JCEA annual International editorial board meeting 2016, Zagreb, Croatia, 15 Sept 2016

Scholarly publishing and open science

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About me

- MSc Physics, MSc LIS, PhD LIS
- library director at Ruđer Bošković Institute till 2009
- from 2009 Department of information sciences, University of Zadar and RBI
- Croatian Scientific Information System – SZI (1994)
- Centre for online databases – http://onlinebaze.irb.hr (1995)
- Croatian Scientific Bibliography CROSBI - http://bib.irb.hr (1997)
- Who's Who in Science in Croatia - http://tkojetko.irb.hr (2001)
- Repository of the Croatian OA journals HRČAK - http://hrcak.srce.hr (2006)
- Croatian Scientific Portal - http://www.znanstvenici.hr (2006)
- Repository of scientific equipment ŠESTAR - http://sestar.irb.hr (2007)
- National infrastructure for the institutional repositories DABAR (2014) – http://dabar.srce.hr

- National Point of Reference (NPR) for Croatia for the area of Open Access to and preservation of scientific information (European Commission)
- NOAD for Croatia in OpenAIRE project

- research interests: scholarly communication and publishing, open science (open access), bibliometrics, data mining and text analysis, information systems

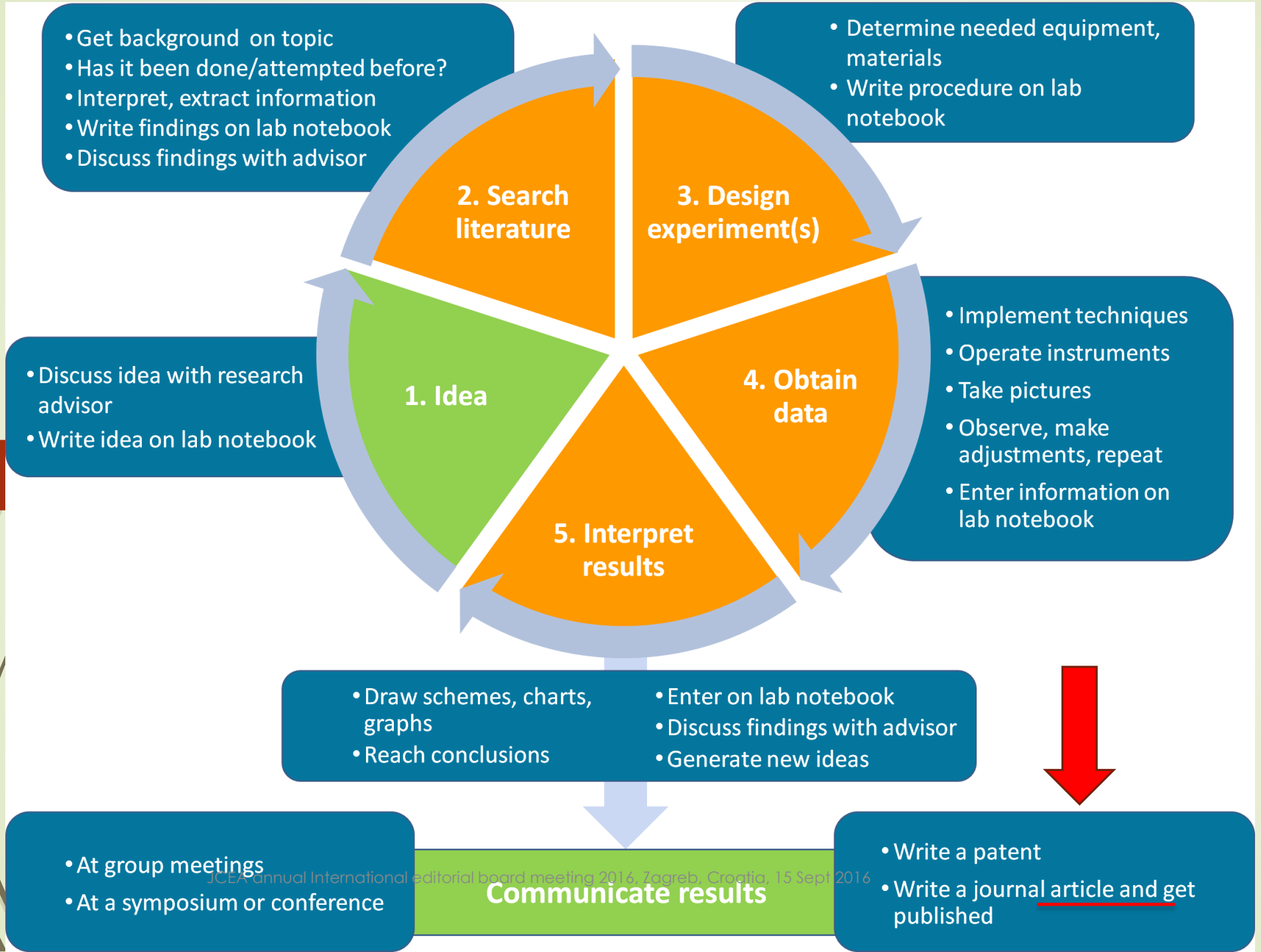
The 7 biggest problems facing science, according to 270 scientists

- Academia has a huge money problem
- Too many studies are poorly designed
- Replicating results is crucial — and rare
- Peer review is broken
- Too much science is locked behind paywalls
- Science is poorly communicated
- Life as a young academic is incredibly stressful

http://www.vox.com/2016/7/14/12016710/science-challeges-research-funding-peer-review-process

RESEARCH CYCLE IS NOT VISIBLE

http://cossrvfile00.utep.edu/couri/



FINAL PUBLICATION – THE ONLY VISIBLE PART OF SCHOLARLY COMMUNNICATION

Scholarly publishing today

- huge numbers (almost 2 mil journal articles per year)
- paper-centric nature of most journals
- large volume of data and complex research processes cannot be squeezed in 5-10 pages of paper
- specificities of disciplines are equalized (e.g. authorship)
- publish or perish and ethical issues (authorship, plagiarism, fabrication, misconduct, conflict of interest…)
- no version control (what to cite?)
- open access and business models (APC) problems („predatory" journals and publishers – where are the boundaries?)

Academia has a huge money problem?

- over 1.900 billion (2016 Global R&D Funding Forecast)
- 2 million papers/year

- 25,2 billion STM revenues (The STM Report 2015)
- allthough there are over 2,000 publishers, as of 2013, **five** for-profit companies (Elsevier, Springer, Wiley-Blackwell, Taylor & Francis, and Sage) accounted for **50% of articles** published
- publishing fees for OA 1.000 EUR (to 5.000 EUR) per paper

- scientific research is funded by government grants (publicly funded)
- most of research results/paper is given to the for-profit publishers who take the *copyright* from authors/researchers
- papers never cited
  - "Only" 12% of medicine articles are not cited, compared to about 82% (!) for the humanities. It's 27% for natural sciences and 32% for social sciences (cite)
- half of the published papers never read (except author/reviewer/editor)
- 50%-80% NOT REPRODUCIBLE!
- only small percentage of published papers has the research data on disposal

Peer review

- slow
- expensive
- inconsistent (should be at least 6 reviewers for a paper to obtain a statistically relevant result)

The recent case of falsifying the identity of "reviewers", in order to review exclusively within a certain number of "scientists", resulted in a retraction even 60 papers from the Journal of Vibration and Control.

- Reviewers generally do not agree with each other
- poorly detected (deliberate) errors - 2 of 8
- can not prevent the publication of papers containing fraud, even in the most prestigious journals such as Nature, Science and The Lancet

Liz Wager, 2014

VÄXJÖ

PEERE Meeting at Växjö, 30 August-1 September 2016

XJENZA

A news article on "Reviewing the review process: New Frontiers of Peer Review", which promotes PEERE, by R. Wijesinha-Bettoni et al. has been published on the last issue of "Xjenza Online"

BY Flaminio Squazzoni / July 14, 2016

A news article on "Reviewing the review process: New Frontiers of Peer Review", which promotes

STEFANO BALIETTI

Stefano Balietti and Dirk Helbing (past PEERE members) published "Peer review and competition in the Art Exhibition Game" in PNAS, 2016, doi: 10.1073/pnas.1603723113

BY Flaminio Squazzoni / July 13, 2016

On 11 July 2016, Stefano Balietti (previously at ETH Zurich, now at Network Science Institute,

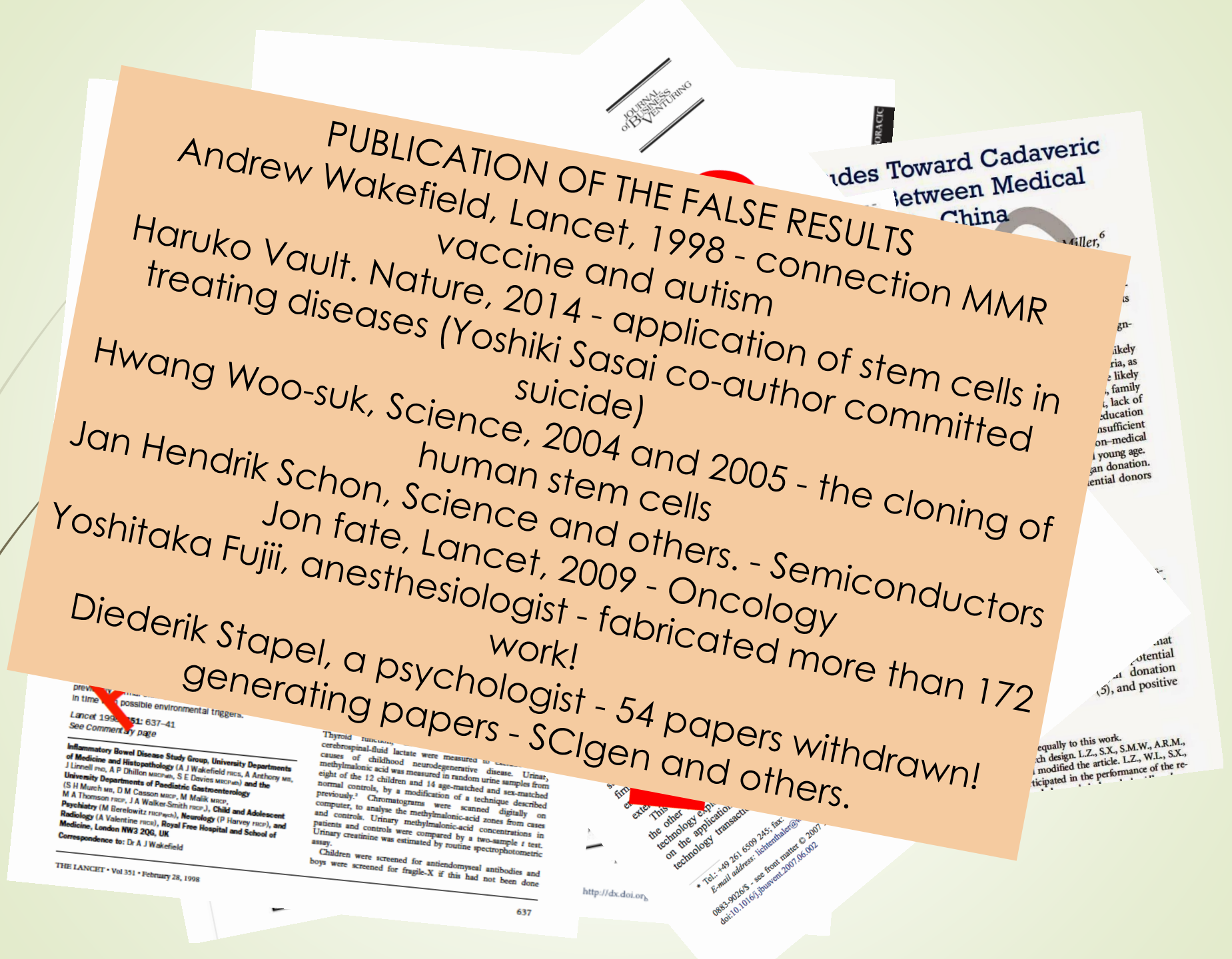
EASE 2016

PEERE Special se… EASE 2016 in Strasbourg, 10-12 June 2016

BY Flaminio Squazzoni / July 5, 2016

A European network for research evaluation in the SSH: ENRESSH

VÄXJÖ


PUBLICATION OF THE FALSE RESULTS
Andrew Wakefield, Lancet, 1998 - connection MMR vaccine and autism
Haruko Vault. Nature, 2014 - application of stem cells in treating diseases (Yoshiki Sasai co-author committed suicide)
Hwang Woo-suk, Science, 2004 and 2005 - the cloning of human stem cells
Jan Hendrik Schon, Science and others. - Semiconductors
Jon fate, Lancet, 2009 - Oncology
Yoshitaka Fujii, anesthesiologist - fabricated more than 172 work!
Diederik Stapel, a psychologist - 54 papers withdrawn! generating papers - SCIgen and others.

Justifying the publication funding

- flawed content, poor reporting or no reporting (without publication) ...
- lack of access, poor dissemination, poor understanding ...
- most of the funding is actually unused ...

Funders

- National Institute of Health (NIH)
- Wellcome Trust
- European Science Foundation (ESF)
- Research Council UK (RCUK)
- Austrian Science Fund (FWF)
- …
- **European Research Council (ERC) - European Commission**

- demand for openness!

Open Science

- Neelie Kroes, former Vice-President of the European Commission:

„we are entering a new era of open science, which will be good for citizens, good for scientists, and good for society"

- Carlos Moedas, European Commissioner for Research, Science and Innovation:
- **„…I see three strategic priorities: Open Innovation, Open Science, and Openness to the World"**

(Moedas speech available at http://europa.eu/rapid/press-release_SPEECH-15-5243_en.htm)

Open Science and EU

- better science (based on previous results)
- effective science (avoiding duplication and enable re-use)
- economic growth (accelerated and open innovation)
- improved transparency (including citizens and companies)

- Objective: To optimize the impact of research and innovation financed by public funds
- How: open access to publications and research data resulting from EU projects (H2020) and the motivation of the Member States for an extensive use of open access

Amsterdam call for action

- *Removing barriers to open science*
  1. Change assessment, evaluation and reward systems in science
  2. Facilitate text and data mining of content
  3. Improve insight into IPR and issues such as privacy
  4. Create transparency on the costs and conditions of academic communication
- *Developing research infrastructures*
  5. Introduce FAIR and secure data principles
  6. Set up common e-infrastructures
- *Fostering and creating incentives for open science*
  7. Adopt open access principles
  8. Stimulate new publishing models for knowledge transfer
  9. Stimulate evidence-based research on innovations in open science
- *Mainstreaming and further promoting open science policies*
  10. Develop, implement, monitor and refine open access plans
- *Stimulating and embedding open science in science and society*
  11. Involve researchers and new users in open science
  12. Encourage stakeholders to share expertise and information on open science

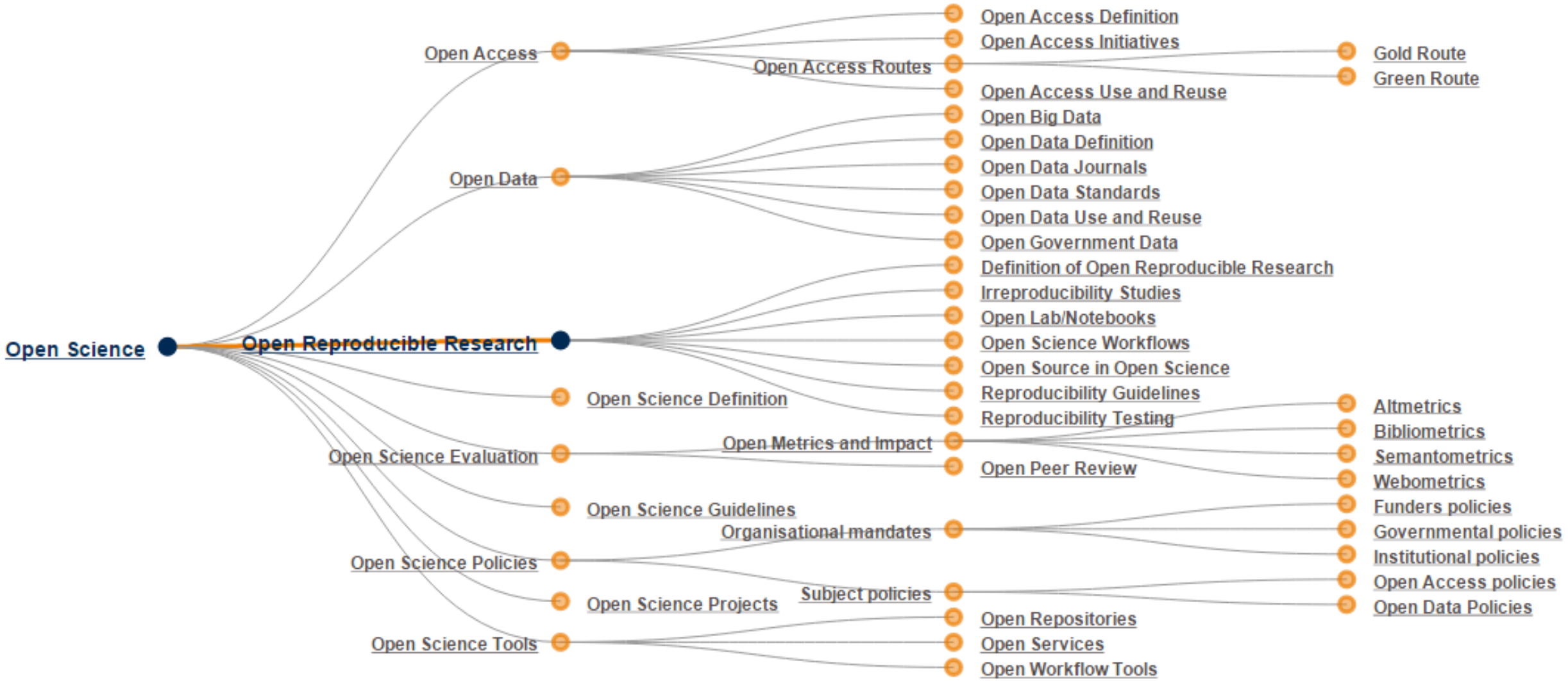
What is open science?

- The conduction of science in a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, with terms that allow reuse, redistribution and reproduction of the research.

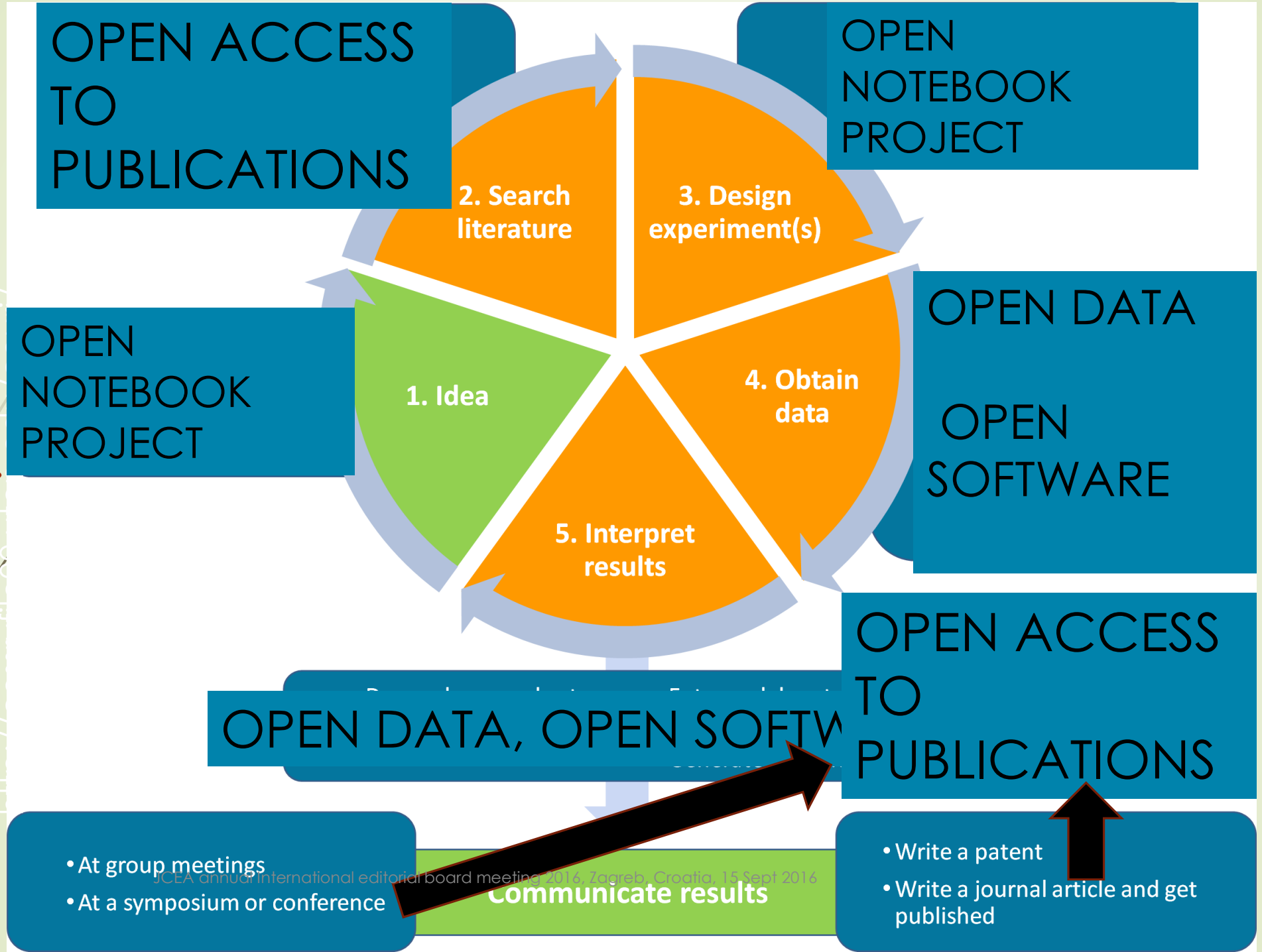
FOSTER (https://www.fosteropenscience.eu/)

Openness

- anyone, anything, anytime
- access to publications, access to data, models, source codes, resources, transparent methods, standards, formats, identifiers, APIs, licenses, education, politics ...
- "Accessible, understandable, acceptable, reusable"



FOSTER Open Science


OPEN ACCESS TO PUBLICATIONS
OPEN NOTEBOOK PROJECT
2. Search literature
3. Design experiment(s)
OPEN NOTEBOOK PROJECT
1. Idea
4. Obtain data
OPEN DATA
OPEN SOFTWARE
5. Interpret results
OPEN DATA, OPEN SOFTW
OPEN ACCESS TO PUBLICATIONS
• At group meetings
• At a symposium or conference
Communicate results
• Write a patent
• Write a journal article and get published

Open Access

- WHO has access to WHAT and WHEN?
- Key issue for the free flow of information between researchers and society

- *"...free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited."* (BOAI, 2002)
- BOAI definition limits its scope to peer-reviewed journal literature
- Open Access to the present form of publication is not enough

WHO?	WHAT?	WHEN?
OPEN?	primary research materials, e.g. lab notebooks	during research
	"completed" experimental protocols, source code, raw data, and analysis workflow	during manuscript writing
researchers / authors	manuscript drafts	upon manuscript „done”
moderators (journal editors and conference program chairs)	final manuscripts (including supplementary materials)	upon manuscript submission
reviewers	identities of manuscript authors, official peer reviewers, unofficial peer reviewers	during formal peer review & revision
journal subscribers or conference attendees	official peer reviews, unofficial peer reviews, annotations, and comments	upon journal or conference decision
general public	author responses to reviewers	upon journal publication or conference presentation
	publication revisions	N months post publication
(Soergel et al., 2013)	presentation slides, presentation videos	never

“4 Rs” of Open

- **Reuse**: the right to reuse the content in its unaltered/verbatim form
- **Revise**: the right to adapt, adjust, modify, or alter the content itself
- **Remix**: the right to combine the original or revised content with other content to create something new
- **Redistribute**: the right to share copies of the original content, the revisions, or the remixes with others

Hilton, J. I., Wiley, D., Stein, J., & Johnson, A. (2010)

Fifty shades of open by J. Pomerantz and R. Peek

- Open means rights
- Open means access
- Open means use
- Open means transparent
- Open means participatory
- Open means enabling openness
- Open means philosophically aligned with open principles

*„The word "open" is used to indicate that a resource is accessible for **no monetary cost**. The word "open" is used to indicate that a resource may be **used in any way** imaginable. The word "open" is used to indicate that **anyone may use** a resource. The word "open" is used to indicate that **anyone may join** in a process. The word "open" is used to indicate that **artefacts of a process are accessible**. The word "open" is used to indicate that a **process leads to the creation of resources** that are accessible and may be used in any way imaginable. The word "open" is used to indicate that a resource **was created by using other open resources**."*

from http://firstmonday.org/ojs/index.php/fm/article/view/6360/5460

SUPPORT DOAJ

Home | Search | Browse Subjects | Apply | News | About | For Publishers | API | Login

„Too much science is locked behind paywalls?"

Search DOAJ

journals articles

Directory of C…rnals (DOAJ)

DOAJ is …tory that indexes and provides access to high quality, open access, peer-reviewed journals.

Latest News

Policy updates: open access statement and user registration

Open Access Statement Until recently, DOAJ has insisted that journals state very clearly on their web site a full and detailed open access statement, preferably one that follows closely the Budapest Open Access Initiative definition. From 8th September, DOAJ will accept a short open access statement—even as short as 'This journal is open access.'—but ONLY […] Read More...

Fri, 09 Sep 2016 at 14:43

Presenting the DOAJ Ambassadors

Further to our announcement of the start of our IDRC-funded project focussing on the improvement of open access journals in the global

9,198 Journals
6,386 searchable at Article level
130 Countries
2,300,299 Articles

FAQs
Interacting with DOAJ
Open Access Information
Best Practice
Download metadata
New Journals Feed

Our members
Our publisher members
Our sponsors
Our volunteers

Open notebook science

„Too many studies are poorly designed?"

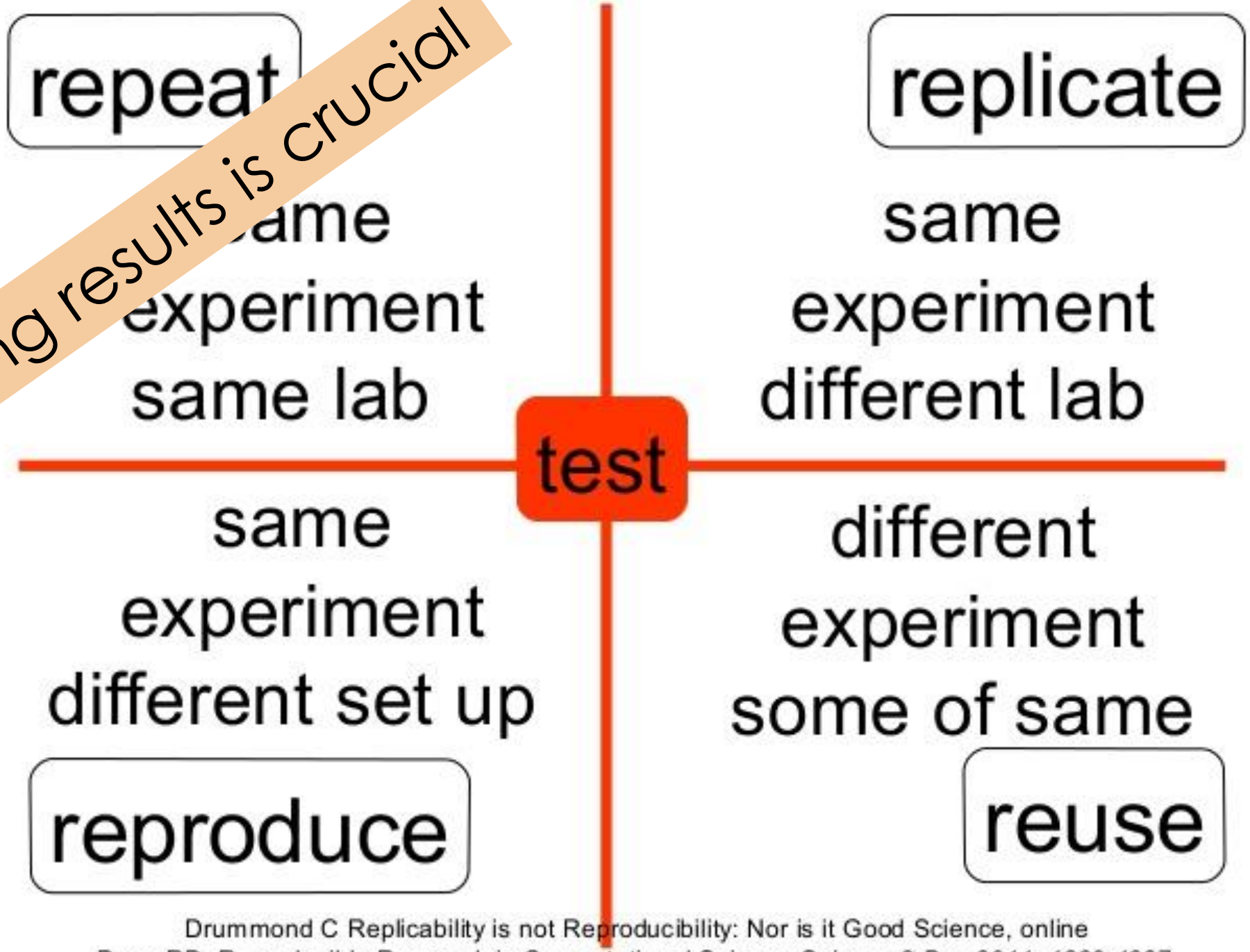
- coined by chemist Jean-C[illegible] Bradley, 2006.
- "... There is a URL to a laboratory [illegible]ook that is freely available and indexed on common [illegible]engines. It does not necessarily have to look like a p[illegible] notebook but it is essential that all of the info[illegible] available to the researchers to make their conclu[illegible] is equally available to the rest of the world "
- practice of public disclosure of primary record (laboratory logs, raw data, processed data, associated matter ...)
- possible also for the research which results were not published

- **Authors invite** expert peers to formally evaluate their work posted in any online archive (libraries, repositories, preprint servers, etc).
- Reviewers who accept submit a detailed **qualitative and quantitative assessment** of the work.
- The **reviewer's name** and any **conflict of interest** are **publicly disclosed**.
- Reviews are published with a **creative commons license** (or similar) and become publicly available along with the original work.
- Reviews are subject to **commentary** and **evaluation by the entire community**.

„Peer review is broken?"

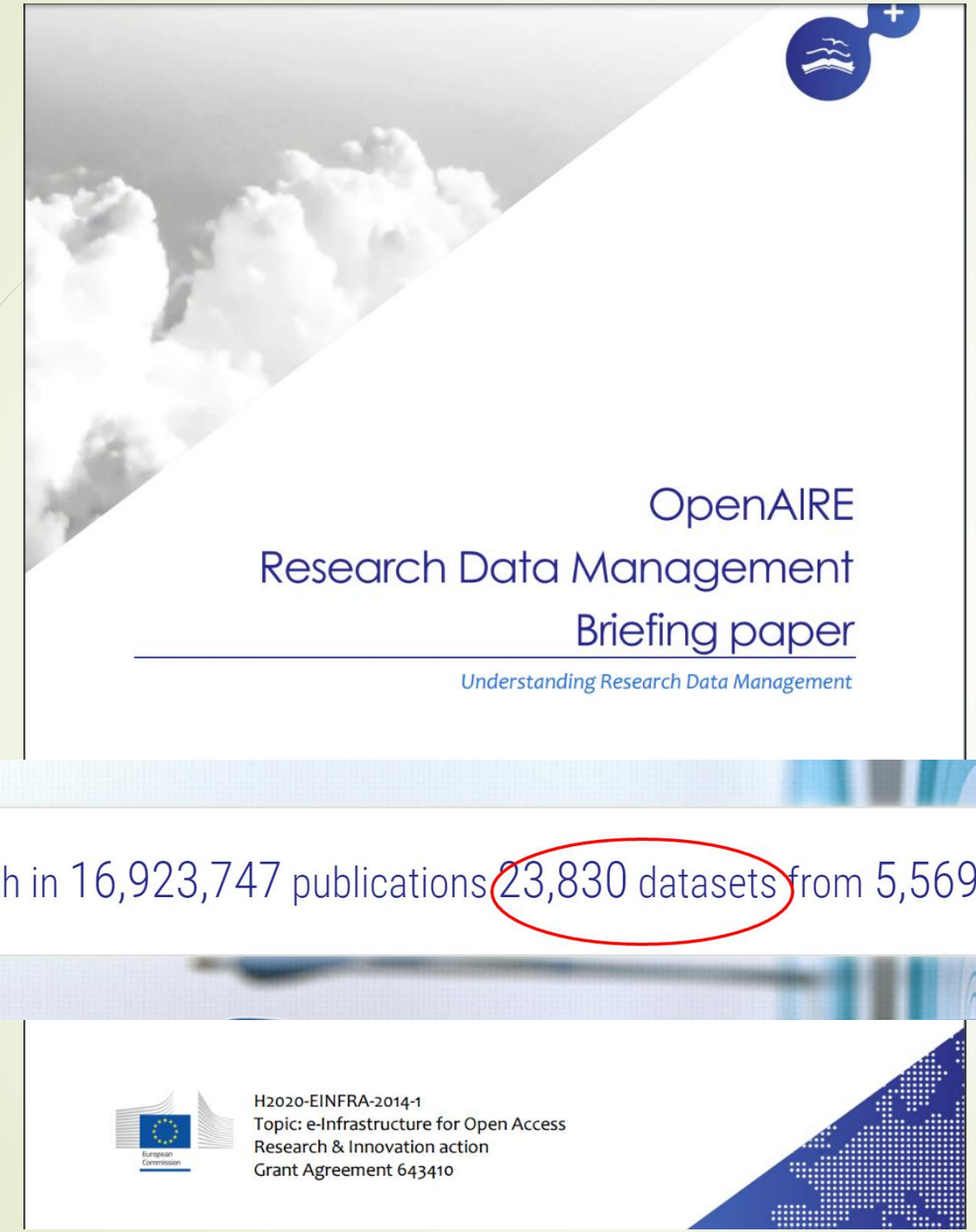
from http://openscholar.org.uk/open-peer-review/

Replicating results is crucial



Drummond C Replicability is not Reproducibility: Nor is it Good Science, online
Peng RD, Reproducible Research in Computational Science *Science 2 Dec 2011: 1226-1227.*

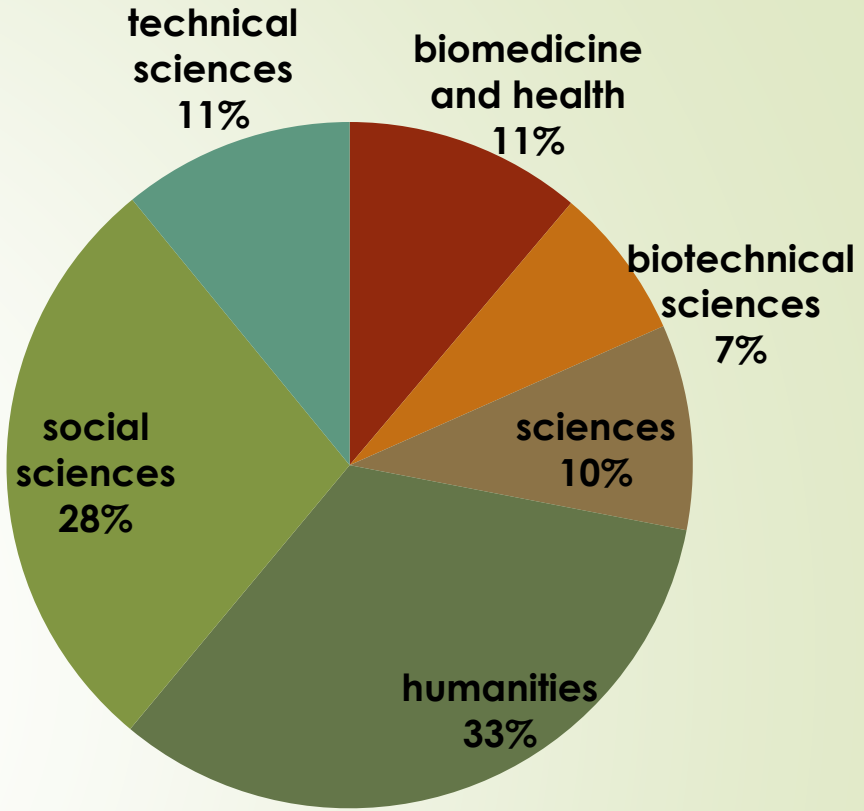
„Science is poorly communicated?"



What's about journals from the scientific semi-periphery?

„Local" journals' challenges

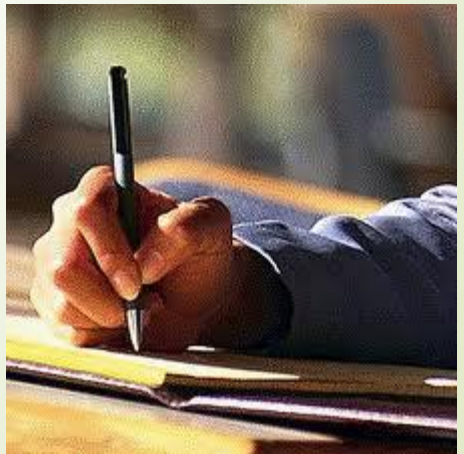
- low visibility
- difficulties with distribution
- small number of subscribers
- low circulation
- insufficient finances
- poor infrastructure (including ICT)
- low readability
- low citation impact
- sometimes not-reliable peer review policies
- lack of international standards in editorial processes



- 380 active scholarly, professional and popular OA journals included in HRČAK
  - 100% in Google Scholar (GS)
  - 93 in DOAJ
  - 53 in WoS
  - 106 in Scopus
  - ...

Why are „local" journals important?

- Protect excellence in locally relevant research (Hicks, Wouters, Waltman, de Rijcke, & Rafols, 2015);
- Development of terminology in local language;
- Close editorial guidance of young researchers;
- Development of editorial and publishing skills in digital environment;
- Bridging the gap between science and application inside community;



Why are „local" journals important (cont)?

- Benefits for the development of the research and academic culture – considering ethical issues and scientific integrity
- Building the reputation of the locally scientific community
- Development of the evaluation criteria, impact of the research is not reflected through citations only
- Lower cost of publishing concerning high average Article Processing Charges (APC)
- Easy access to the research results for the community (OA)
- Content in local language can be spread to a wider local community – no language barriers

Journal - challenges

- growing number
- „*publish or perish*" pressure
- competition for research funding
- highly profitably scholarly publishing industry
- repeated reports on research misconduct

- need for self-regulation and **guidance** in the conduct of science and the dissemination of scientific results

Best practice editorial policies including ethical issues

Editors' general duties and responsibilities

- actively seek the **views of authors, readers, reviewers and editorial board members** about ways of improving their journal's processes
- encourage and **be aware of research into** peer review and 'journalology' and reassess journal processes in the light of new findings
- work to persuade their publishers to provide them with appropriate resources, guidance from experts (e.g. designers, lawyers) and **adequate training** to perform their role in a professional manner and raise the quality of their journal
- support initiatives designed to **reduce academic misconduct**
- support initiatives to **educate researchers** about publication ethics
- **assess the effects of their journal policies** on author and reviewer behaviour and revise policies, as required, to encourage responsible behaviour and discourage misconduct
- ensure that any press releases issued by the journal reflect the message of the reported article and put it into context

COPE Best Practice Guidelines for Journal Editors - http://publicationethics.org/files/u2/Best_Practice.pdf

Relations with readers

- ensure that all published reports of research have been reviewed by suitably **qualified reviewers** (e.g. including statistical review where appropriate)
- ensure that **non-peer-reviewed sections of their journal are clearly identified**
- adopt processes that encourage accuracy, completeness and clarity of research reporting (e.g. technical editing, use of CONSORT checklist for randomised trials)
- consider developing a **transparency policy** to encourage maximum disclosure about the provenance of nonresearch articles
- adopt **authorship or contributorship systems** that promote good practice (i.e. so that listings accurately reflect who did the work) and discourage misconduct (e.g. ghost and guest authors)
- inform readers about steps taken to ensure that submissions from members of the journal's staff or editorial board receive an **objective and unbiased evaluation**

COPE Best Practice Guidelines for Journal Editors - http://publicationethics.org/files/u2/Best_Practice.pdf

Relations with authors

- publish clear **instructions** in their journals about submission and what they expect from authors
- provide **guidance about criteria for authorship** and/or who should be listed as a contributor
- review **author instructions** regularly and provide links to relevant guidelines (e.g. ICMJE, COPE)
- require all contributors to disclose relevant **competing interests** and publish corrections if competing interests are revealed after publication
- ensure that appropriate **reviewers** are selected for submissions (i.e. individuals who are able to judge the work and are free from disqualifying competing interests)
- respect requests from authors that an individual should not review their submission, if these are well-reasoned.
- be guided by the **COPE flowcharts** in cases of suspected misconduct or disputed authorship
- publish details of how they handle cases of suspected misconduct (e.g. with links to the COPE flowcharts)

COPE Best Practice Guidelines for Journal Editors - http://publicationethics.org/files/u2/Best_Practice.pdf

Relations with reviewers

- provide clear **advice to reviewers**
- require reviewers to **disclose any potential competing interests before** agreeing to review a submission
- encourage reviewers to comment on **ethical questions** and possible research misconduct raised by submissions
- encourage reviewers to ensure the **originality of submissions** and be alert to redundant publication and plagiarism
- consider providing reviewers with tools to detect **related publications**
- seek to **acknowledge** the contribution of reviewers to the journal
- encourage academic institutions to **recognise peer-review activities** as part of the scholarly process
- monitor the **performance of peer reviewers** and take steps to ensure this is of high quality
- develop and maintain a **database of suitable reviewers**, and update this on the basis of reviewer performance
- remove from the journal's database any reviewers who consistently produce discourteous, poor quality or late reviews
- seek to add **new reviewers** to the database to replace those who have been removed
- ensure that the reviewer database reflects the academic community for their journal
- use a wide range of sources (not just personal contacts) to identify potential new reviewers
- follow the i**COPE flowchart** n cases of suspected reviewer misconduct

COPE Best Practice Guidelines for Journal Editors - http://publicationethics.org/files/u2/Best_Practice.pdf

Relations with editorial board members

- identify suitably qualified editorial board members who can actively contribute to the development and good management of the journal
- appoint editorial board members for a fixed term of office (e.g. three years)
- provide clear guidance to editorial board members about their expected functions and duties, these might include:
  - acting as ambassadors for the journal
  - supporting and promoting the journal
  - seeking out the best authors and best work (e.g. from meeting abstracts) and actively encouraging submissions
  - reviewing submissions to the journal
  - accepting commissions to write editorials, reviews and commentaries on papers in their specialist area
  - attending and contributing to editorial board meetings
- consult editorial board members regularly (at least once a year) to gauge their opinions about the running of the journal, inform them of any changes to journal policies, and identify future challenges

COPE Best Practice Guidelines for Journal Editors - http://publicationethics.org/files/u2/Best_Practice.pdf

Revision of the existing instructions and guidelines

- Avoid that the instructions for authors mainly consist of instructions for literature citation
- accept one of the international standards (Harvard, APA, IEEE, MLA, Chicago, Vancouver ...)
- Authors interested in the peer review process, the percentage of rejected works, the timeliness of the publication ... and of course, interested in the visibility of the journal
- try the instructions for authors do not sound threatening
- don't look for illogical (eg. the image resolution)

Small research community and ethical guidelines

- Ethical issues are often neglected in small research communities
- In order to respond properly to potentially low quality submissions, editorial policies of small journals should rely on best practices and guidelines
- sharing the responsibility for research integrity between authors, editors and publishers
- **Instructions for authors and reviewers are a mirror of editorial policies**

two studies on Croatian OA journals:
282 instructions for authors
84 instructions for reviewers

Category	Subcategory	Sci	Biomed	Techn	Biotech	Soc	Hum	Chi square value	P(Chi square test)
1. Ethical issues		**16/21**	**23/30**	**20/29**	**16/22**	**43/87**	**52/94**	**13.141**	**0.022**
	Accuracy	6	9	9	6	11	10	14.266	0.014
	Authorship	6	11	4	3	7	17	15.654	0.008
	Confidentiality	4	5	3	3	5	5	13.118	0.022
	Ethics	4	14	3	2	11	12	23.751	< 0.001
	Funding & Col	8	13	4	6	21	7	25.203	< 0.001
	Misconduct	6	8	9	8	6	3	36.301	< 0.001
	Plagiarism	4	4	2	1	5	2	11.143	0.049
	Redundancy	3	9	1	1	6	6	23.324	< 0.001
	Reporting	3	9	1	2	3	2	33.463	< 0.001
	Research integrity	8	14	11	6	15	19	15.6	0.008
	Responsibility	1	5		1	1	1	21.51	0.001
	Retraction	4	4	5	5	2	1	26.085	< 0.001

- Ethical issues are best represented in the instructions for authors of biomedical journals (77%) - expected
- Science journals followed closely (76%) - not expected
- Less than half of the journals from social sciences have present any ethical issues in their instructions for authors

Category	Subcategory	Sci	Biomed	Techn	Biotech	Soc	Hum	Chi square value	P(Chi square test)
2. Journal		**21/21**	**29/30**	**29/29**	**22/22**	**86/87**	**94/94**	**4.374**	**0.497**

- The most addressed media was text presented by PDF format
- Information about journal carrier were equally represented by terms "print" and "electronic"
- suggested languages were mostly English and Croatian
- Business models, including fees and charges, are mostly present in journals from science and biomedicine disciplines
- The terms "article processing charges" or APC were not mentioned, although a few journals are charging for publishing papers
- Open Access was addressed only by 14 journals, even if all 283 journals included in the analysis were OA journals
- Editors are not yet communicating copyright issues, peer review type and timeliness, all issues of crucial importance for potential authors.

Category	Sci	Biomed	Techn	Biotech	Soc	Hum	Chi square value	P(Chi square test)
3. Manuscript	**21/21**	**30/30**	**29/29**	**22/22**	**87/87**	**93/93**	**2.018**	**0.847**
Manuscript elements	21	30	29	22	87	93	6.097	0.297
Manuscript layout	21	30	29	22	87	87	14.431	0.013
Type of paper	21	29	28	22	86	86	8.903	0.113

- Manuscript issues were present in almost **all journals**
- **Manuscript layout** (chapters, paragraphs, margins, page size, line spacing, alignment, indentation, headers and footers) makes large part of the instructions for authors
- Journal editors are often describing **manuscript elements**: article title, authors, abstract, key-words, introduction, materials and methods, results, discussion, literature and acknowledgement
  - Most frequently mentioned were author(s), abstract and literature list, while the presence of discussion and acknowledgement varied across disciplines
- The most popular **type of the paper** in all disciplines is article (scientific paper), followed by the conference paper.

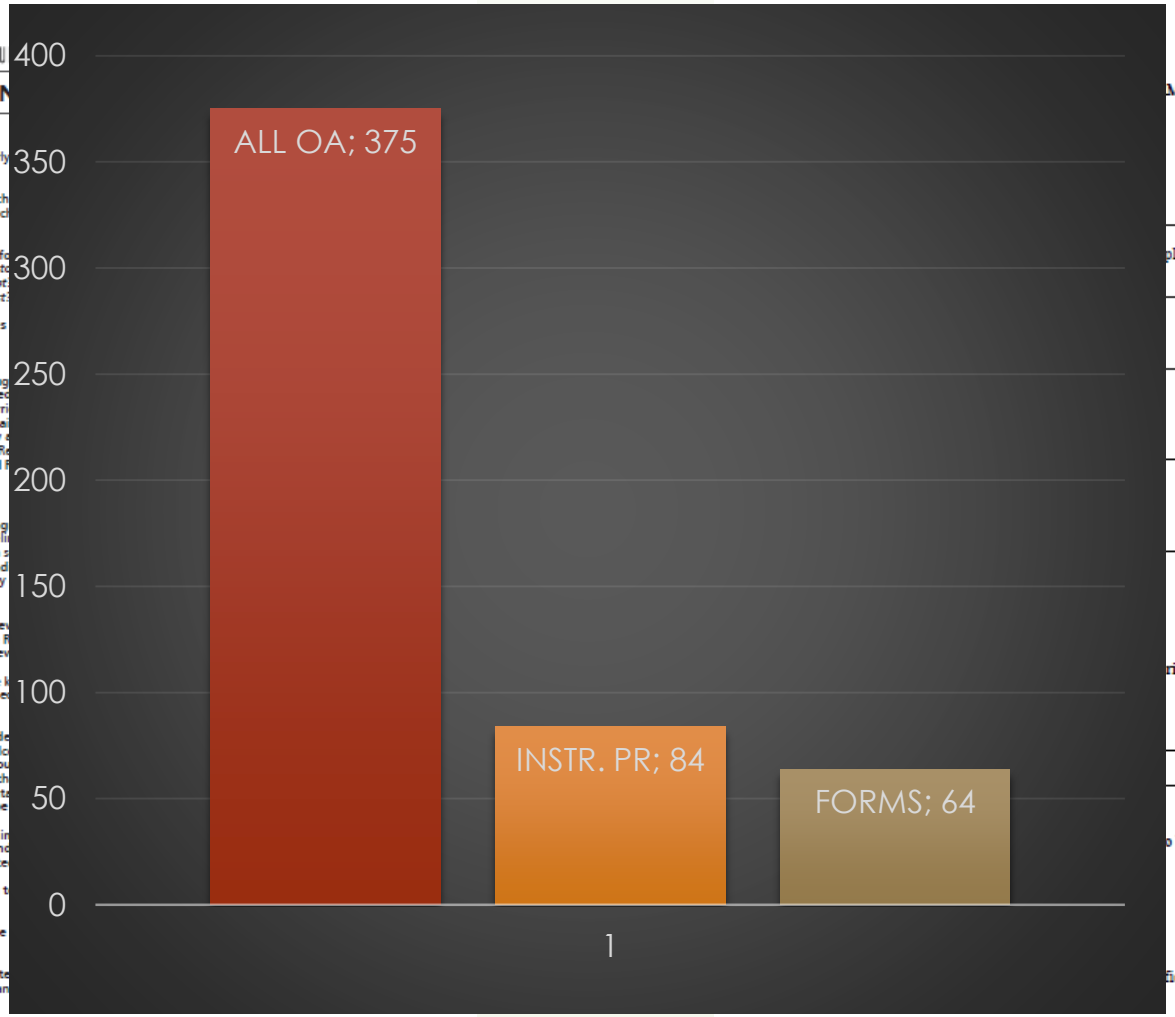
Instructions for authors - conclusions

- Ethical issues was **the least** prominent category in our study
- The most frequent ethical issues addressed by Croatian OA journals were **responsibility, funding and accuracy**
- Guidance regarding **redundancy, conflict of interest, reporting, retraction, confidentiality, plagiarism, and research integrity** was addressed by **less then 10%** of the journals
- Addressed more often by medical journals: **responsibility, publishing ethics, conflict of interest, funding, and authorship**
- Ethical issues like **retraction, plagiarism, research integrity and confidentiality** were represented by **few** biomedical journals.

Importance of the **instructions for peer reviewers**

- **author** – to know details about peer review process
- **reviewer** - to make clear what constitutes a good review, to help reviewers understand what matters to editors about reviews, to give reviewers help in producing a good review, to make clear what is expected from reviewer in terms of journal quality standards
- **readers** - may have more confidence on objective and unbiased peer review, and consequently more trust in the accuracy of the published research studies

From high expectations to the reality



Content analysis

- **REVIEWER**
- **PEER REVIEW PROCESS** (INCLUDING ETHICAL ISSUES)
- **MANUSCRIPT**

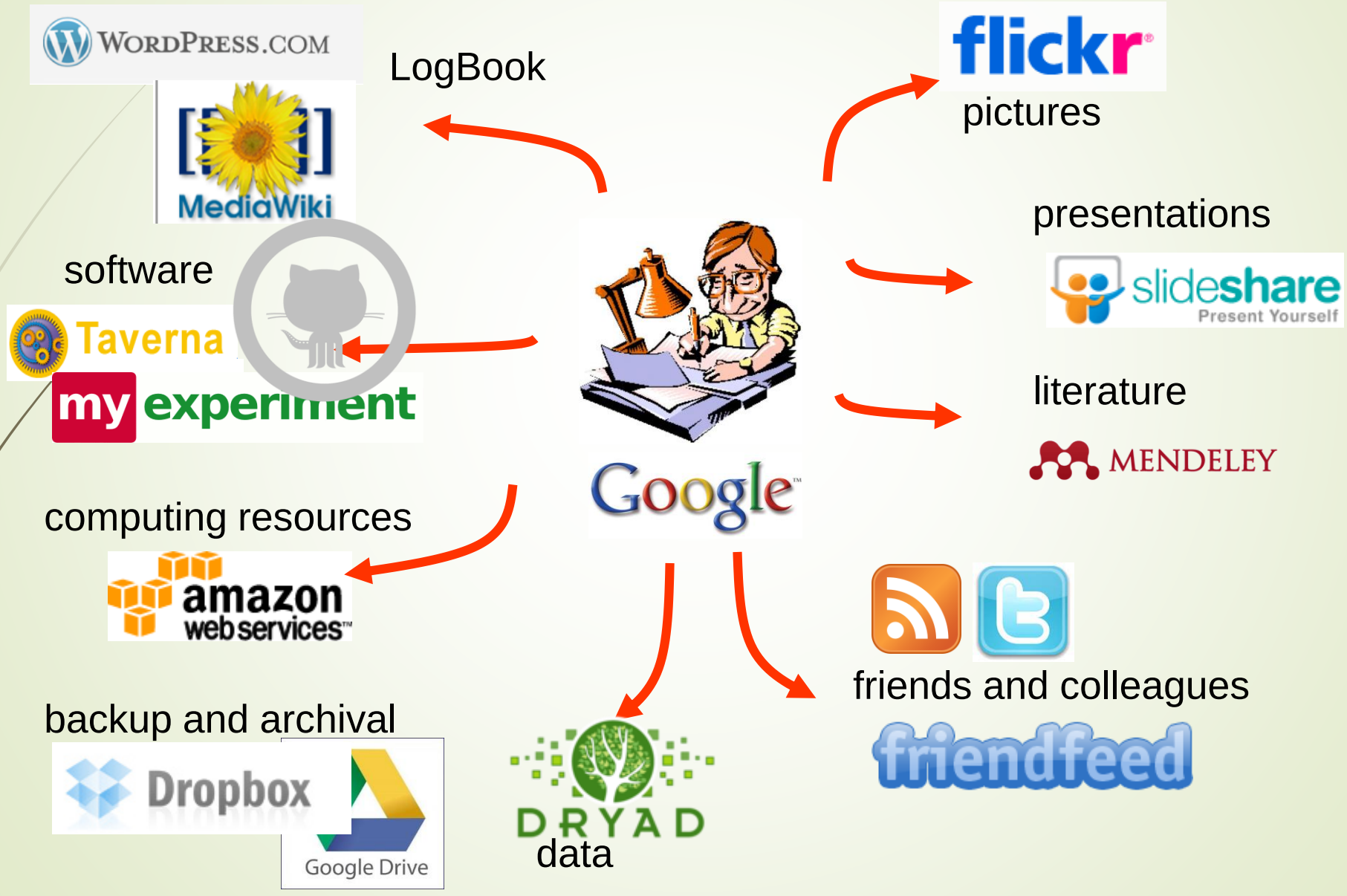
Conclusions (1)

- Among 84 instructions of Croatian OA journals, 64 are just reviewer forms
- The most present category was information about *manuscript* (83/84), with *manuscript elements* (title, literature etc.) as most frequent subcategory (82/84)
- Research *data* (raw data, underlying data) were not mentioned in a single instruction
- Information about *reviewer* was present in the majority of instructions (79/84), with reviewers' *comments* and *suggestions* as most frequent terms (50/84 and 45/84 accordingly)

Conclusions (2)

- *Peer review* was the least represented category in the instructions for peer reviewers (71/84)
- Among *peer review* subcategories the most present was about *revision results* (accepted, rejected...)(66/84),
  - subcategories *peer review types* (blind, anonymous, open...), *peer review process* (confidentiality, fairness, unbiasedness...) and *ethical issues* (authorship, misconduct, redundancy, plagiarism...) were represented poorly (22-28/84)

Understanding of the personal working environment

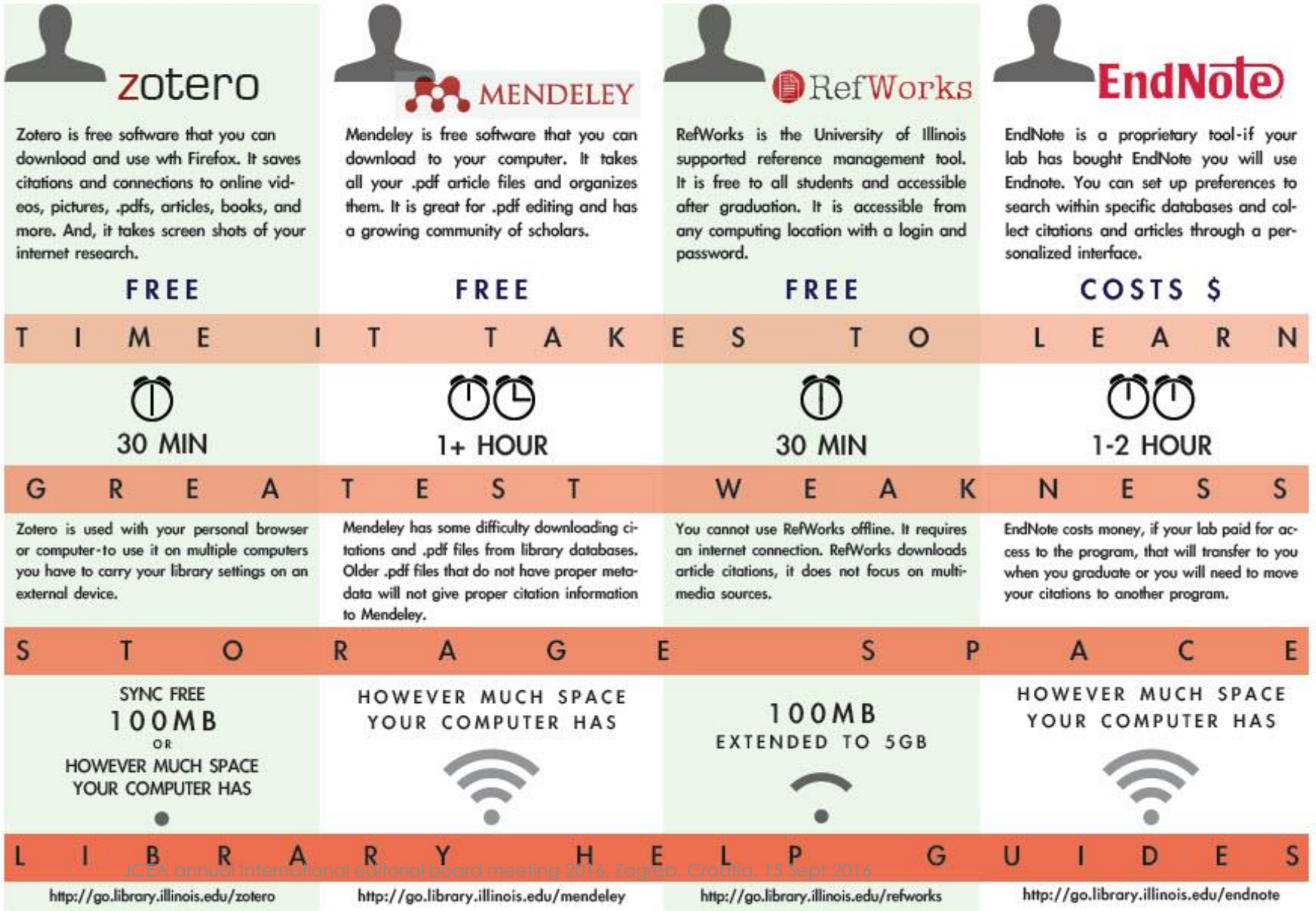


Understanding of available tools

Mounce, Ross. The Open Advantage for Early Career Researchers, 2014 (FOSTER Open Science event 4th September, King's College London)

WHAT WILL IT DO FOR ME?

THE REAL QUESTION ABOUT THE REFERENCE MANAGER. THEY ALL AUTOMATICALLY MAKE BIBLIOGRAPHIES, HOW ARE THEY DIFFERENT?



http://2.bp.blogspot.com/-9Pzt-

Indexing - why?

Different criteria for inclusion

Important sources

- The Thomson Reuters Journal Selection Process na http://wokinfo.com/essays/journal-selection-process/
- Getting your journal indexed: a SPARC guide (Scholarly Publishing and Academic Resources Coalition) http://www.sparc.arl.org/resources/papers-guides/journal-indexing
- Assessing Journals for Inclusion into Scopus http://taiwan.elsevier.com/htmlmailings/Event/Local_Journal/PDF/Evan_Bieske.pdf
- Scopus Content Coverage Guides http://www.elsevier.com/__data/assets/pdf_file/0019/148402/contentcoverageguide-jan-2013.pdf
- Getting Your Journal Indexed and Using Resources for Editors https://nursing.ceconnection.com/nu/files/Chapter10GettingYourJournalIndexedandUsingResourcesforEditors-1362418784516.pdf
- Advice to journal editors and publishers: Securing accession for a journal to Scopus http://www.scopus.fecyt.es/SiteAssets/Pages/info_editores/CSAB_statement_Advice_to_journal_editors_and_publishers.pdf

Importance of DOI

- Analog bar code on the physical objects, "digital object identifier" is a series of alphanumeric characters:
- uniquely identify a piece of digital content
- act as a stable, **permanent** links to the location where the content is located on the Web
- "Resistant" is to change eg. the owner of copyright, or change the location because this address is only used to search for the right address in the directory

DOI in full-text article

letters to nature

Nature **425**, 155 - 158 (11 September 2003); doi:10.1038/nature01826

Quantum dynamics of a single vortex

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Vortices occur naturally in a wide range of gases and fluids, from macroscopic to microscopic scales. In Bose–Einstein condensates of dilute atomic gases[1], superfluid helium[2] and superconductors, the existence of vortices is a consequence of the quantum nature of the system. Quantized vortices of supercurrent[3] are generated by magnetic flux penetrating the material, and play a key role in determining the material properties[4] and the performance of superconductor-based devices[5,6]. At high temperatures the dynamics of such vortices are essentially classical, while at low temperatures previous experiments have suggested collective quantum dynamics[7,8]. However, the question of whether vortex tunnelling occurs at low temperatures has been addressed only for large collections of

Evolution of journal articles and benefits of openness and transparency

- Increasing the efficiency and cost-effectiveness of science
- Making science more productive
- Better quality of science
- Improving reputation and trust
- Enhancing visibility and impact
- Innovations

Thank you for your attention! ☺

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