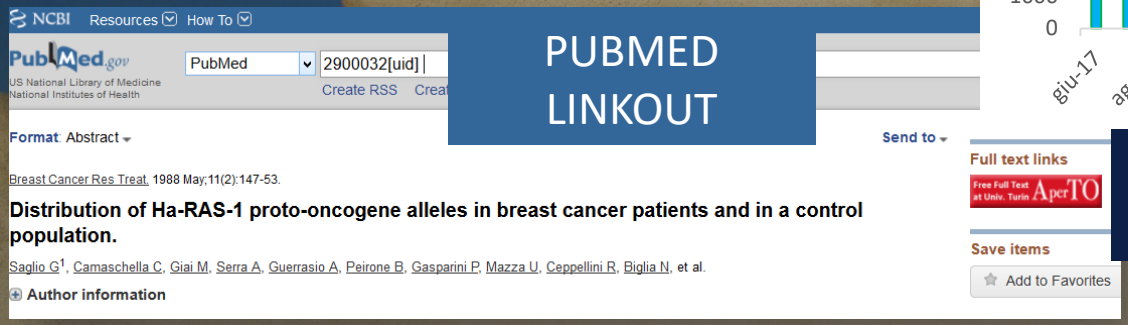
Science Cloud a reality, hinting at the need to further strengthen the ongoing dialogue across institutions and with stake-holders, for a new governance framework to be launched in Vienna, on 23 November 2018.

…abbattendo muri e abilitando servizi

TEXT AND DATA MINING

POSSIBILI SOLO SE IN PARTENZA GLI AUTORI HANNO DEPOSITATO

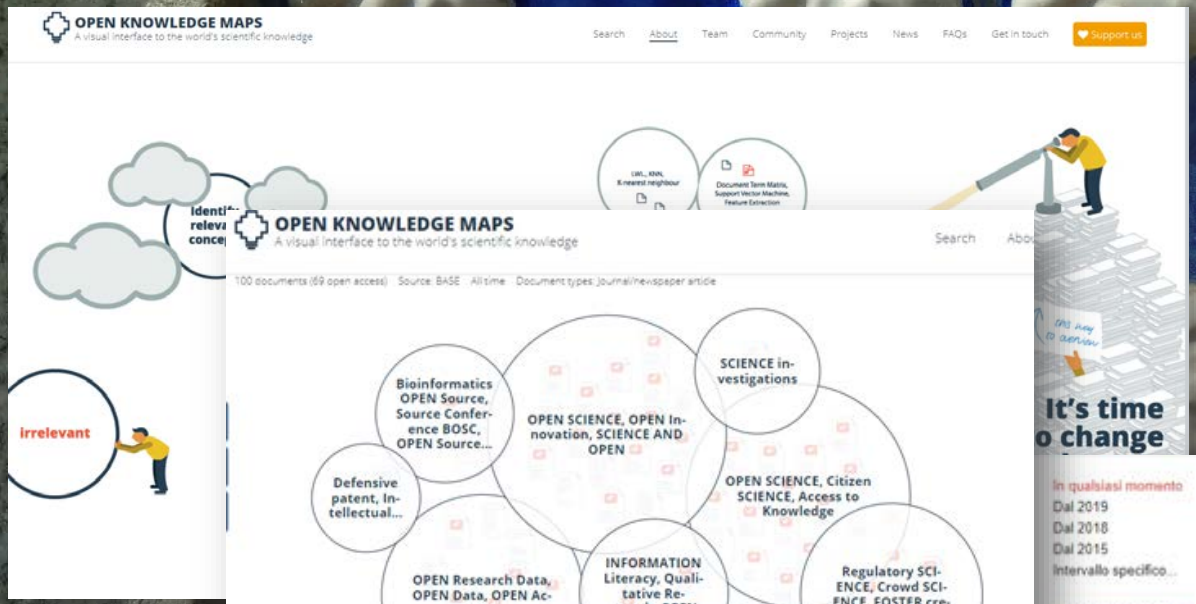


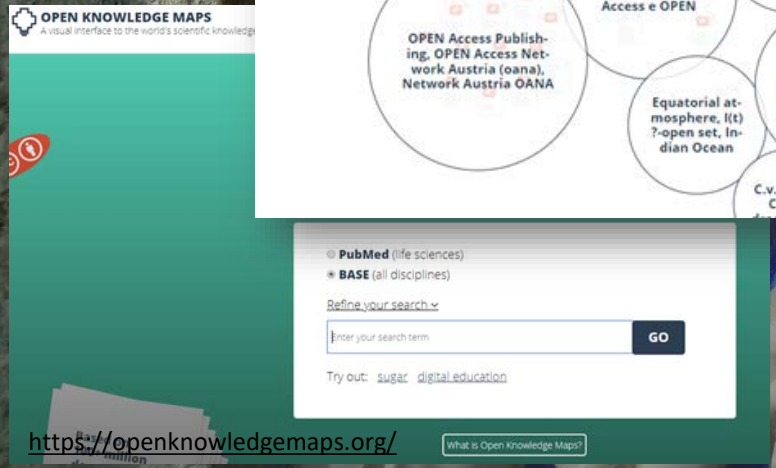


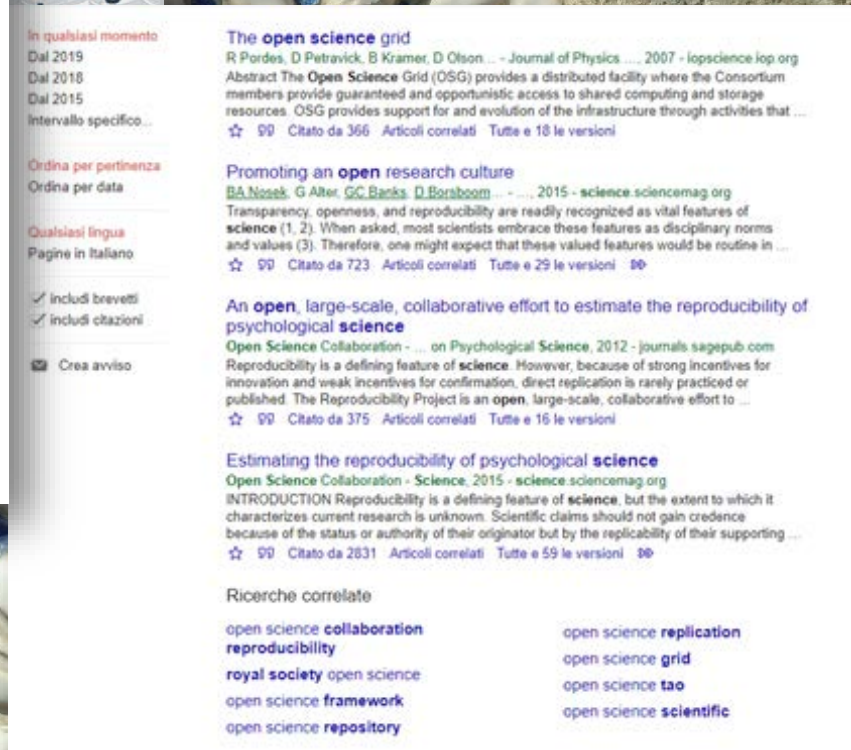
PUBMED LINKOUT

214.823 downloads da maggio 2017 [7161 al mese]

…favorendo nuovi modi di cercare







https://openknowledgemaps.org/

..e una diversa idea di «impatto sociale»

PERCHÉ NON SCRIVERE UN ARTICOLO DI WIKIPEDIA SUI TEMI SU CUI SIETE ESPERTI?

Open science

From Wikipedia, the free encyclopedia

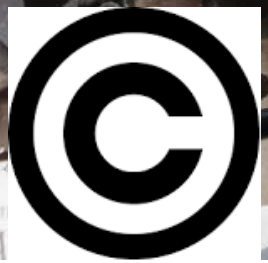
Open science is the movement to make scientific research (including publications, data, physical samples, and software) and its dissemination accessible to all levels of an inquiring society, amateur or professional.[2] Open science is transparent and accessible knowledge that is shared and developed through collaborative networks.[3] It encompasses practices such as publishing open research, campaigning for open access, encouraging scientists to practice open notebook science, and generally making it easier to publish and communicate scientific knowledge.

The six principles of open science[1]

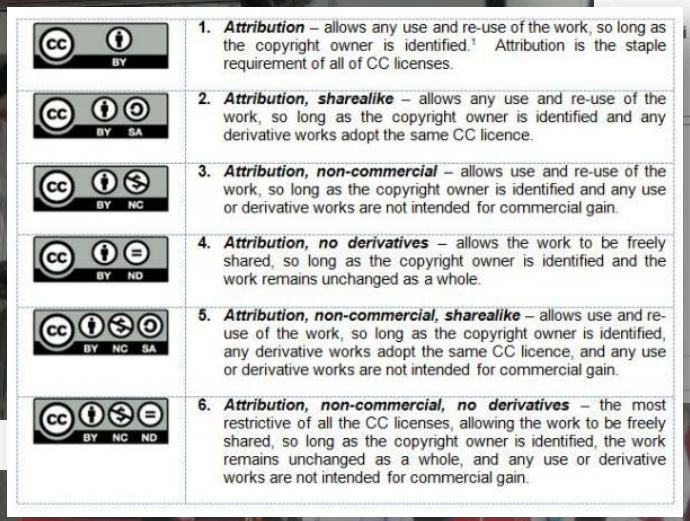
Open Science can be seen as a continuation of, rather than a revolution in, practices begun in the 17th century with the advent of the academic journal, when the societal demand for access to scientific knowledge reached a point at which it became necessary for groups of scientists to share resources[4] with each other so that they could collectively do their work.[5] In modern times there is debate about the extent to which scientific information should be shared.[6] The conflict that led to the Open Science movement is between the desire of scientists to have access to shared resources versus the desire of individual entities to profit when other entities partake of their resources.[7] Additionally, the status of open access and resources that are available for its promotion are likely to differ from one field of academic inquiry to another.[8]

...mantenendo i «diritti»

ALCUNI DIRITTI RISERVATI



TUTTI I DIRITTI RISERVATI



1. ***Attribution*** – allows any use and re-use of the work, so long as the copyright owner is identified.[1] Attribution is the staple requirement of all of CC licenses.
2. ***Attribution, sharealike*** – allows any use and re-use of the work, so long as the copyright owner is identified and any derivative works adopt the same CC licence.
3. ***Attribution, non-commercial*** – allows use and re-use of the work, so long as the copyright owner is identified and any use or derivative works are not intended for commercial gain.
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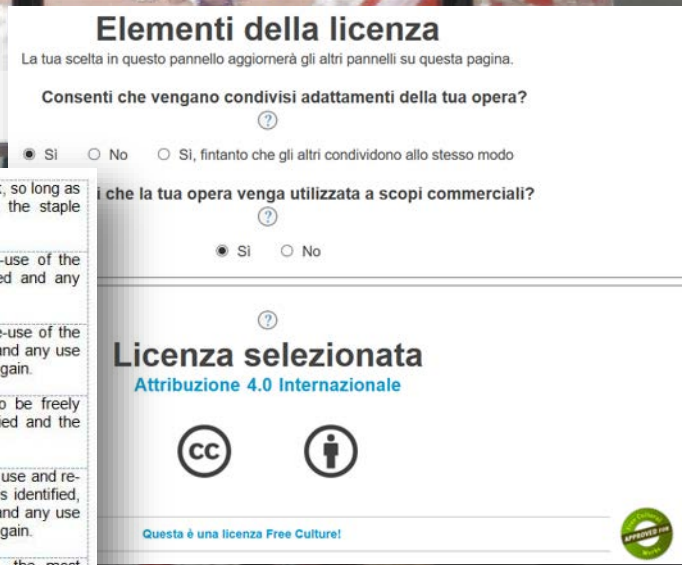


… Open Science in pratica…

OPEN SCIENCE MADE EASY

7 steps towards transparent and reproducible research

1. Create your own OSF account

Open Science Framework: (one possible) online platform to document and present your research process transparently

- Go to https://osf.io/
- Register: name, email, password
- Create new project: 'My Projects' ➜ 'Create project' ➜ Insert title ➜ 'Create'
- The URL of the project will not be changed ➜ can be referenced in your paper
- The account can be used for all the following aspects of Open Science (OS)
- When you are ready: Change project status from *private* to *public*

2. Pre-register your own studies

Describe your hypotheses, methods and analyses before running the study in your pre-registration

- In OSF: 'Project overview' – 'registrations' – 'New registration'
- Choose and complete a template
- Make it public immediately or use the embargo (up to 4 years) to postpone public access.
- Pre-registrations can …
  - be brief or very detailed
  - be made before/during/after data collection
  - include confirmatory, but also exploratory and open research questions

3. Open Materials

Make methods and materials transparent and availablev

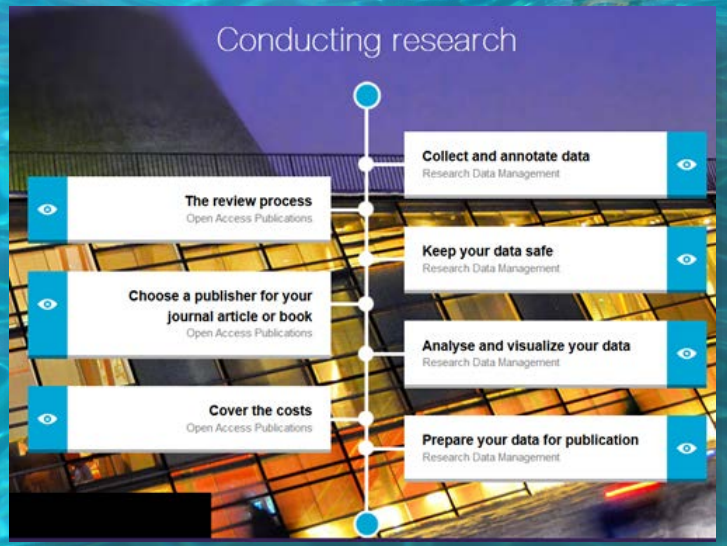
- Upload documents describing all processes, methods and variables to your OSF project
- Add the OSF link in your paper
- Basic lists as well as detailed code books are feasible
- If possible upload the original questionnaires (be cautious with copyrighted materials!)

4. Open Data

Make your research data publicly available

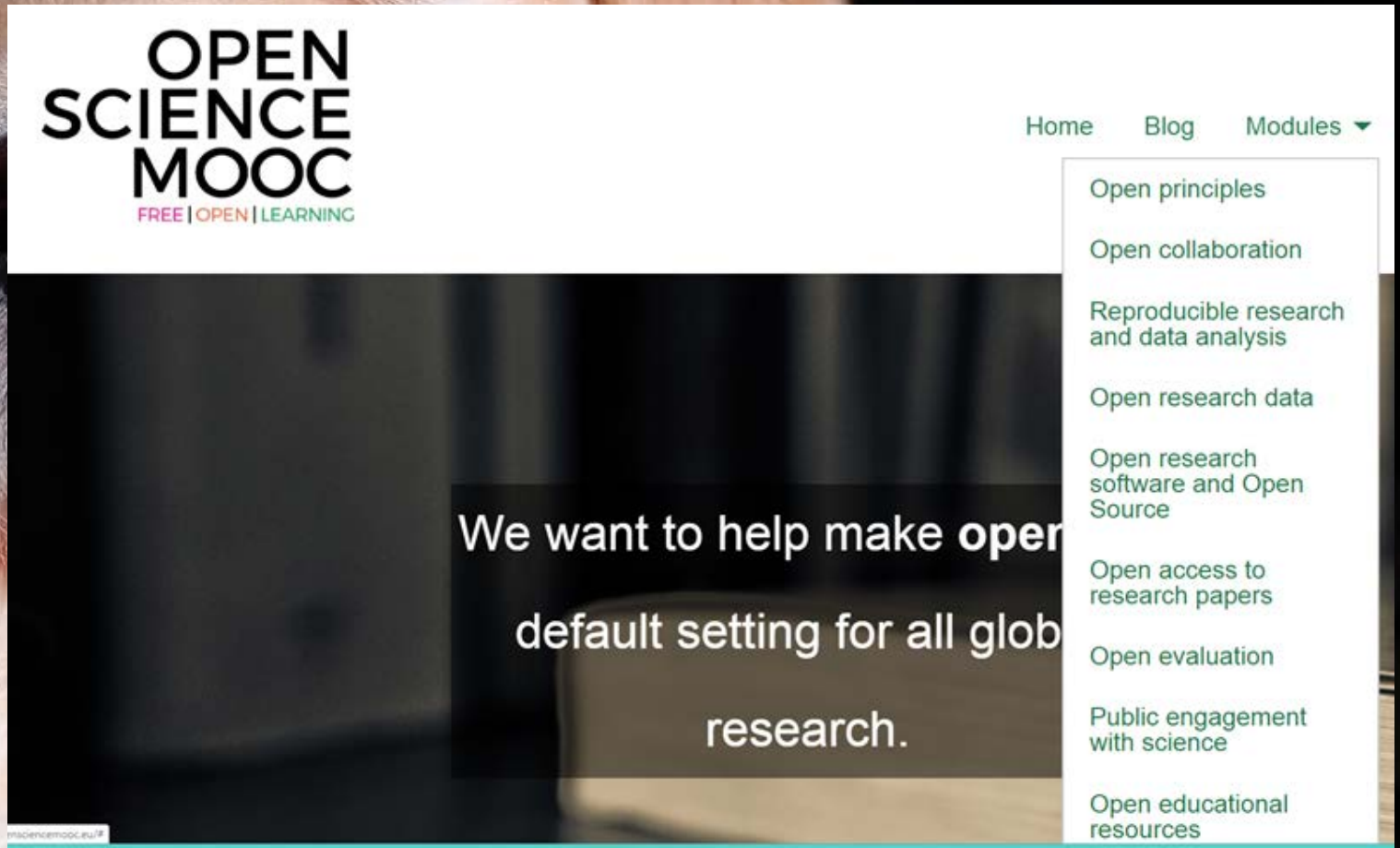
- Notify your participants in the informed consent form
- Make all primary data available that is necessary to reproduce your results
- Guarantee anonymity (if necessary delete variables, collapse, …)
- Prepare your code book
- Upload your data files and code book to the OSF project, add the link in your paper
- Make your data citable (doi)
- Cf. the DGPs recommendation for open data sharing: http://bit.ly/dgpsdata_en

https://osf.io/hktmf/



http://opensciencegeuide.tudelft.nl/

Open Science???



Open Science???

https://www.fosteropenscience.eu/toolkit

FOSTER About Resources Events Courses News

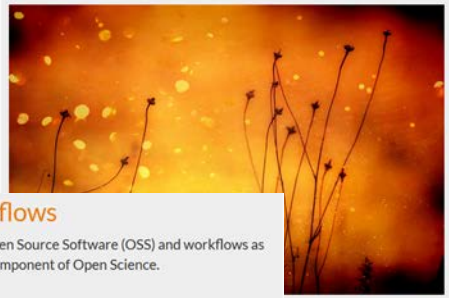
Open Science Training Courses

What is Open Science?

This introductory course will help you to understand what open science is and why it is something you should care about.

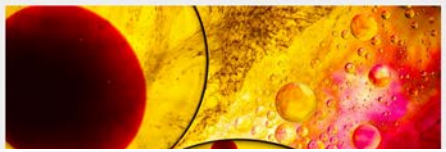
Best Practices

This course introduces funding body policies and other environmental factors that influence good practice in opening up research practice.



Managing and Sharing Research Data

In this course, you'll focus on which data you can share and how you can go about doing this most effectively.



OSS and Workflows

This course introduces Open Source Software (OSS) and workflows as an emerging but critical component of Open Science.

Data Protection and Ethics

This course helps you to get to grips with responsible data sharing.

Licensing

This course helps you to find the best license for your open research outputs.


…ci siamo meritati una pausa?