How can the Library support the Researcher

CERN-UNESCO School on Digital Libraries

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November 2016

ELSEVIER

Engaging and supporting the Academic

- ➢ **Research Impact Metrics**

- ➢ **Ethics**

- ➢ **Predatory Journals**

- ➢ **New Initiatives**

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Research Impact Metrics

Research Impact Metrics| Ethics| Predatory Journals| New Initiatives

What can Scientific Publishers do?

Listen to the global and local community needs of a discipline

Compare/benchmark journals to their local and global competitors

Define the strategy for a journal/discipline to improve the journal's

> Global Visibility

> Impact

Renew editorial boards to:

> Enlarge network of the journal

> Follow new research developments

Start new journals/product to support

the scientific community

BASICALLY determine (with the editors) where do we want to be in 5 years from now and execute the strategy accordingly

Catering to researchers' many hats

REVIEWER
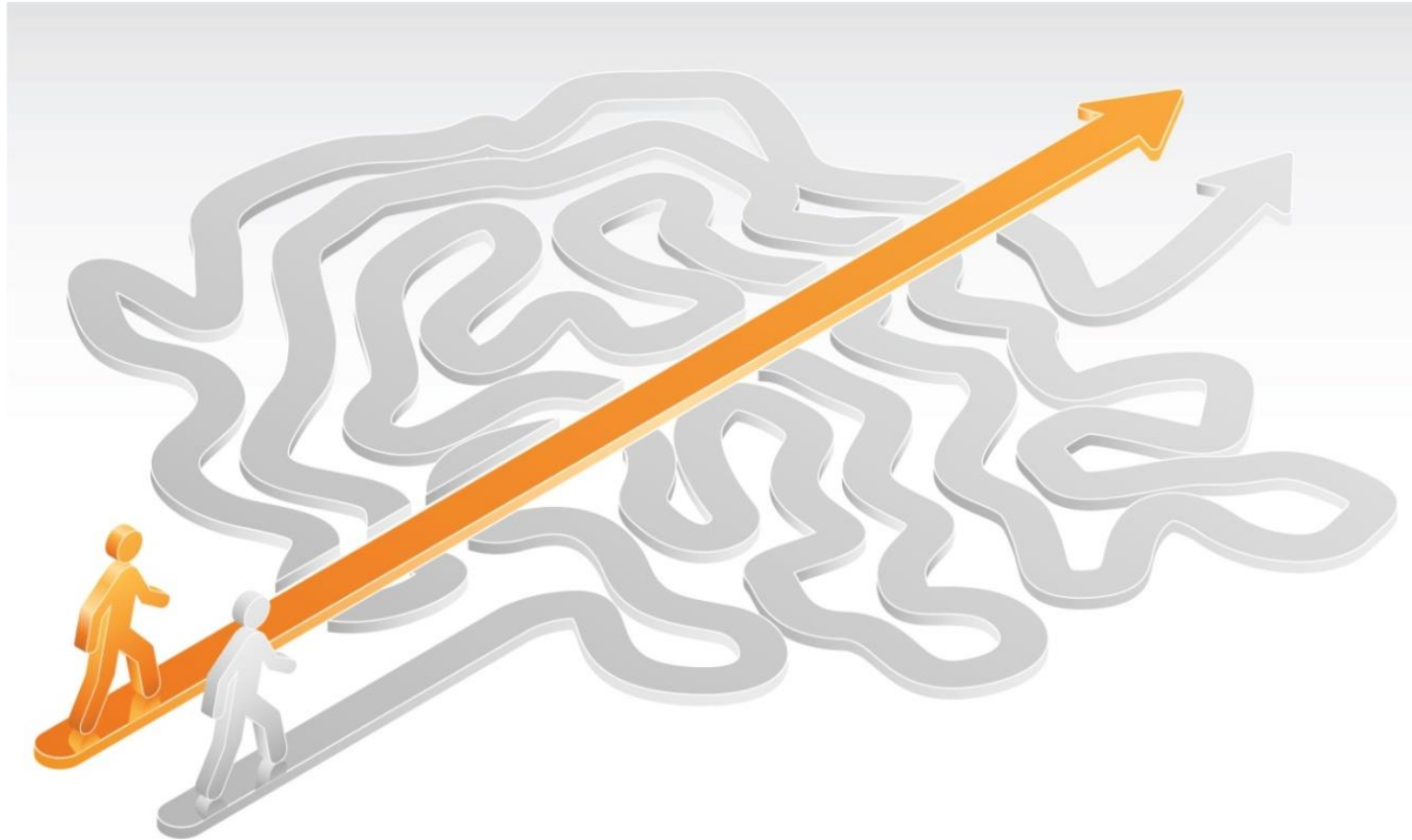
COLLABORATOR

AUTHOR
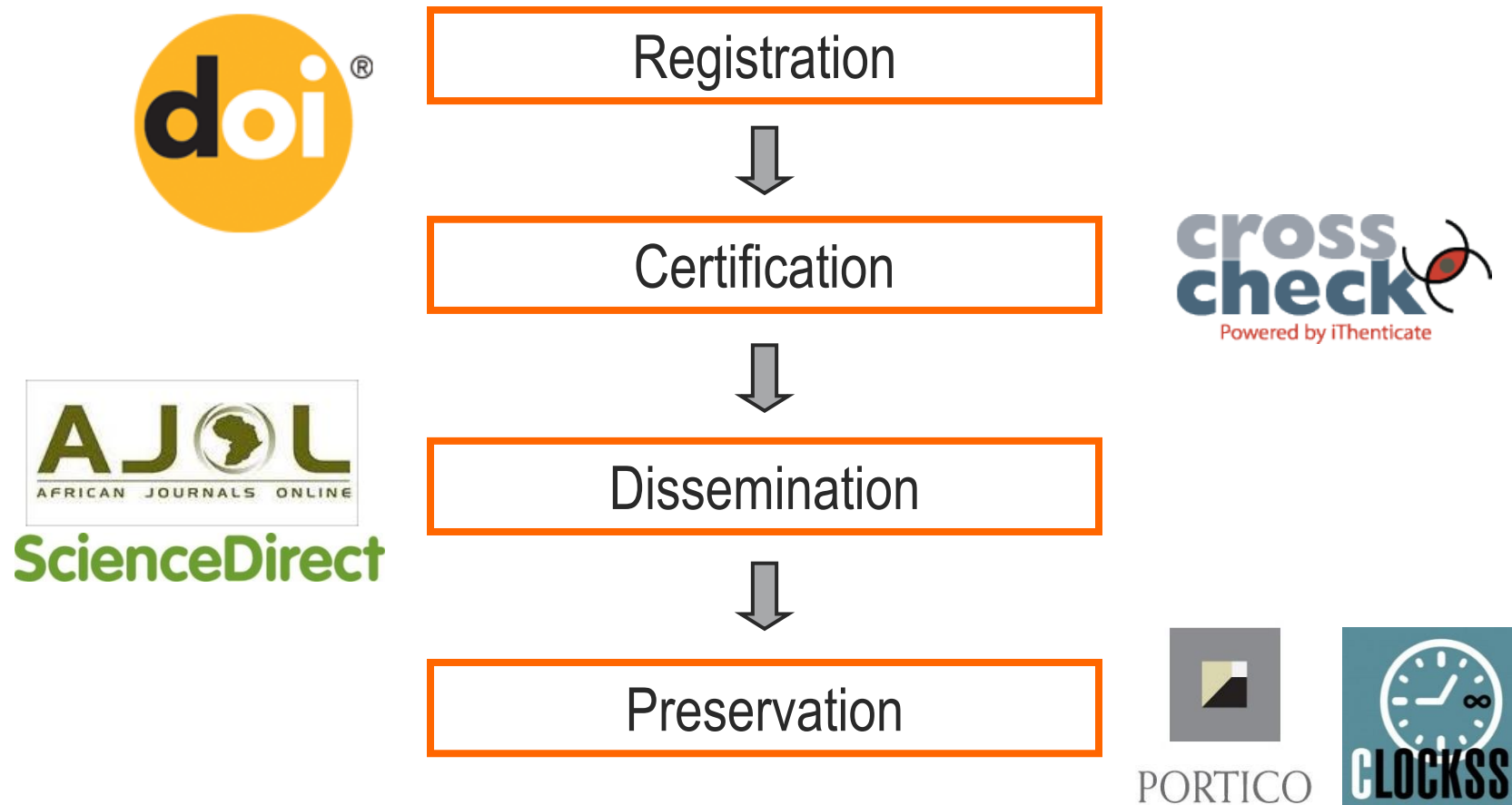
TEACHER

READER

EDITOR

RESEARCHER

Digital solutions and tools

Right content, right context, right time

Enhance our traditional role

Trends in publishing: moving online

Tools to assess and "improve" journal quality

- **Globally used tools to assess quality of jnls:**
  - Impact Factor
  - H-Index
  - Online usage of papers
  - But there are many more......

JOURNAL IMPACT FACTOR

citations in a year to documents published in previous 2 years

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no. of citable items in previous 2 years

Based on Web of Science data, this metric is updated once a year and traditionally released in June following the year of coverage as part of the Journal Citation Reports®. JCR also includes a Five-year Impact Factor.
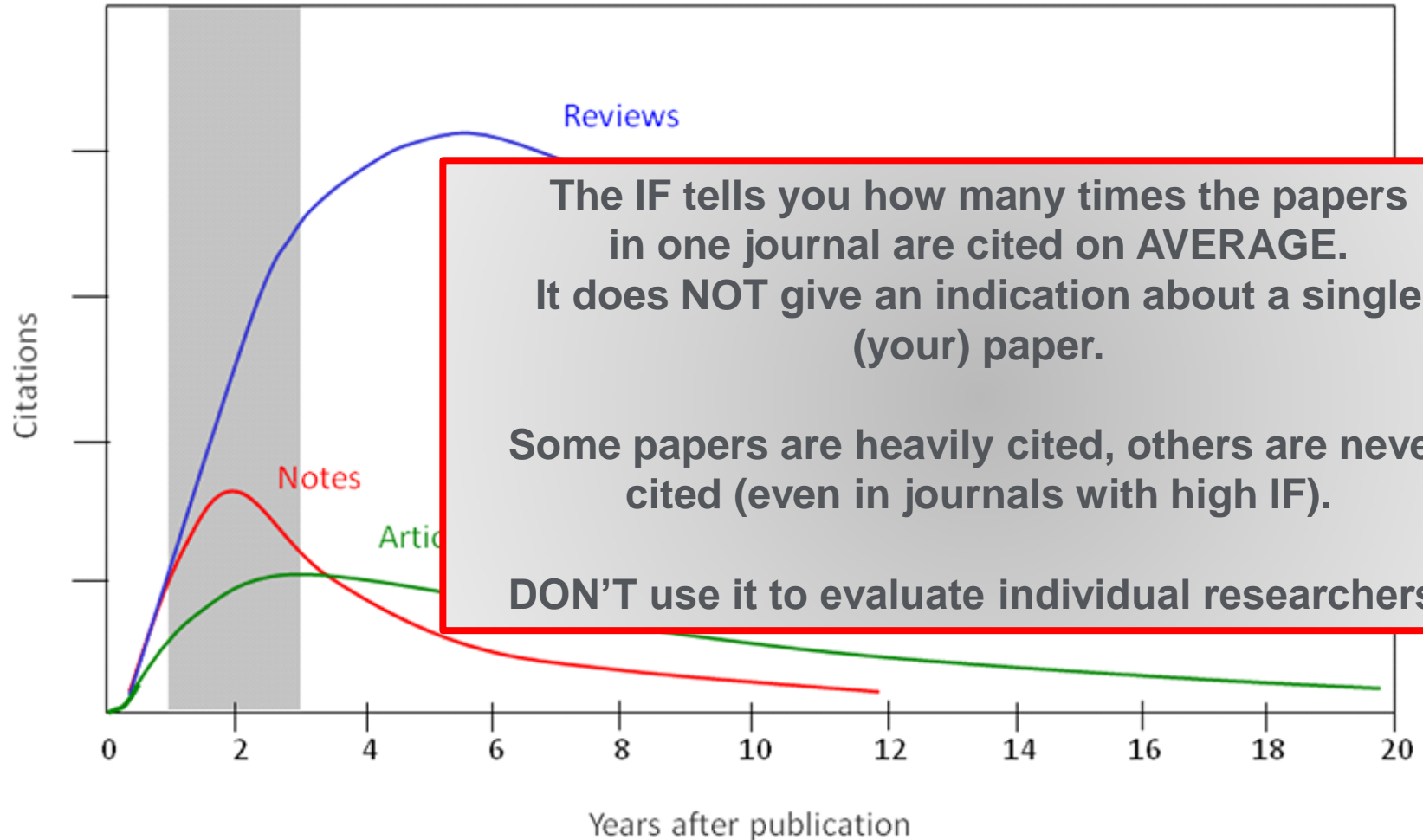
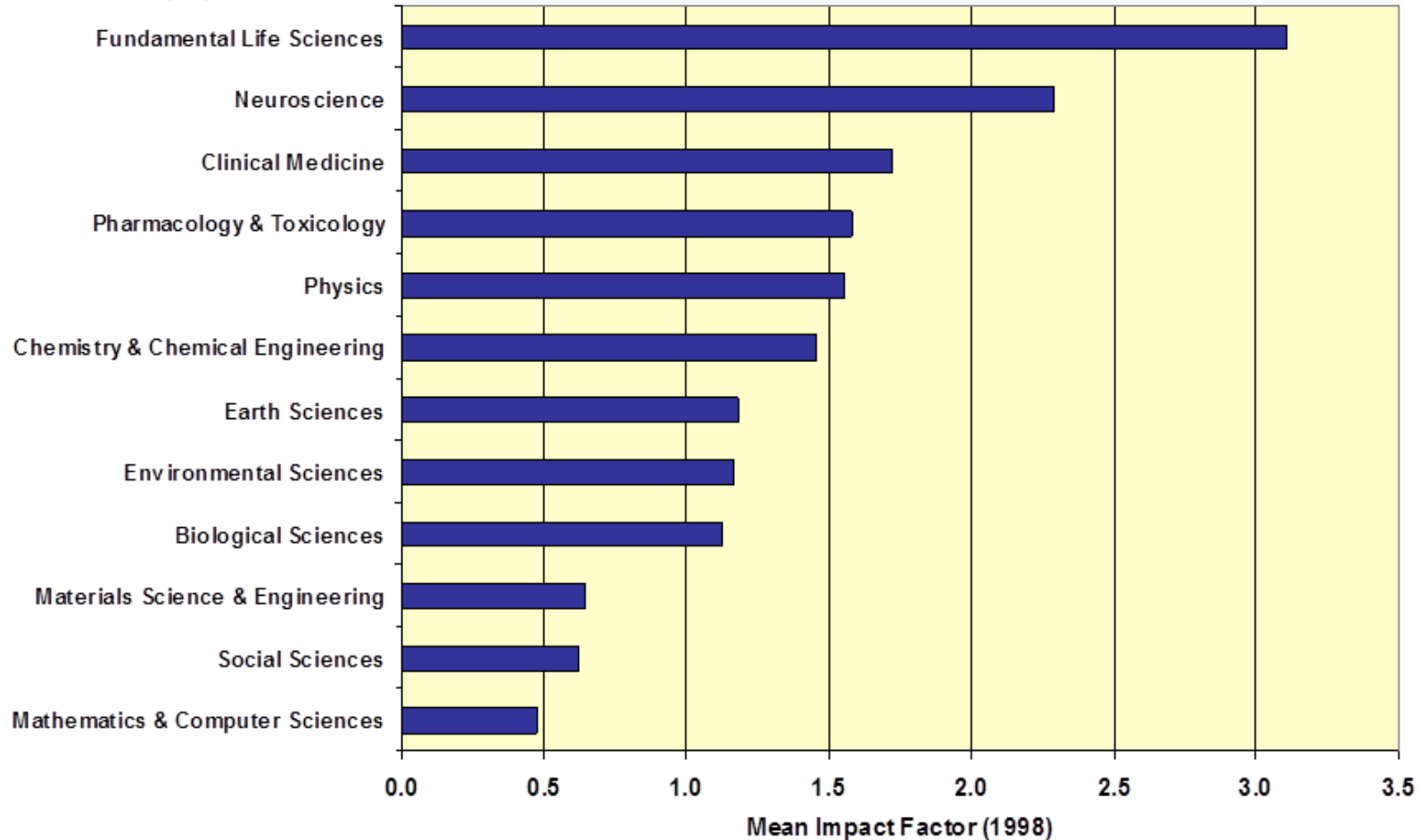## IF calculation: example

$$\frac{\text{Citations 2012 to publications 2010/2011}}{\text{\# of publications 2010/2011}}$$

$$\frac{200}{100} \rightarrow IF = 2$$

Citations per article type

The IF tells you how many times the papers in one journal are cited on AVERAGE.
It does NOT give an indication about a single (your) paper.

Some papers are heavily cited, others are never cited (even in journals with high IF).

DON'T use it to evaluate individual researchers.

Influences on Impact Factors: Subject Area

H-index (more for individuals than Jnls)

h-INDEX

# of articles in the collection (h) that have received at least (h) citations over the whole period

For example, an *h*-index of 8 means that 8 of the collection's articles have each received at least 8 citations. *h*-index is not skewed by a single highly cited paper, nor by a large number of poorly cited documents. This flexible measure can be applied to any collection of citable documents. Related *h*-type indices emphasize other factors, such as newness or citing outputs' own citation counts (http://www.harzing.com/pop_hindex.htm).

Additional metrics

CITATION COUNT
of citations accrued since publication

A simple measure of attention for a particular article, journal or researcher. As with all citation-based measures, it is important to be aware of citation practices. The paper "Effective Strategies for Increasing Citation Frequency" (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2344585) lists 33 different ways to increase citations.

https://libraryconnect.elsevier.com/metrics

DOCUMENT COUNT
of items published by an individual or group of individuals

A researcher using document count should also provide a list of document titles with links. If authors use an ORCID iD – a persistent scholarly identifier – they can draw on numerous sources for document count including Scopus, ResearcherID, CrossRef and PubMed.

Register for an ORCID iD at http://orcid.org.

https://libraryconnect.elsevier.com/metrics

FIELD-WEIGHTED CITATION IMPACT (FWCI)

$$\frac{\text{\# of citations received by a document}}{\text{expected \# of citations for similar documents}}$$

Similar documents are ones in the same discipline, of the same type (e.g., article, letter, review) and of the same age. An FWCI of 1 means that the output performs just as expected against the global average. More than 1 means that the output is more cited than expected according to the global average; for example, 1.48 means 48% more cited than expected.

https://libraryconnect.elsevier.com/metrics

IMPACT PER PUBLICATION (IPP)

$$\frac{\text{\# of citations in present year for journal documents from past 3 years}}{\text{total \# of papers published in past 3 years in that journal}}$$

This score can be used for any serially published collection of publications. It is similar to the Journal Impact Factor in the way it is calculated, but allows for more comparison across disciplines, since disciplinary citation practices mean that not all journals will reach their peak citation rate within the Journal Impact Factor's 2-year period.

https://libraryconnect.elsevier.com/metrics

Additional metrics

PERCENTILE BENCHMARK (ARTICLES)

compares items of same age, subject area & document type over an 18-month window

The higher the percentile benchmark, the better. This is available in Scopus for citations, and also for Mendeley readership and tweets. Particularly useful for authors as a way to contextualize citation counts for journal articles as an indicator of academic impact.

https://libraryconnect.elsevier.com/metrics

SCIMAGO JOURNAL RANK (SJR)

average # of weighted citations received in a year

# of documents published in previous 3 years

Citations are weighted – worth more or less – depending on the source they come from. The subject field, quality and reputation of the journal have a direct effect on the value of a citation. Can be applied to journals, book series and conference proceedings.

Calculated by Scimago Lab (http://www.scimagojr.com) based on Scopus data.

https://libraryconnect.elsevier.com/metrics

SOURCE NORMALIZED IMPACT PER PAPER (SNIP)

journal's citation count per paper

citation potential in its subject field

The impact of a single citation will have a higher value in subject areas where citations are less likely, and vice versa. Stability intervals indicate the reliability of the score. Smaller journals tend to have wider stability intervals than larger journals.

Calculated by CWTS (http://www.journalindicators.com) based on Scopus data.

https://libraryconnect.elsevier.com/metrics

OUTPUTS IN TOP PERCENTILES

extent to which a research entity's documents are present in the most-cited percentiles of a data universe

Found within SciVal, Outputs in Top Percentiles can be field weighted. It indicates how many articles are in the top 1%, 5%, 10% or 25% of the most-cited documents. Quick way to benchmark groups of researchers.

https://libraryconnect.elsevier.com/metrics

Online usage of papers

SCHOLARLY ACTIVITY ONLINE

# of users who added an article into their personal scholarly collaboration network library

The website How Can I Share It? links to publisher sharing policies, voluntary principles for article sharing on scholarly collaboration networks, and places to share that endorse these principles including Mendeley, figshare, SSRN and others.
http://www.howcanishareit.com

https://libraryconnect.elsevier.com/metrics

SCHOLARLY COMMENTARY ONLINE

# of mentions in scientific blogs and/or academic websites

Investigating beyond the count to actual mentions by scholars could uncover possible future research collaborators or opportunities to add to the promotion and tenure portfolio. These mentions can be found in the Scopus Article Metrics Module and within free and subscription altmetric tools and services.

https://libraryconnect.elsevier.com/metrics

SOCIAL ACTIVITY ONLINE

# of mentions on micro-blogging sites

Micro-blogging sites may include Twitter, Facebook, Google+ and others. Reporting on this attention is becoming more common in academic CVs as a way to supplement traditional citation-based metrics, which may take years to accumulate. They may also be open to gaming (http://www.altmetric.com/blog/gaming-altmetrics).

MEDIA MENTIONS

# of mentions in mass or popular media

Media mentions are valued indicators of social impact as they often highlight the potential impact of the research on society. Sources could include an institution's press clipping service or an altmetric provider. Mendeley, Scopus (Article Metrics Module), Pure and SciVal (coming in 2016) also report on mass media.

Insights for researchers
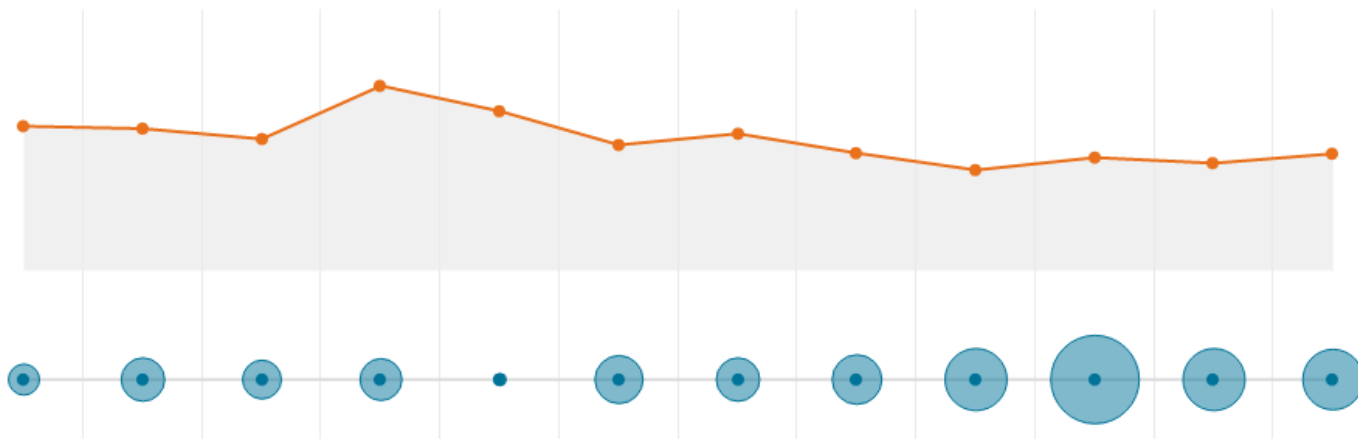
Ethics

Research Impact Metrics| Ethics| Predatory Journals| New Initiatives

Ethics: Responsibilities of the publishing house

It is fundamental to the value Elsevier offers the community that we…

- **Safeguard the quality, integrity & reliability of the content we publish**

- **Promote highest ethical & professional standards**

- **Educate authors about accountability**

- **Provide editors with best processes, tools & support**

- **Stand with editors if their decisions are challenged**

Retractions: rising but still rare

- **Nr of retractions per year increased X 19 from 2001-2010**

- **15 prolific individuals accounted for more than half of all retractions due to alleged research misconduct**

| Researcher	Retraction years	Country	Field of study	Number of retractions	Justification given for retractions
Joachim Boldt[1]	2010–2011	Germany	Anesthesiology	88	Lack of IRB approval
Adrian Maxim[2]	2007	USA	Electrical engineering	48	Alleged data fraud and fictitious co-authors
H. Zhong[3]	2010	China	Chemistry	43	Alleged data fraud
Jon Hendrick Schön[4]	2002–2004	USA	Physics	33	Alleged data fraud
T. Liu[3]	2010	China	Chemistry	29	Alleged data fraud
Robert A. Slutsky[4]	1985–1987	USA	Cardiology	25	Alleged data fraud
Scott S. Reuben[4]	2009–2010	USA	Anesthesiology	24	Alleged data fraud
Naoki Mori[5]	2010–2011	Japan	Oncology	23	Alleged data fraud
Friedhelm Herrmann[6]	1997–2003	Germany	Oncology	22	Alleged data fraud
John R. Darsee[4]	1982–1984	USA	Cardiology	19	Alleged data fraud
Pattium Chiranjeevi[7]	2008	India	Chemistry	19	Plagiarism
Wataru Matsuyama[5]	2007–2010	Japan	Immunology	17	Alleged data fraud
Suresh Radhakrishnan[8]	2010	USA	Immunology	15	Alleged data fraud
M. Quik, G. Goldstein and collaborators	1993–1994	Canada	Physiology	15	Artifact (contamination)
Jon Sudbø[9]	2006–2007	Finland	Oncology	14	Alleged data fraud

These cases distort figures for individual journals, years, countries and subdisciplines, and are distributed throughout North America, Europe and Asia. Nine of the 15 are in medical fields.

Grieneisen & Zhang; PlosOne 2012

Are we focusing on the tip of the iceberg?

Falsification
Fabrication
Plagiarism

Questionable
Research
Practice

(Ir)responsible
Conduct of
Research/
Issues with
Reproducibility
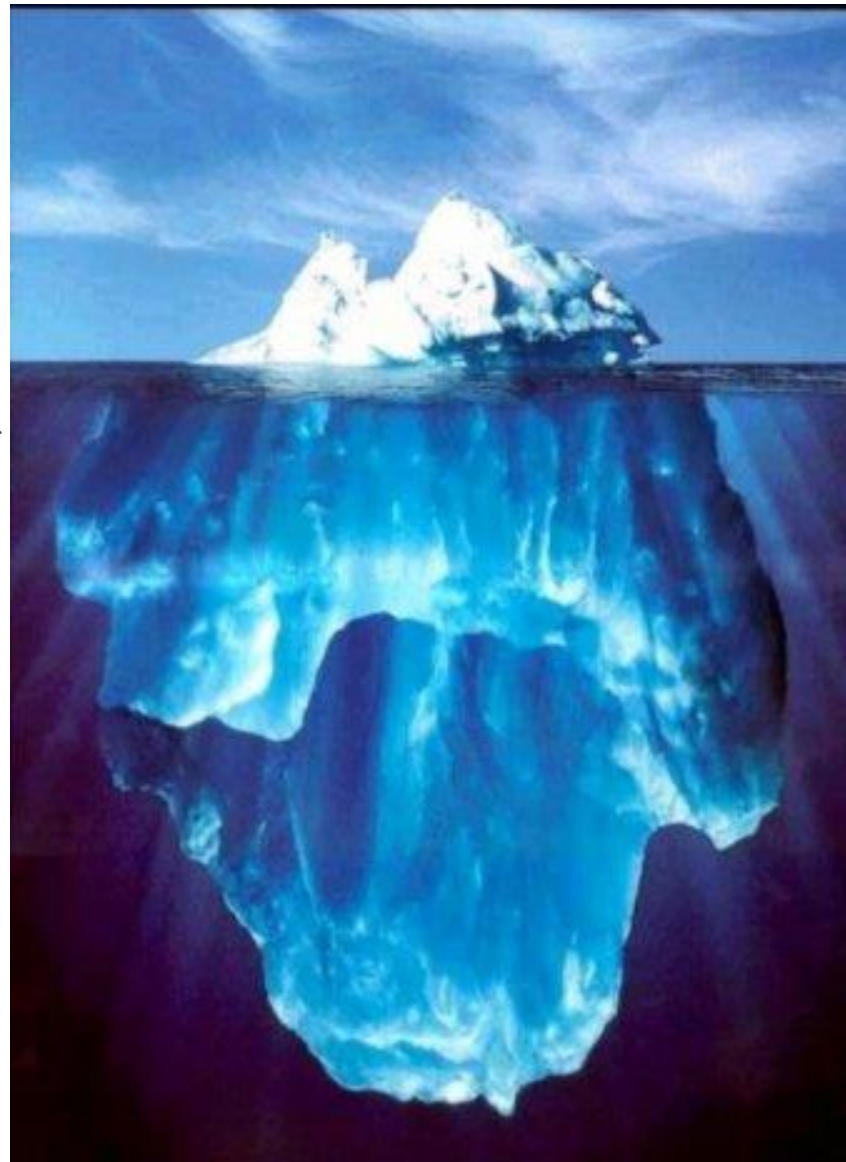
Educating authors on the do's & don'ts

- **Online education program**

- **Teaching the "ground rules"...and the consequences to authors & society when they're broken**

- **Interviews, quarterly webinars, quizzes, factsheets, FAQ**

- **500+ Author Workshops annually**

Along with the credit of being an author, comes accountability

http://www.publishingcampus.elsevier.com/ethics

Top 5 reasons to publish ethically

It protects life and the planet ②
Publishing ethically ensures that we have trusted information on which to build future therapies, technologies, and policies. Published work based on fraudulent data can form an inappropriate basis for follow up studies leading to waste of resources and harmful effects to patients, communities, or habitats.

① **It ensures scientific progress**
Truth is the foundation of science and the progress of ideas. The scientific community thrives only when each participant publishes with integrity.

It promotes ethical behavior
Doing the right thing sets an example and reinforces our responsibility to our peers and society at large (who generally pay for our work). Believing our actions won't make a difference or are above the law can lead those who don't know better into believing the same.

③

⑤ **It's the only way**
A good reputation and acting with integrity opens the door to opportunity. Your work represents not only you but the research institution, the funding body, and other researchers.

④ **It's good for your reputation**
There's nothing like getting published and being able to accept credit and accolades for a job well done. Do it the right way. A published paper is a permanent record of your work. Don't become part of the minority who end up with a retracted paper and a tarnished reputation.

Make your research count.
Publish ethically.
ethics.elsevier.com

Prevention: Clear policies for authors

- **Ethical policies are prominent in all 'Guide for Authors'**

- **Mandatory ethics statement for all submissions**

http://ees.elsevier.com/journal/ ELS_Plagiarism.html

Ethics in Publishing: Instructions to Authors

The editor(s) and publisher of this Journal believe that there are fundamental principles underlying scholarly or professional publishing. While this may not amount to a formal "code of conduct", these fundamental principles with respect to the authors' paper are that the paper should:

- be the authors' own original work, which has not been previously published elsewhere. To verify originality, your article will be checked by the text-similarity detection service CrossCheck,
- reflect the authors' own research and analysis and do so in a truthful and complete manner,
- properly credit the meaningful contributions of co-authors and co-researchers,
- not be submitted to more than one journal for consideration (ensuring it is not under redundant simultaneous peer review), and
- be appropriately placed in the context of prior and existing research.

For a full description of the standards of expected ethical behaviour by all parties involved in the publishing process (the author, the journal editor, the peer reviewer, the publisher and the society for society-owned or sponsored journals) please see:
http://www.elsevier.com/wps/find/intro.cws_home/publishing.

Of equal importance are ethical guidelines dealing with research methods and research funding, including issues dealing with informed consent, research subject privacy rights, conflicts of interest, and sources of funding.

While it may not be possible to draft a "code" that applies adequately to all instances and circumstances, we believe it useful to outline our expectations of authors and procedures that the Journal will employ in the event of questions concerning author conduct. Relevant conflicts of interest should be disclosed (see
http://www.elsevier.com/wps/find/authorshome.authors/conflictsofinterest).

Last revised: 5 September 2014

Plagiarism detection: CrossCheck

- **Consists of database of published content and plagiarism-detecting software from Iparadigms**

- **Unique database: 50 million+ articles from 175,000+ journals and books from 300+ publishers**

- **Expert interpretation still essential: CrossCheck shows similarity but not context or intent**

- **Shortcomings: risk of false positives & false negatives - There is no magic number!!**

Detection of image manipulation

- **Elsevier policy similar to that of Rossner & Yamada, JCB:**
  - "No specific feature within an image may be enhanced, obscured, moved, removed, or introduced
  - Adjustments of brightness, contrast, or color balance acceptable, as long as they don't obscure or eliminate any information from the original"

- **ORI Forensic Droplets for detecting Photoshopping**

- **Manual checking very time-consuming**

- **Automated tools under development/assessment**

Sources: *Journal of Cell Biology:* Rossner, M. and Yamada, K. 166, 11-15, 2004

Dr Jacques Piette, Editor, *Biochemical Pharmacology*

Office of Research Integrity http://ori.hhs.gov/droplets

Publishing Ethics Resource Kit (PERK)

www.elsevier.com/publishingethicskit

- **Step-by-step advice on how to handle ethics cases**

- **Policies, real-life case studies, flow-charts & decision-trees**

- **Form letters for various scenarios, approved by Legal**

- **Detailed Q&A for more nuanced scenarios**

- **Currently being streamlined & revised**

What to do if you suspect ghost, guest or gift authorship
(see also flowcharts on Changes in authorship, as such requests may indicate the presence
of a ghost or gift author)

Review acknowledgement section and authorship declaration (if supplied)

and/or*

Send copy of journal's authorship policy** to corresponding author and request statement that all qualify and no authors have been omitted (if not obtained previously)

and/or*

Request information (or further details) of individuals' contributions***

Authorship role missing (e.g. contributor list does not include anybody who analysed data or prepared first draft)

Listed author does not meet authorship criteria

Satisfactory explanation of author list

Doubts remain/need more information

C|O|P|E COMMITTEE ON PUBLICATION ETHICS

- **Started in 1997 as "self-help" group of medical editors (Lancet, BMJ)**
- **All Elsevier journals are members of COPE**
- **Website with searchable database of 300+ sample cases**
- **"Ask COPE anything" sessions where editors can seek advice on tricky cases**
- **Guidelines, eg "Sharing of Information among Editors"**
- **Members only e-learning modules http://publicationethics.org/resources/elearning**

Sanctions proportionate to the violation

- **Rejection of submission**

- **Notification of author's institute**

- **Notification of funding body**

- **Corrigendum (honest mistakes, author in full agreement)**

- **Editor's note/expression of concern**

- **All retractions & removals are reviewed by Retraction Committee within Elsevier**

- **Retraction for serious honest error or fraud**

- **Removal only where article is defamatory or could endanger life**

- **Temporary banning of author: keep for very serious cases**

Guidance for Editors on corrections to the record, PERK

Predatory Journals

Research Impact Metrics| Ethics| Predatory Journals| New Initiatives

Predatory Journals: What is it?

"Content published in journals whose publishers exploit the author-pays model for their own profit. Typically, these publishers have a low article acceptance threshold, with a false-front or non-existent peer review process, affecting content providers across the globe."

(Stratford, 2012, p. A1-A8 and Beall n.d.)

Predatory Journals: How and Since when?

2008: Richard Poynder & Gunther Eysenbach

2009: Beall in Charleston Advisor

2010: *Nature*, and more Beall

2012: The Big Bang

2013: *Science* sting operation

2016: Enter, U.S. Government

The Whistleblower

Who exactly is Jeffrey Beall?

- Academic librarian/professor
- Published author in the searching and metadata field
- Author, "Beall's List": www.scholarlyoa.com
- Twitter, @Jeffrey_Beall

Source: NFAIS webinar Sept 2016

Predatory Journals: Rise in Deceptive Publishers

Publishers	
Year	Number of publishers
2011	18
2012	23
2013	225
2014	477
2015	693

Standalone Journals	
Year	Number of journals
2013	126
2014	303
2015	507

Source: Jeffery Beall, Beall's List of Predatory Publishers 2015,
https://scholarlyoa.com/2015/01/02/bealls-list-of-predatory-publishers-2015/

Predatory Journals: Identifying the Wolf in Sheep's Clothing

Predatory Journals: Evaluation - Reputation is key

Indication of a good journal:

- Member of ethical bodies such as COPE (Committee on Publication Ethics)
- Peer Review
- Editorial advisory board
- Online submission system
- Comes from reputable publishers or societies
- Has ISI/Scopus/regional indexation
- Has digital preservation such as Portico
- Publishes reputable authors

Be careful when:

- Publishers promise an almost immediate acceptance of manuscripts for a fee; with no, poor or fake peer review
- Websites and journal titles look remarkably similar to well known journal brands
- Many of these predatory publishers name themselves "Institutes," "Associations," or "Centers"
- The journals are often mega-journals, frequently lacking recent/past content
- The publishers spam authors via large email campaign; often no match with subject field

Remember to be careful as "A paper can only be published once"

New Initiatives

New article types

Peer review initiatives

Insights for researchers

ScienceDirect API services

Research Impact Metrics| Ethics| Predatory Journals| New Initiatives

New article types: research elements

Reproducibility

MethodsX is a broad (all experimental disciplines) Open Access journal, publishing method details in the microarticle format.

84% spend most of their research time on validating, tweaking and improving existing methods.

77% indicate that it's important to get credit for the work done in the lab to improve methods.

Data driven

Data in Brief
article type describes open datasets so it can easily found, reproduced, reused and reanalyzed.

Data in Brief provides a way for researchers to easily share and reuse each other's datasets by publishing data.

Results in Physics
- Data and/or a plot plus a description
- Description of a new method or instrumentation
- Negative results
- Concept or design study

Short results

results in PHYSICS
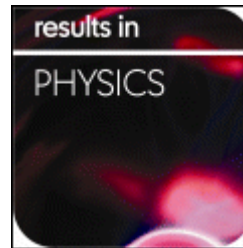
Analyse & interpret

SoftwareX
stresses the importance of the software developers who are, in part, responsible for the impact of software

SoftwareX aims to acknowledge the impact of software on today's research practice, and on new scientific discoveries in almost all research domains.

https://www.youtube.com/watch?v=l1cWoHKCBak

New article types: Virtual Journal *Atlas*

Recognizes the impact of scientific, technical and medical research on people's lives around the world

Articles chosen by external advisory board

- shortlist from Elsevier's 1800+ journals
- Board members from NGOs across the world

Winning articles summarized in a lay summary by a scientific journalist and hosted on Atlas website

Author receive the Atlas award and have their article free to access on ScienceDirect

Atlas
Research for a better world

Read the award winning stories

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Peer review initiatives: The Challenge

Reviewers do not feel recognized

Reviewer Recognition Program

"it is good to be recognized for what amounts to a contribution to the academy and the often unheralded role of review. A role which is 'stolen' from time when we often should be with family or friends."

Peer review initiatives: Objective of Reviewer Recognition Program
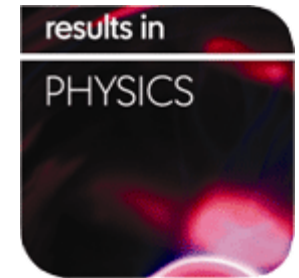
Make peer review a measurable research output

➢ **Reviewer Recognition Platform**

➢ **Peer Review reports as Articles on Science Direct**

Peer review initiatives: examples of existing pilots

*To **improve** peer review **speed** and to **innovate** the peer review process*

- Scientific Screening (with managing editors/PS1 – 5 titles)

- Vertical Journal cascade (e.g. Cascading/Results in)

- Horizontal Journal cascade (Food Sciences)

- Reviewer Mentorship Program (LS)

- NeuroScience Peer Review Consortium (LS)

- Rejected Paper Analysis

- Open Peer Commentary Format (One title, Physics)

- Reviewer reports as articles on ScienceDirect

The benefits of ScienceDirect API services for institutional repositories

ScienceDirect — Embed final article in your IR

Increased discoverability of full body of authors' articles — ScienceDirect Scopus

Automatic ingestion metadata, abstracts and embargoes of articles — ScienceDirect Scopus

Maximize the value of library ScienceDirect subscription — ScienceDirect

Provide users with the best available version — ScienceDirect

Measure readership statistics of articles — ScienceDirect Scopus

Comply easily with funding body and publisher policies — ScienceDirect

For more information on the use case visit:
https://www.elsevier.com/solutions/sciencedirect/support/institutional-repository

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Four (4) ScienceDirect APIs to enhance Institutional Repositories

ScienceDirect API	How this program will enhance your IR
1. Search API*	Retrieve metadata and abstracts of articles of your affiliated authors published with Elsevier Journals and create links to article on ScienceDirect or embed final version in your IR
2. Entitlements API**	Indicate to your IR users to the best available version for them: 1. the open access full text article 2. entitled users to the final version on ScienceDirect 3. an accepted manuscript hosted on your IR
3. Hosting permissions API (optional)	Retrieve embargo end dates on the article level to make hosted accepted manuscripts available externally in line with Elseviers' hosting policy
4. Article retrieval API (optional)	Embed the final article in your institutional repository, so users do not leave your IR to find the final version.

Notes:
*Scopus customers can benefit from the IR program in combination with their Scopus metadata
**The ScienceDirect Entitlements API needs to be implemented, to link entitled users to the final version on ScienceDirect or embedded on the IR, as a minimum part of the program.

More information our developers portal:
http://dev.elsevier.com/tecdoc_sd_ir_integration.html

Interested to participate? These are the requirements and next steps:

Prerequisites

- Your institution does not have to subscribe to ScienceDirect or any other Elsevier service to participate in the SD API program;

- There is no cost involved for the institution.

Next steps

1. Register your interest on our webpage: https://www.elsevier.com/solutions/sciencedirect/support/institutional-repository

2. Register for an API key and accept the terms and conditions https://dev.elsevier.com/user/login

3. Develop software in line with the developers instructions that can be found on our developers portal http://dev.elsevier.com/tecdoc_sd_ir_integration.html.

THANK YOU!

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