Facilitate Open Science Training for European Research

Metrics

https://www.flickr.com/photos/lwr/32563690

FOSTER

Quiz - What's your field of expertise?

- a) Humanities
- b) Social Sciences
- c) Science
- d) still thinking…

FOSTER

What tools are available to us to measure the quality of a paper?

Established Metrics:

1) Impact factor
2) Citation Analysis
3) Hirsh Index

Emerging Metrics

1) Article Level Metrics (ALMs) /Altmetrics

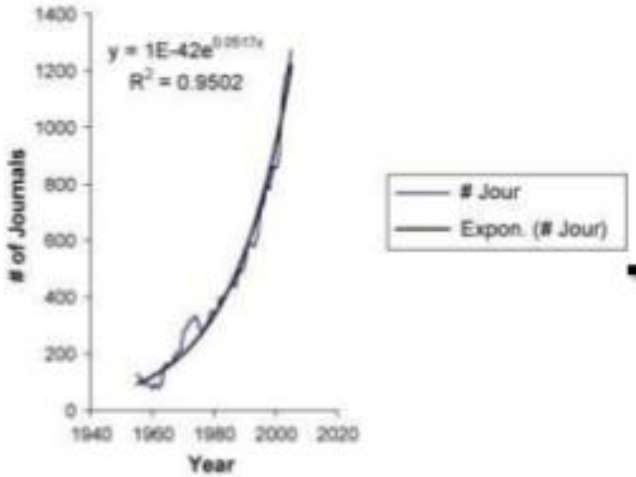
FOSTER

Research Landscape

Books are the main communication channel for scientists

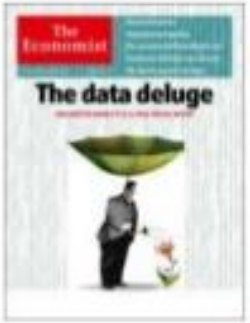
1665

Creation of the two first scientific journals



Exponencial increment of scientific journals

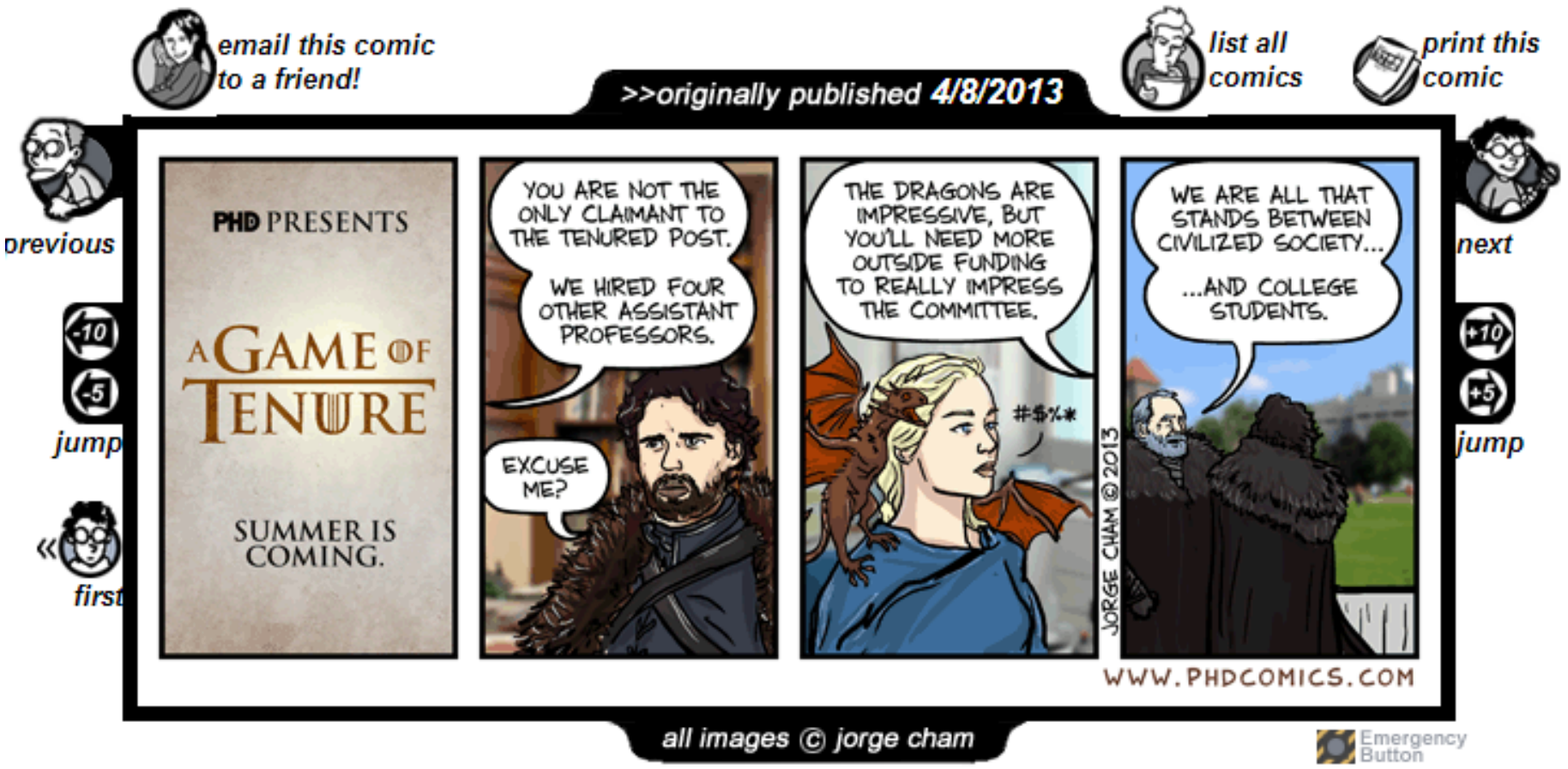
1950



2013

FOSTER

Research Impact



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Citation Analysis

- Scholarly Communication (provide peer recognition)
- Scientific Evaluation
- LIVE: Scopus / Web of Science

www.flickr.com/photos/dan4th/5133979718

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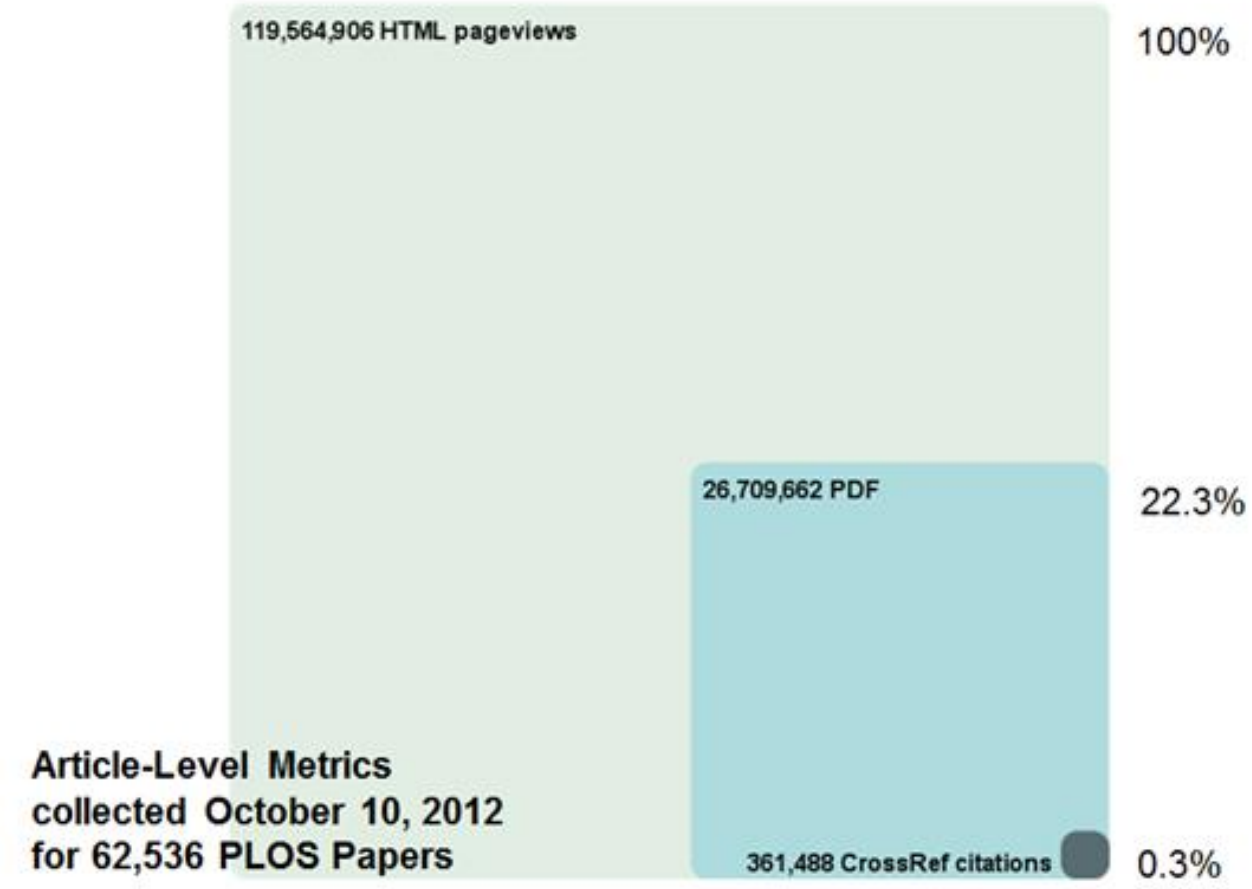
Quiz - Citation Analysis

Can you estimate how many papers in academic journals are never cited?

- 47%
- 65%
- 90%

FOSTER

PLoS example:



Source: Cave 2012

FOSTER

Citation Analysis (Reject errors)

September 29, 1955

Dr. Solomon A. Berson
Radioisotope Service
Veterans Administration Hospital
130 West Kingsbridge Road
Bronx 63, New York

Dear Dr. Berson:

I regret that the revision of your paper entitled "Insulin-I^{131} Metabolism in Human Subjects: Demonstration of Insulin Transporting Antibody in the Circulation of Insulin Treated Subjects" is not acceptable for publication in THE JOURNAL OF CLINICAL INVESTIGATION. - - - - - - - - - - - - - -

- - - - - - - - - - - - - - - - - - The second major criticism relates to the dogmatic conclusions set forth which are not warranted by the data. The experts in this field have been particularly emphatic in rejecting your positive statement that the "conclusion that the globulin responsible for insulin binding is an acquired antibody appears to be inescapable". They believe that you have not demonstrated an antigen-antibody reaction on the basis of adequate criteria, nor that you have definitely proved that a globulin is responsible for insulin binding, nor that insulin is an antigen. The data you present are indeed suggestive but any more positive cleaim seems unjustifiable at present.

- -

Sincerely,

Stanley E. Bradley

Stanley E. Bradley, M.D.
Editor-in-Chief

FOSTER

Citation Analysis (Accept errors)

Lancet formally retracts Wakesfield paper Grant Jacobs Feb 03

10 Comments

0

Heading the home page of medical journal *The Lancet* is an announcement of the formal retraction of the Wakefield paper that in part sparked the MMR vaccination scare in the UK and elsewhere. (I write 'in part' as other factors, such as Wakesfield's public addresses and uncritical media coverage have their role in the saga.)

The retraction statement reads:

> Following the judgment of the UK General Medical Council's Fitness to Practise Panel on Jan 28, 2010, it has become clear that several elements of the 19 Wakefield et al are incorrect, contrary to the findings of an earlier investigation. In the claims in the original paper that children were "consecutively referred investigations were "approved" by the local ethics committee have been proven Therefore we fully retract this paper from the published [record.]

RETRACT

Scibling Peter Giffin's article from earlier this week reports on the findings of the UK's Council with respect to Wakesfield's work. I've earlier written about autism and it's p vaccination.

Addendum: Also worth reading for some wider context are any number of articles about a hopes of a "treatment", like this article by Liane Carter in the *New York Times*.

sciblogs.co.nz/code-for-life/2010/02/03/lancet-formally-retracts-wakesfield-paper,

THE LANCET

SCIgen - An Automatic CS Paper Generator

About Generate Examples Talks Code Donations Related People Blog

About

SCIgen is a program that generates random Computer Science research papers, including graphs, figures, and citations. It uses a hand-written **context-free grammar** to form all elements of the papers. Our aim here is to maximize amusement, rather than coherence.

One useful purpose for such a program is to auto-generate submissions to conferences that you suspect might have very low submission standards. A prime example, which you may recognize from spam in your inbox, is SCI/IIIS and its dozens of co-located conferences (check out the very broad conference description on the **WMSCI 2005** website). There's also a list of **known bogus conferences**. Using SCIgen to generate submissions for conferences like this gives us pleasure to no end. In fact, one of our papers was accepted to SCI 2005! See **Examples** for more details.

We went to WMSCI 2005. Check out the **talks and video**. You can find more details in our **blog**.

Generate a Random Paper

Want to generate a random CS paper of your own? Type in some optional author names below, and click "Generate".

Author 1:
Author 2:
Author 3:
Author 4:
Author 5:
Generate Reset

SCIgen currently supports Latin-1 characters, but not the full Unicode character set.

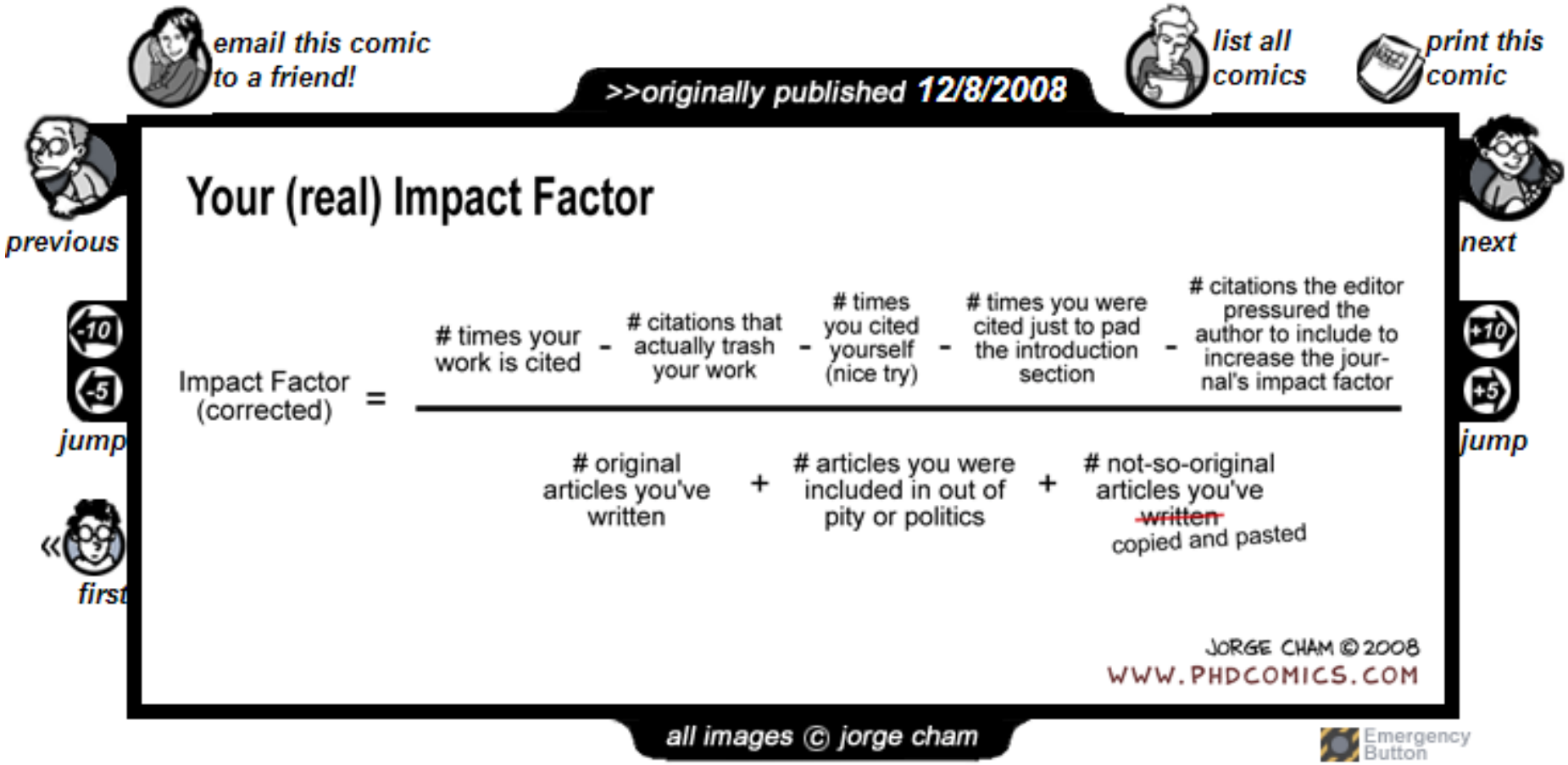
Examples

Here are two papers we submitted to **WMSCI 2005**:

- **Rooter: A Methodology for the Typical Unification of Access Points and Redundancy** (**PS**, **PDF**)
  Jeremy Stribling, Daniel Aguayo and Maxwell Krohn

FOSTER

Journal Impact Factor



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Journal Citation Reports®

WELCOME | HELP | RETURN TO LIST | PREVIOUS JOURNAL | NEXT JOURNAL

2013 JCR Science Edition

Journal: TRENDS IN MOLECULAR MEDICINE

Mark	Journal Title	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Citable Items	Cited Half-life
☐	TRENDS MOL MED	1471-4914	6659	10.110	10.292	1.527	74	5.6

Cited Journal | Citing Journal | Source Data | Journal Self Cites

CITED JOURNAL DATA | CITING JOURNAL DATA | IMPACT FACTOR TREND | RELATED JOURNALS

Journal Information

Full Journal Title: TRENDS IN MOLECULAR MEDICINE
ISO Abbrev. Title: Trends Mol. Med
JCR Abbrev. Title: TRENDS MOL MED
ISSN: 1471-4914
Issues/Year: 12
Language: ENGLISH
Journal Country/Territory: ENGLAND
Publisher: ELSEVIER SCI LTD
Publisher Address: THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND
Subject Categories: BIOCHEMISTRY & MOLECULAR

Eigenfactor® M
Eigenfactor® S
0.02090
Article Influen
Score
3.718

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2013 JCR Science Edition

Journal: AMERICAN JOURNAL OF BIOETHICS

Mark	Journal Title	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Citable Items	Cited Half-life	Citing Half-life
☐	AM J BIOETHICS	1526-5161	1450	2.452	3.194	1.694	193	4.2	5.3

Cited Journal | Citing Journal | Source Data | Journal Self Cites

CITED JOURNAL DATA | CITING JOURNAL DATA | IMPACT FACTOR TREND | RELATED JOURNALS

Journal Information

Full Journal Title: AMERICAN JOURNAL OF BIOETHICS
ISO Abbrev. Title: Am. J. Bioeth.
JCR Abbrev. Title: AM J BIOETHICS
ISSN: 1526-5161
Issues/Year: 12
Language: ENGLISH
Journal Country/Territory: UNITED STATES

Eigenfactor® Metrics
Eigenfactor® Score
0.00397
Article Influence®
Score
1.212

FOSTER

Journal Impact Factor - Subject Categories

Molecular Biology

Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data					
			Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life
1	CELL	0092-8674	191226	33.116	35.020	6.750	432	8.4
2	NAT MED	1078-8956	60002	28.054	26.501	5.817	175	7.8
3	ANNU REV BIOCHEM	0066-4154	20070	26.534	32.970	3.250	28	>10.0
4	MOL PSYCHIATR	1359-4184	13902	15.147	14.196	3.500	132	5.4
5	MOL CELL	1097-2765	52033	14.464	15.324	3.819	309	6.5
6	MOL BIOL EVOL	0737-4038	34971	14.308	10.494	1.824	238	6.6
7	MOL SYST BIOL	1744-4292	7195	14.099	12.292	2.405	74	4.1
8	GENOME RES	1088-9051	30995	13.852	14.927	2.938	192	5.7
9	TRENDS BIOCHEM SCI	0968-0004	15910	13.522	12.197	1.926	68	>10.0
10	NAT CHEM BIOL	1552-4450	12495	13.217	15.059	3.448	116	4.4
11	PROG LIPID RES	0163-7827	4382	12.963	12.336	1.659	41	7.8
12	MOL INTERV	1534-0384	1073	12.143	7.360		0	7.7
13	PLOS BIOL	1545-7885	24324	11.771	12.807	1.706	201	5.9
14	NAT STRUCT MOL BIOL	1545-9993	25691	11.633	12.338	3.989	182	6.2
15	EMBO J	0261-4189	76176	10.748	10.168	2.951	225	>10.0
16	NAT PROD REP	0265-0568	7158	10.715	10.353	3.719	57	6.1
17	MOL ASPECTS MED	0098-2997	3486	10.302	11.214	2.422	83	5.4
18	TRENDS MOL MED	1471-4914	6659	10.110	10.292	1.527	74	5.6

History and Philosophy of Science

Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data				
			Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles
1	AM J BIOETHICS	1526-5161	1450	2.452	3.194	1.694	193
2	SOC STUD SCI	0306-3127	1971	2.151	2.466	0.810	42
3	SCI ENG ETHICS	1353-3452	650	1.516	1.377	0.209	91
4	AGR HUM VALUES	0889-048X	970	1.359	1.926	0.326	43
5	J AGR ENVIRON ETHIC	1187-7863	586	1.250	1.477	0.117	60
6	BRIT J PHILOS SCI	0007-0882	995	1.017	1.519	0.143	35
7	BIOL PHILOS	0169-3867	821	0.907	1.090	0.358	53
8	STUD HIST PHILOS M P	1355-2198	355	0.902	0.792	0.170	47
9	OSIRIS	0369-7827	283	0.875	0.621	0.200	15
10	ISIS	0021-1753	1000	0.818	1.297	0.030	33
11	EUR PHYS J H	2102-6459	70	0.778	1.143	0.208	24
12	SCI EDUC-NETHERLANDS	0926-7220	680	0.718		0.046	108
13	HYLE	1433-5158	91	0.700	0.727	0.429	7
14	J HIST MED ALL SCI	0022-5045	336	0.686	0.775	0.235	17
15	PHILOS SCI	0031-8248	2142	0.667	1.061	0.156	77
16	SYNTHESE	0039-7857	1963	0.637	0.815	0.083	217
17	J HIST BIOL	0022-5010	404	0.622	0.757	0.095	21
18	STUD HIST PHILOS SCI	0039-3681	380	0.564	0.508	0.139	72

Quiz -what is the H-Index (Hirsh Index)?

- a) the equivalent N such that you have N papers each of which have at least N citations
- b) the largest N such that you have N papers each of which have at least N citations
- C) the largest N such that you N papers each of which have more than N citations

FOSTER

H-Index

- Bob is a senior researcher in Microscopy. He's published prolifically over his career: 127 papers, 98 of which never got cited, 19 no more than 5 times, while the remaining 8 got cited more than 8 times

  → he's h-index is of **8**

- Early career researcher Colin (also in the field of Microscopy) has published two papers only but they were both outstanding and attracted many citations (72 and 45 respectively over the last 12 months)
- -> he's h-index is of **2**

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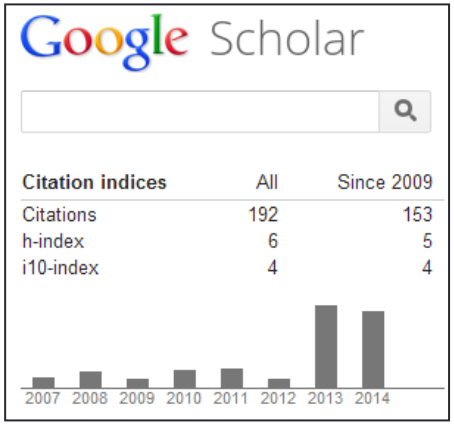
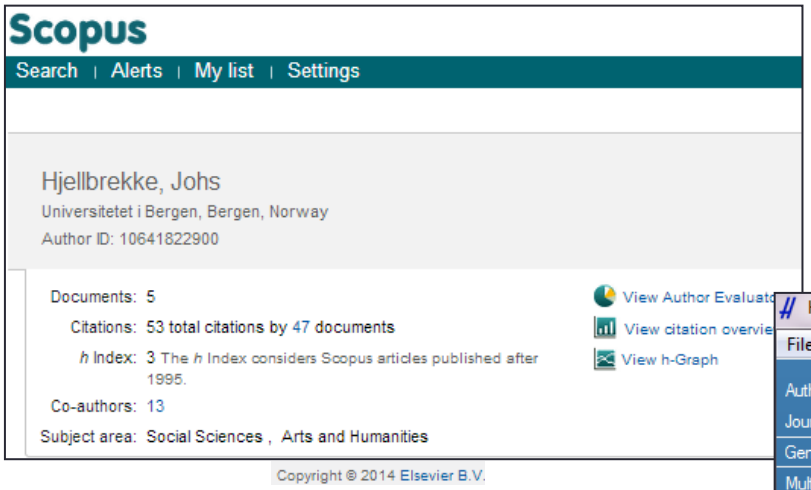
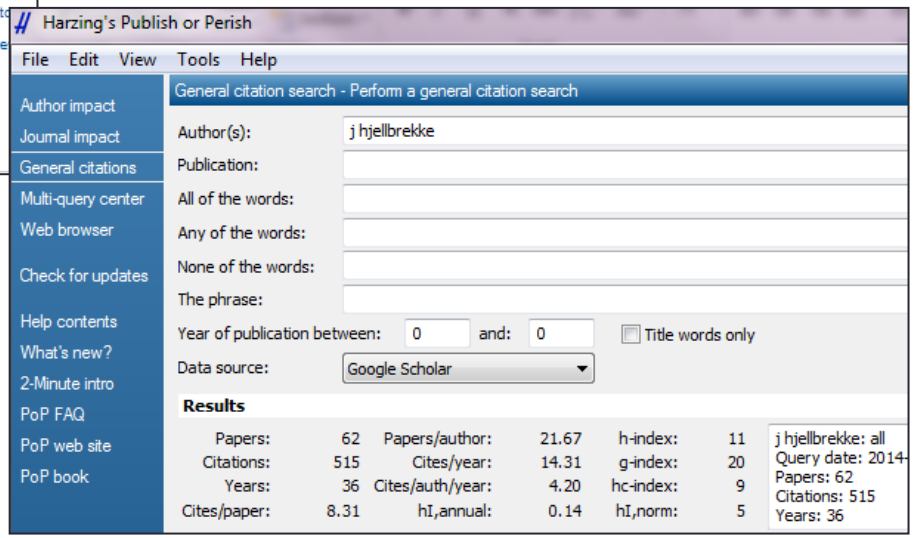
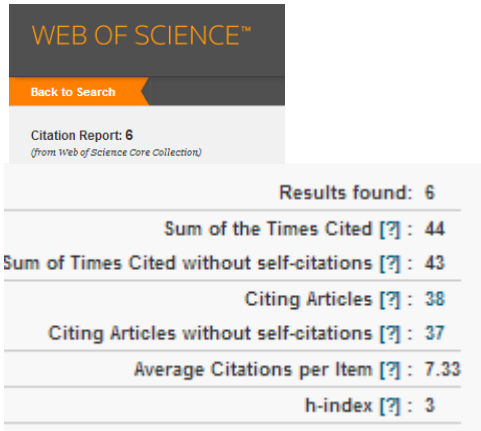
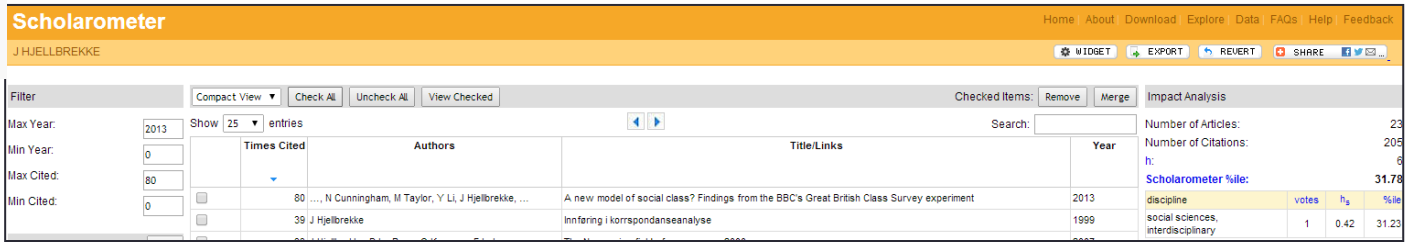
Tools to retrieve h-index











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Alternatives to the h-index:

- G-index
- individual h-index
- universal h-index
- H10 index
- M-index

www.flickr.com/photos/souvenirsofcanada/14257320869

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ORCID (Open Researcher and Contributor Identifier)

- How do you distinguish between:

  A. Smith, Anna Smith, and Anna L. Smith

- ORCID is a unique author ID that distinguishes your work online from that of researchers with the same or similar names. It is a tool that allow researchers to link their research works with their names and thus gain full credit for their own work

www.orcid.org

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Google Scholars Citations

Erin C. McKiernan

Follow

Researcher in Medical Sciences, National Institute of Public Health of Mexico

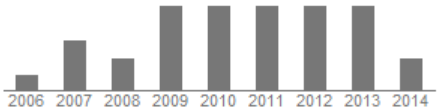
physiology, epidemiology, neuroscience, mathematical modeling

Verified email at insp.mx - Homepage

Title	Cited by	Year
A Brunswikian evolutionary developmental theory of preparedness and plasticity AJ Figueredo, KR Hammond, EC McKiernan Intelligence 34 (2), 211-227	26	2006
Relating ion channel expression, bifurcation structure, and diverse firing patterns in a model of an identified motor neuron MA Herrera-Valdez, EC McKiernan, SD Berger, S Ryglewski, C Duch, ... Journal of computational neuroscience 34 (2), 211-229	7	2013
Mitigating effects of vaccination on influenza outbreaks given constraints in stockpile size and daily administration capacity M Cruz-Aponte, EC McKiernan, MA Herrera-Valdez BMC infectious diseases 11 (1), 207	2	2011
Biophysical modeling of excitability and membrane integration at the single cell and network levels MA Herrera-Valdez, A Smith, M Cruz-Aponte, EC McKiernan BMC Neuroscience 12 (Suppl 1), P218	2	2011
The role of specific voltage-activated and calcium-activated potassium currents in shaping motor neuron firing output during rhythmic motor activity EC McKiernan The University of Arizona.	2	2010
From spinal cord to hippocampus: links between bifurcation structure, ion channel expression, and firing patterns in a variety of neuron types EC McKiernan, MAH Valdez BMC Neuroscience 13 (Suppl 1), P121	1	2012
Temperature dependent transitions in excitability predicted by an electrodiffusion model of membrane potential JR Melendez-Alvarez, EC McKiernan, MAH Valdez	1	2012

Google Scholar

Citation indices	All	Since 2009
Citations	43	35
h-index	2	2
i10-index	1	1



Co-authors View all...

Maytee Cruz-Aponte

Sharon Crook

Marco Arieli Herrera-Valdez, PhD/PhD

Emerging metrics

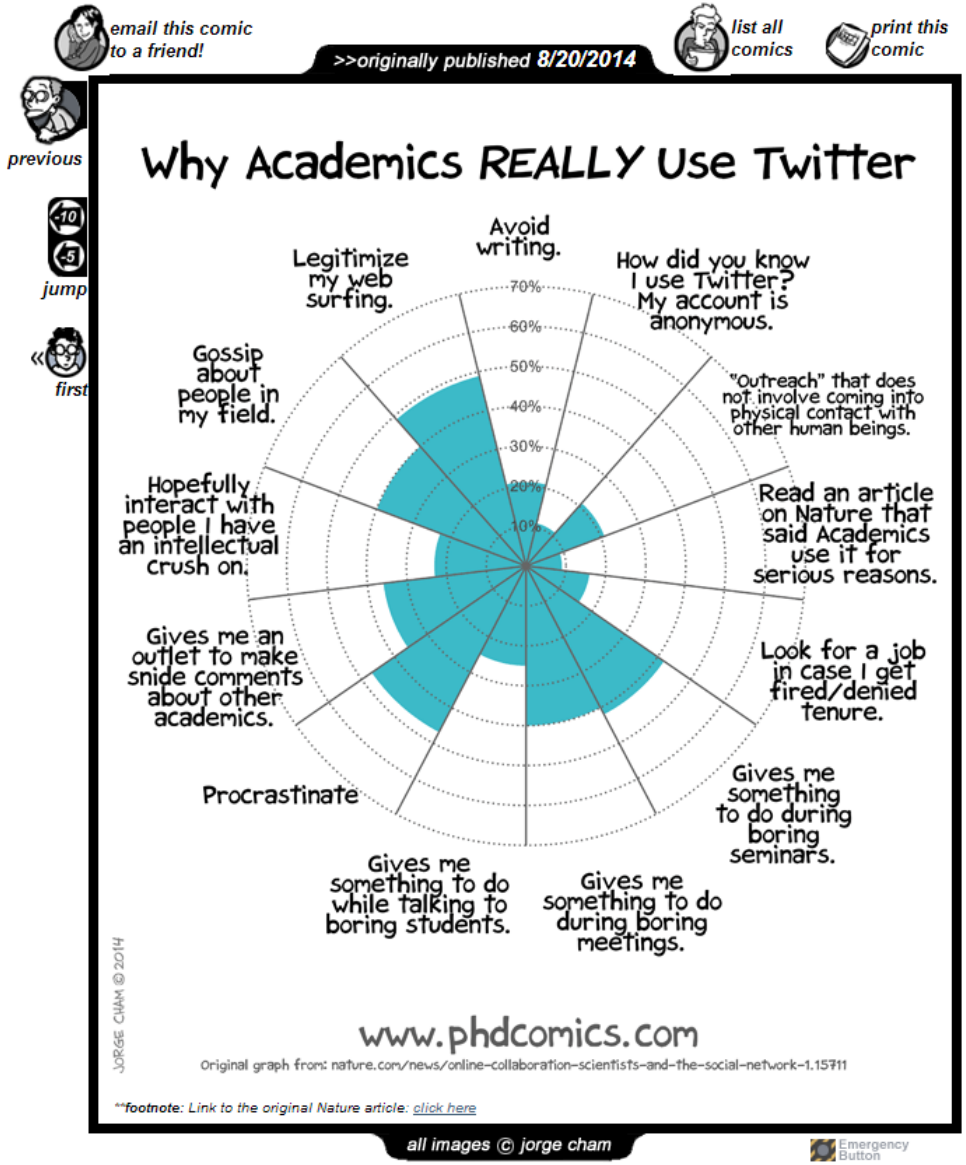
FOSTER

Quiz - what do altmetrics intend to highlight?

a) quality

b) quantity

c) attention



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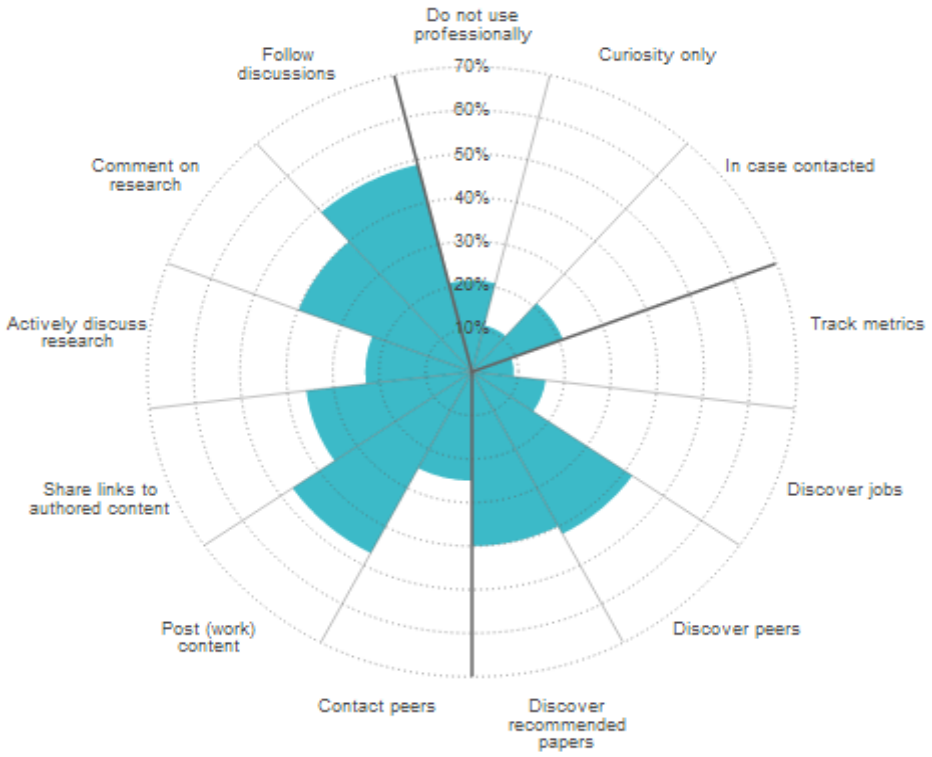
Why academics use social media?

Interactive: Why scholars use social media

In *Nature*'s survey, a subset of scholars who said they 'regularly visited' social media sites were quizzed in detail about their activities.



Twitter (330 regular visitors)
Facebook (340 regular visitors)
LinkedIn (389 regular visitors)
ResearchGate (1,589 regular visitors)
Academia.edu (283 regular visitors)
Mendeley (198 regular visitors)

Voices from the survey

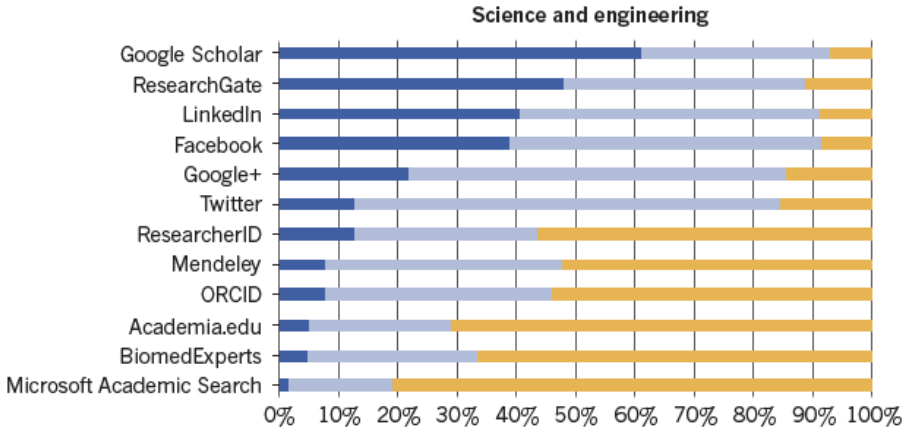
"Good way to interact with journalists and the media."

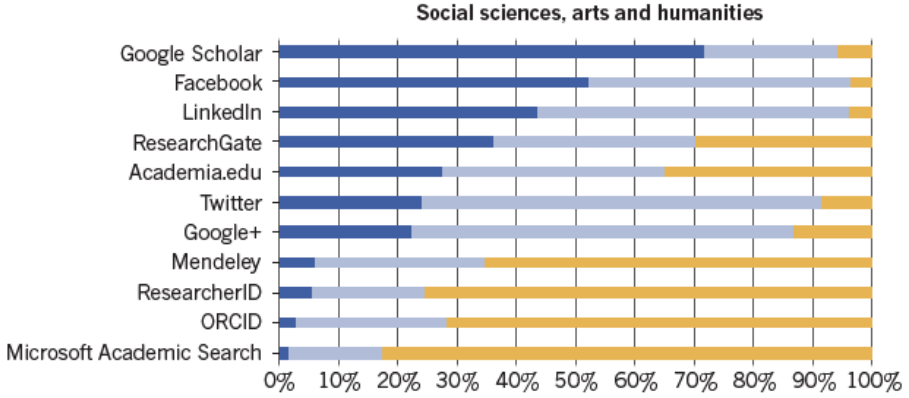
TWITTER USER, AGE 25–34, AUSTRALIA, LECTURER

REMARKABLE REACH

More than 3,000 scientists and engineers told Nature about their awareness of various giant social networks and research-profiling sites. Just under half said that they visit ResearchGate regularly. Another 480 respondents in the humanities, arts and social sciences were less keen on ResearchGate.

- I am aware of this site and visit regularly
- I am aware of this site but do not visit regularly
- I am not aware of this site





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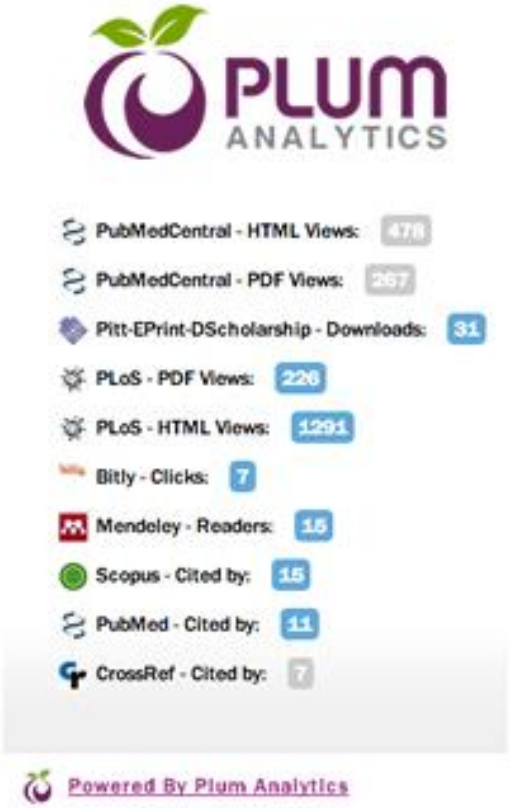
Article Level Metrics Tools



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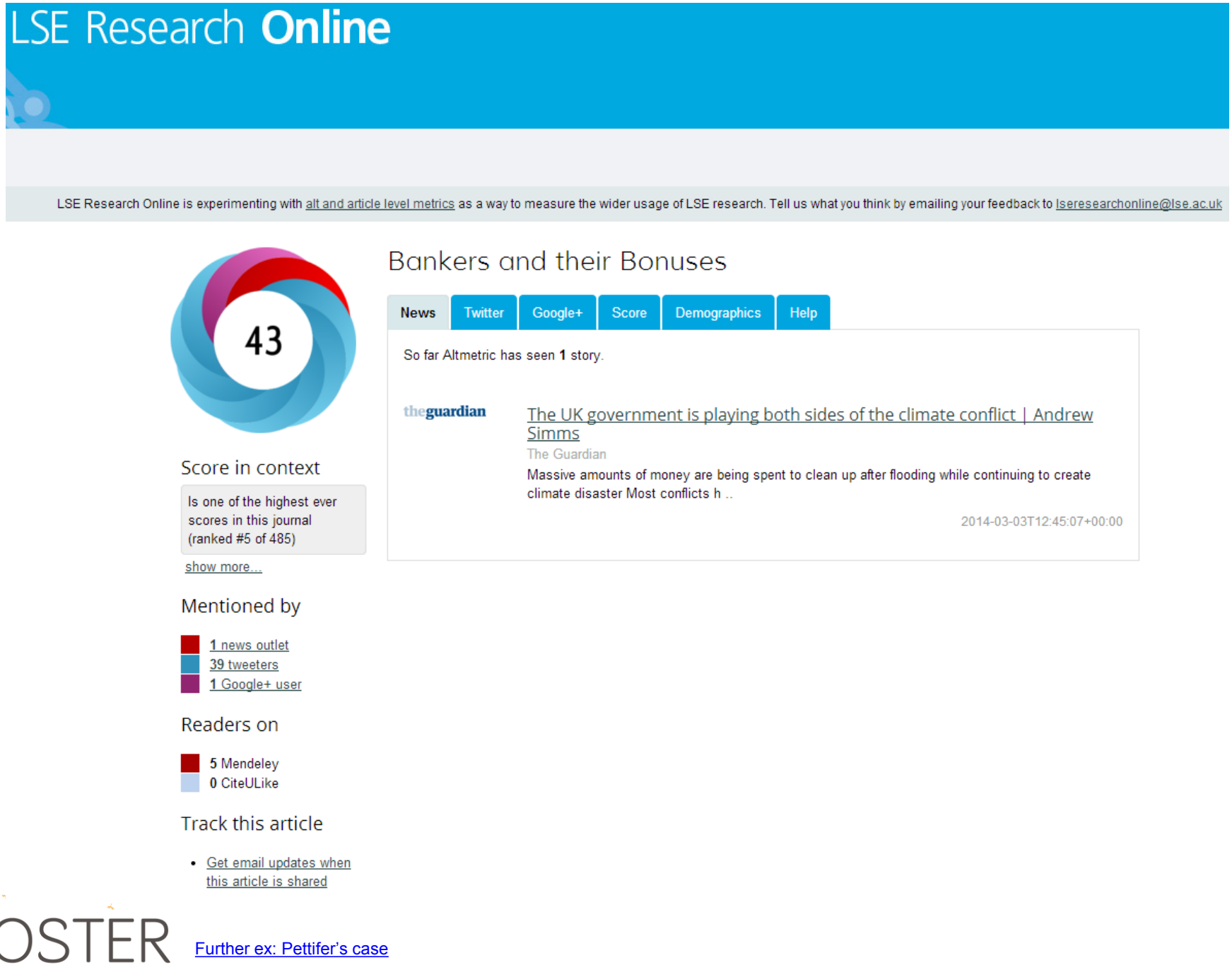

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Further ex: Pettifer's case

Open Access = GREATER IMPACT

Press release archive

***Nature Communications* data shows open access articles have more views and downloads**

30 July 2014

Contact: Amy Bourke
Corporate Communications Manager
Nature Publishing Group/Palgrave Macmillan
T: 020 7843 4603 | M: +44 (0) 7703717212
amy.bourke@palgrave.com

An independent statistical analysis of the articles published in *Nature Communica*
carried out by the Research Information Network (RIN) has found that open acce
articles are viewed three times more often than articles that are only available t
subscribers. RIN also found that OA articles are cited more than subscription art

Can open access publishing be a smart career move?

- 14:14 26 August 2014 by Jenny Blair
- Magazine issue 2983. Subscribe and save
- For similar stories, visit the Careers Topic Guide

It can seem like a magic word is needed to get published in the top academic journals. Is open access a genuine alternative?

Michael Eisen is a professor of genetics at the University of California, Berkeley. He's a Howard Hughes Medical Investigator. He juggles over a aduate students and postdocs. Yet his lab has never published a *Science*, *Nature*, *Cell*, *The Lancet* or the *New England Journal of* . None appear in traditional high-impact genetics journals, either.

I am an early career researcher, and have pledged to make all of my work openly available, forgoing publication in closed access journals like Nature and Science. I have been told by peers and mentors that this is career suicide. But I do not believe it has to be. There are so many ways to be open and be successful in academia. There is even evidence that being open can help your career.

Publishing openly, whether via open access journals or self-archiving, can lead to more citations and more visibility for your work. This is especially important for early career researchers as they try to make a name for themselves. Published studies that make data openly available also tend to receive more citations.

FOSTER

"Open Access has the potential to make scientific communication more efficient and effective, creating benefits for researchers, universities and society in general. Open Access also means that outputs can make a greater impact in the research community and beyond." **Stephen Pinfield, Senior Lecturer, University of Sheffield Information School**

References mentioned today:

Ware, M. 2012 (3rd ed). STM report: An overview of scientific and scholarly journal publishing

LSE Impact Blog, 2014. 3 key measures of academic influence

Curry, Stephen. Reciprocal Space, 2013. Sick of Impact Factor

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Costas,R (et al). CWTS Working Paper Series,2014. Do 'altmetrics' correlate with citations? Extensive comparison of altmetric indicators with citations from a multidisciplinary perspective

Writing for Research

Amsen, Eva. F1000 Research Blog, 2014.What is open peer review

Swan, Alma, 2010. The Open Access citation advantage: Studies and results to date.

FOSTER

THANK YOU FOR YOUR TIME!

QUESTIONS

Nathalie Cornée
LSE Open Access Officer and Information Research Analyst
n.f.cornee@lse.ac.uk (@NathalieCornee)

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