

A horizontal banner image composed of three panels. The left panel shows a car's interior with a digital display. The middle panel shows a large satellite dish. The right panel shows three people (two men and one woman) looking at a laptop screen.

Social Media in Science and Altmetrics

New Ways of Measuring Research Impact

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Agenda

Social media and science

Altmetrics – An overview

Two examples: ImpactStory and Altmetric



A painting of a man with a beard, wearing a blue robe, seated at a desk. He is looking down at a book or document on the desk, which is covered with various items including a blue cloth and some papers. The background features a large window with a grid pattern and a wooden cabinet. The lighting is warm and focused on the man and his work.

1

Background:
Social Media & Science

New media, new chances

- New possibilities of publishing, commenting, and evaluating
 - What resonance do researchers and their articles create?
 - How do researchers connect?
 - How are their articles used?

➡ Research on social media in science?

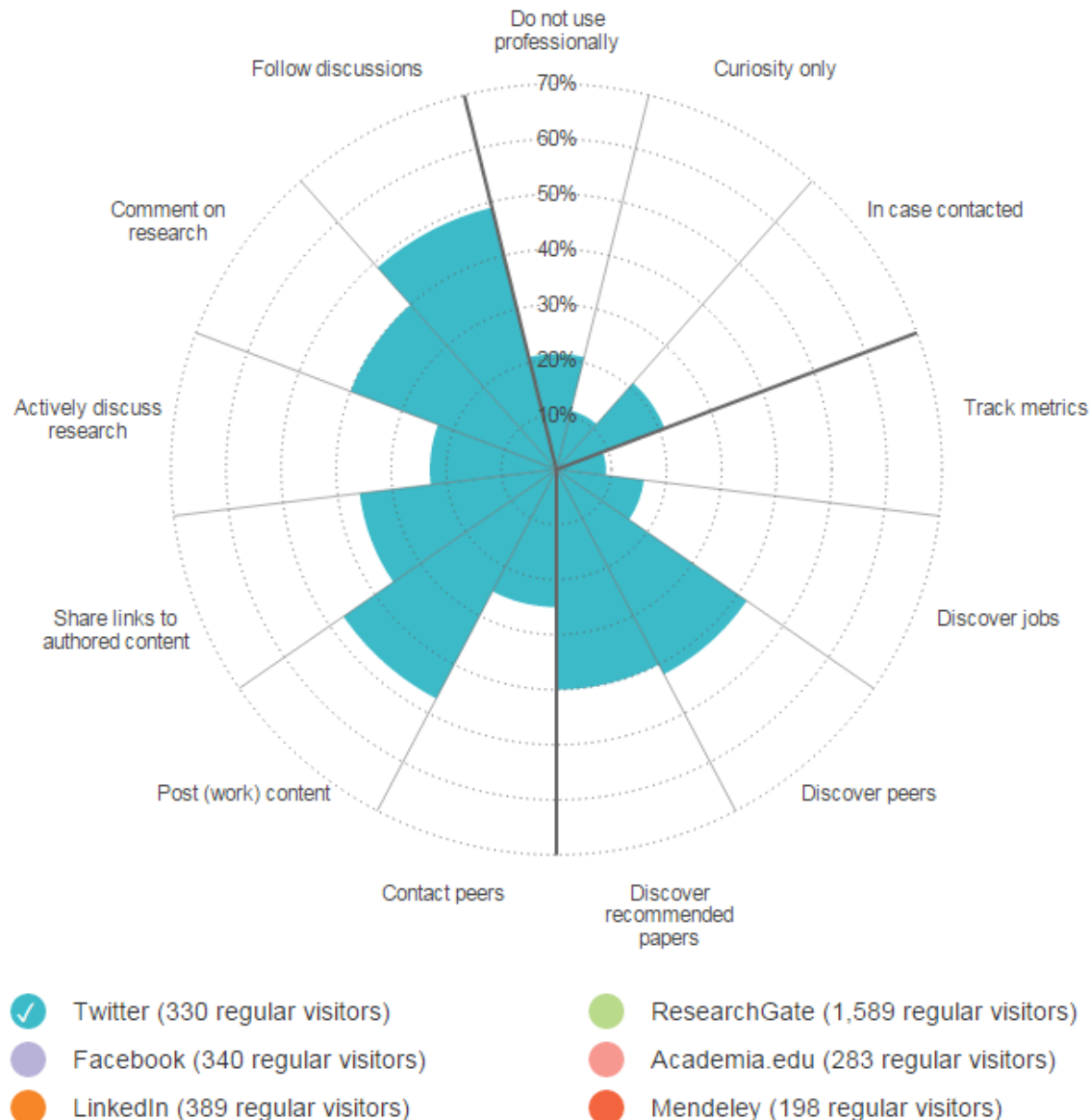


What do we know about social media in science?

- A few studies on general social media use (e.g., Gruzd & Goertzen, 2013; Procter et al. , 2010)
- Some research on academic blogs and Twitter in science
- Few studies about academic SNS
- Active research field «altmetrics»

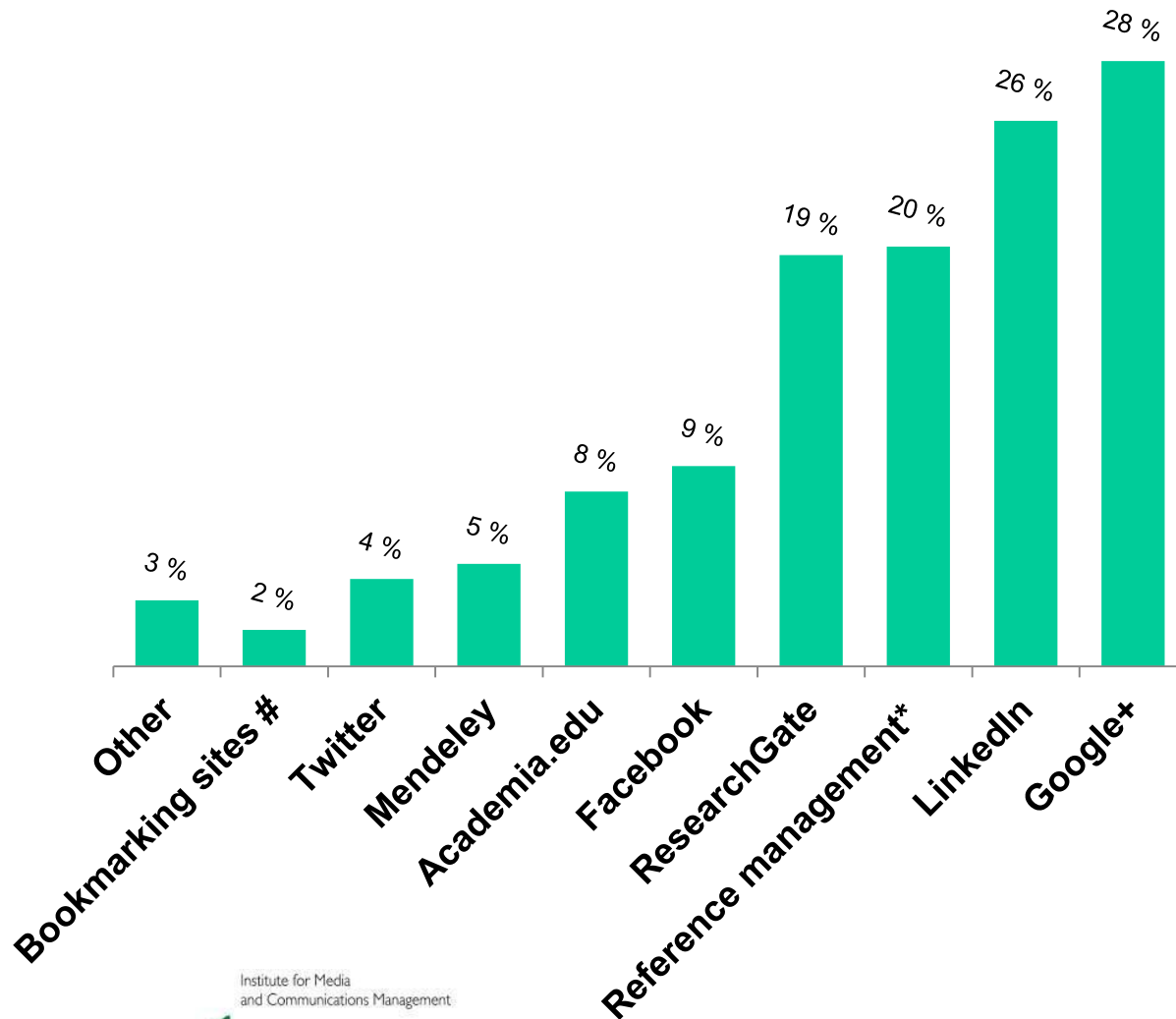


The Nature survey



- **Google Scholar** is most well known and widely used platform
- **ResearchGate** comes second, followed by **LinkedIn**
- **Disciplinary differences**
- **Passive uses** more widespread than active uses and one of the main uses is publishing and promoting own content
- **Twitter** most used for active purposes

Platforms used

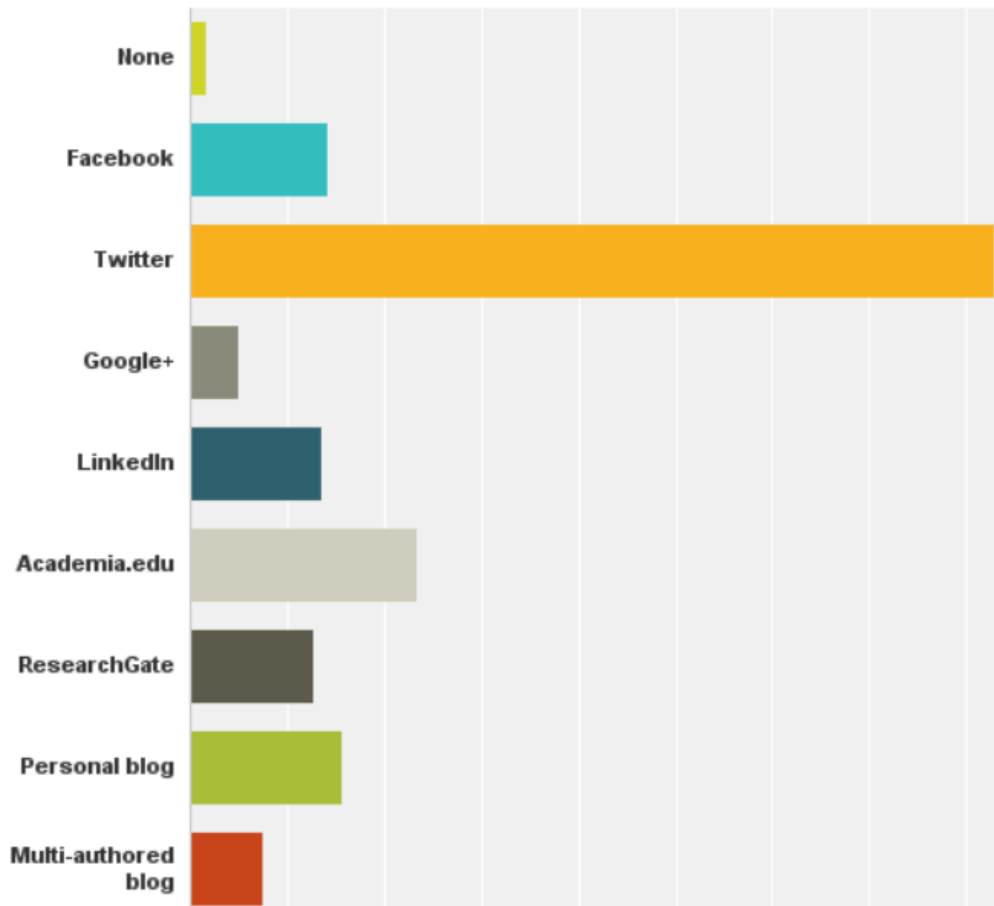


- **70%** of researchers of 3090 respondents use social media in 2013 (2008: 63%)
- **Non-scientific social media** most popular
- **Disciplinary differences:** computer scientists most prone to use social media; medicine, physics and astronomy least so

Platforms found useful

Q2 Which of these social media do you find most useful for your academic work? (More than one box may be ticked.)

Answered: 686 Skipped: 25



- **Twitter** considered as most useful, followed by academia.edu and personal blog
- Problem with **sample bias**: many respondents for that survey recruited via Twitter
- Primarily social scientists and humanities scholars in the sample (where academia.edu is popular)

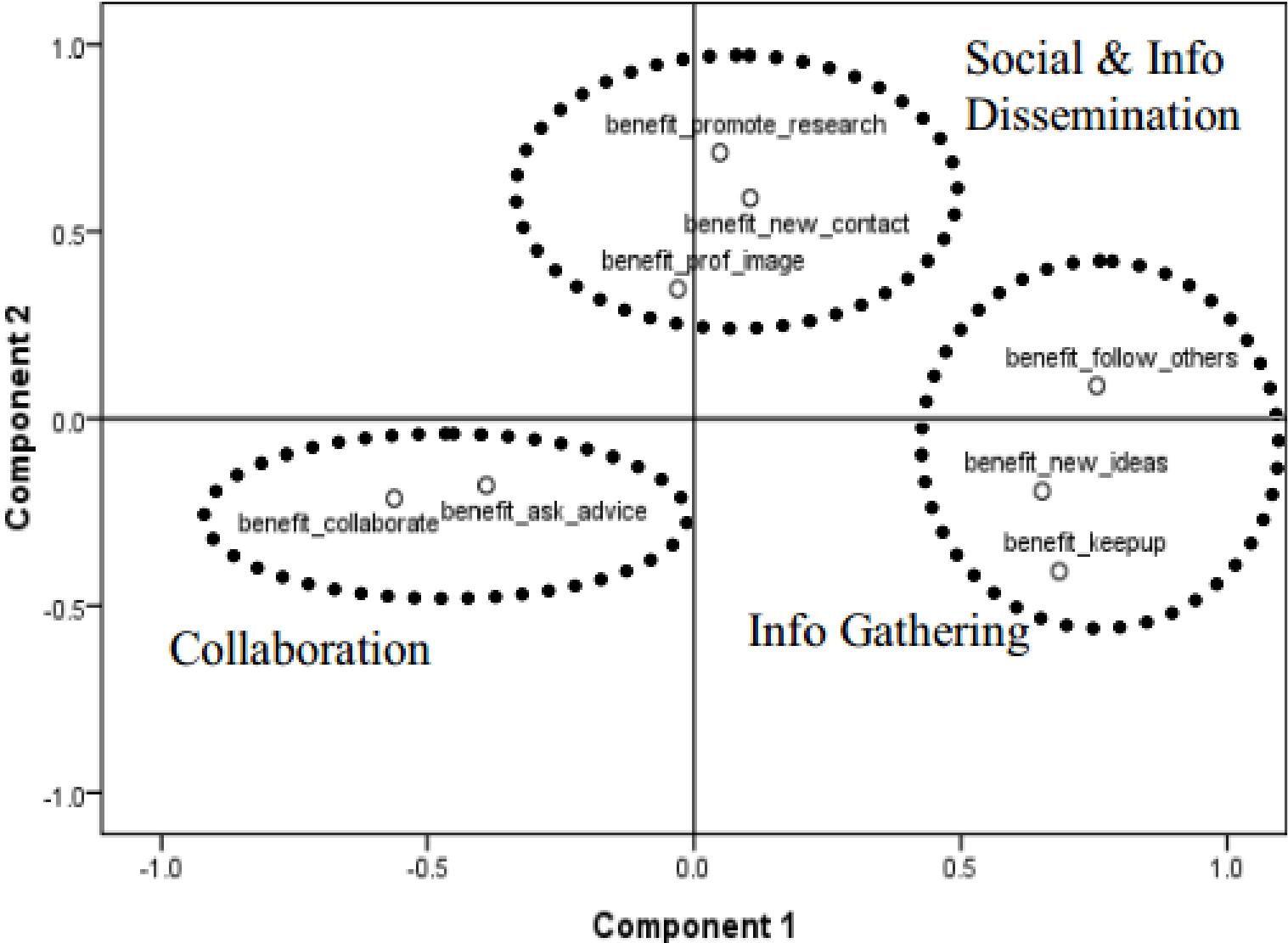
A closer look at disciplines and demographics

	all respondents (%)	frequent users (%)	occasional users (%)	non-users (%)
medicine and veterinary sciences	15	7	17	16
biological sciences	5	3	5	6
physical sciences	16	14	16	15
computer science and mathematics	13	26	15	7
engineering	4	5	4	4
economics and social sciences	29	25	27	32
arts and humanities	18	20	16	20

- 13% frequent users, 45% occasional users, 39% non-users
- Older age groups, more senior positions and males more likely to adopt social media
- **Disciplinary differences:** computer scientists most prone to use social media; biology, medicine and veterinary science least so

“Overall, although most respondents report using ‘generic’ and well-known Web 2.0 tools such as Google Scholar and Wikipedia, the results indicate that use by the UK research community of Web 2.0 in novel forms of scholarly communication is currently rather low.”

Motives for using social media in science



Pros and cons of social media in science

Pros

- Social capital

I use Facebook to keep in touch with friends and profs from graduate school. I have found a rich and wonderful academic network on Twitter.

- Openness and sharing

I find Academia.edu useful for finding and sharing work openly that might not be available otherwise.

- Self-promotion

Twitter is a good way to promote any papers you may have had published

- Teaching, research and support

Cons

- Privacy and boundary blurring

Some caution is required I feel as there is the potential for some academics to disclose too much of their professional and personal lives.

- Risk of jeopardising one's career

- Lack of credibility and quality of content

Frowned upon by more experienced colleagues as frivolous or dangerous.

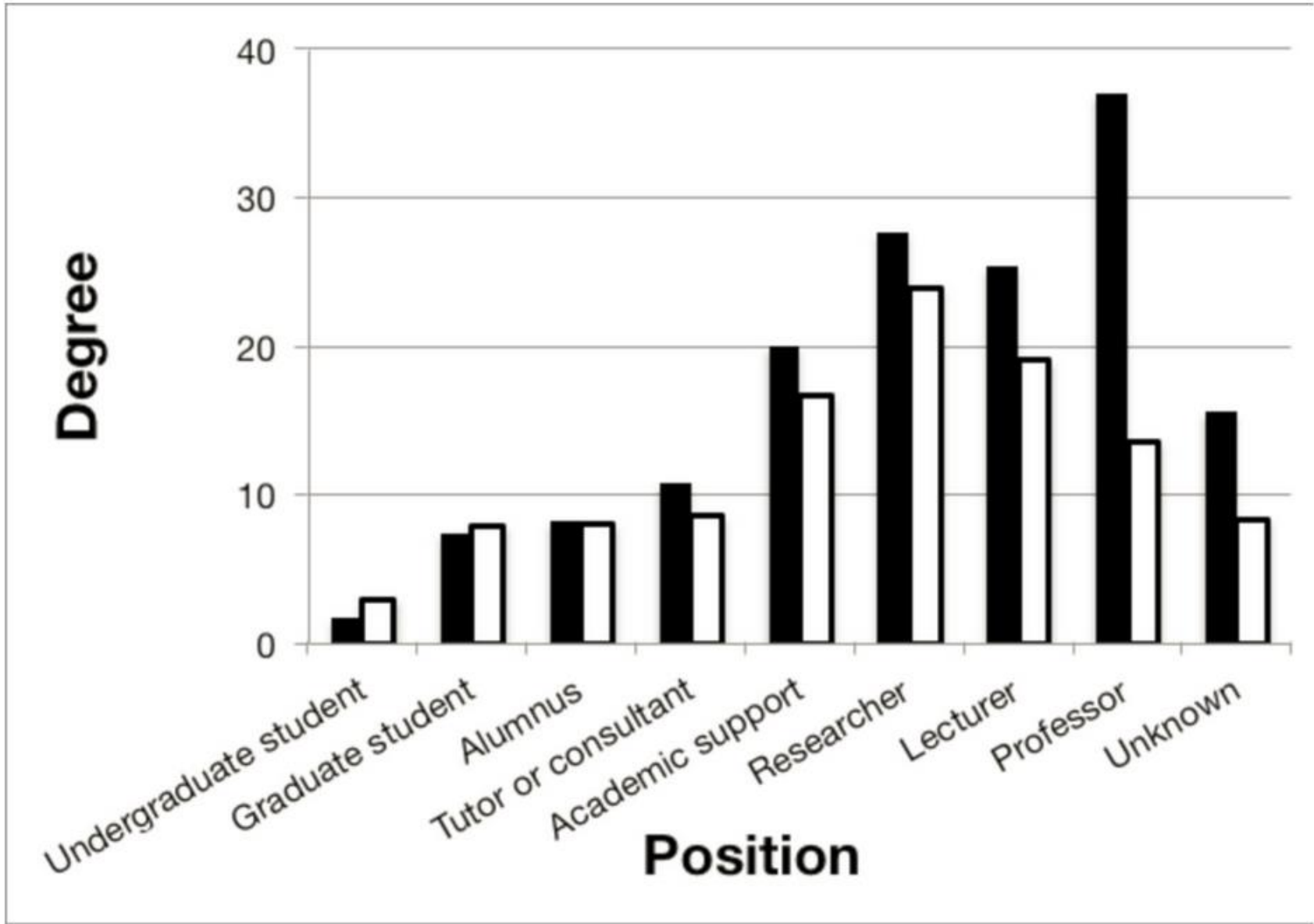
I think it can dumb-down research findings.

- Plagiarism and copyright issues

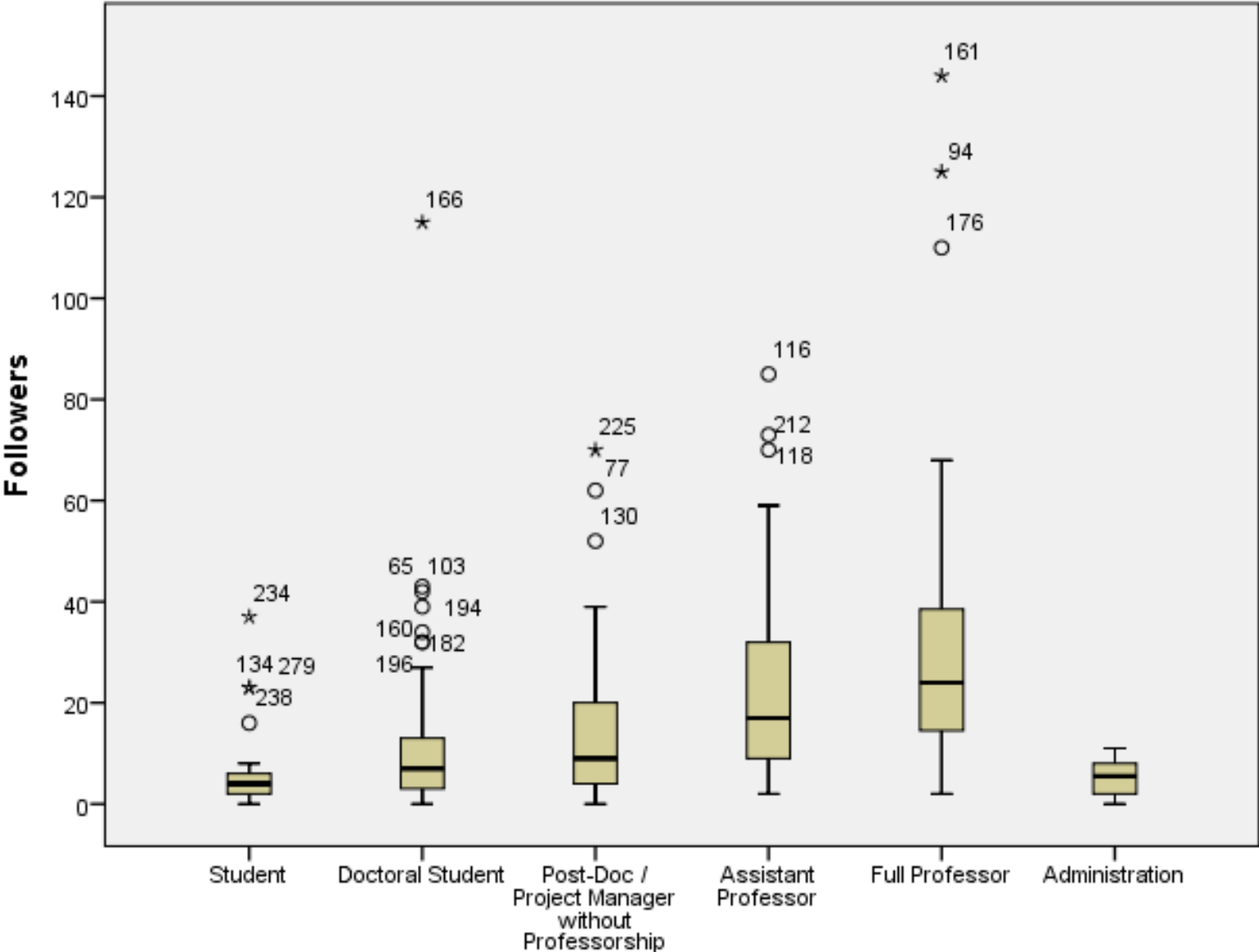
- Time pressure and social media becoming an obligation

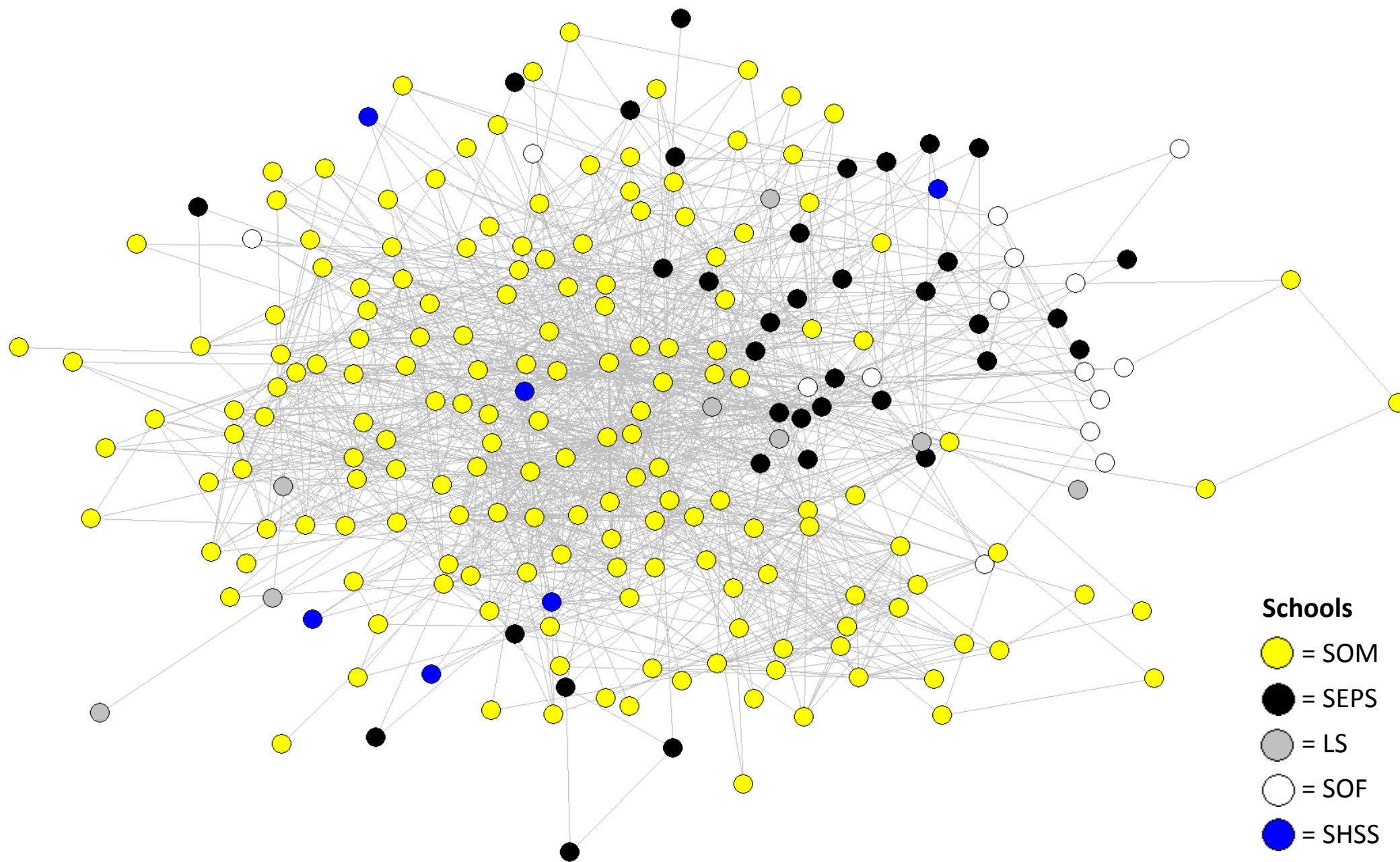
- Becoming a target

Network study about academia.edu



Results match with academia.edu study





Discussion



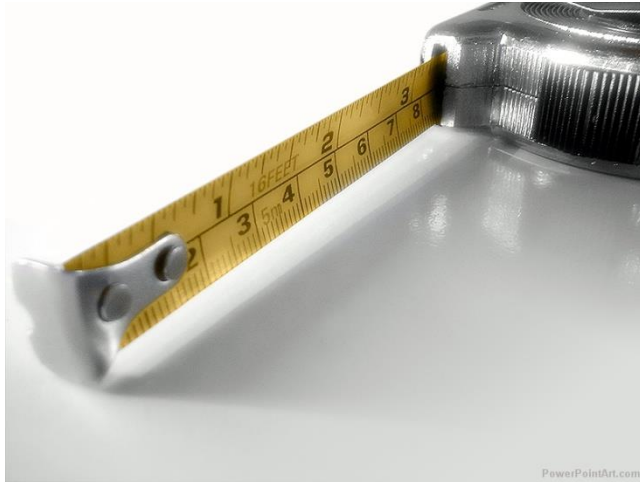
- Do you use social media for your research?
- If yes, why do you find them useful? What do you use them for?
- If no, why not? What are the barriers?
- Which platforms and applications do you find most useful? Why?
- Would you suggest junior researchers to use social media?

The background is a vibrant, abstract composition. On the left, several glowing light bulbs in shades of orange, yellow, and pink are visible, some in sharp focus and others blurred. A large, glowing blue number '10' is prominent in the upper left. The right side features a blurred image of a laptop keyboard and screen, with a greenish-blue tint. Overlaid on this is a semi-transparent dark blue rectangle containing the title text. The overall aesthetic is futuristic and tech-oriented.

2

Altmetrics
An overview

Forms of impact



- **Managerial Impact**
 - Impact on peer group in companies and p. a.
- **Scientific Impact**
 - Impact on scientific community
- **Media Impact**
 - Impact on media and public sphere

Scientific Impact



Usage-based Metrics



Bibliometrics from peer-reviewed journals

Usage-based metrics



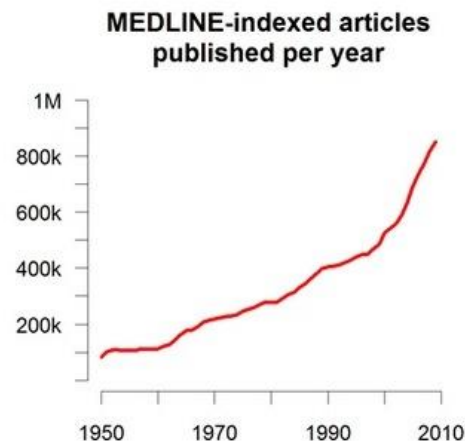
- Publication on the web enables **new metrics**:
 - Webometrics
 - Scientometrics 2.0/Altmetrics
- **Goal:** achieving a more current and differentiated picture of impact
- Making use of social media data

altmetrics: a manifesto

NO ONE CAN READ EVERYTHING. We rely on filters to make sense of the scholarly literature, but the narrow, traditional filters are being swamped. However, the growth of new, online scholarly tools allows us to make new filters; these altmetrics reflect the broad, rapid impact of scholarship in this burgeoning ecosystem. We call for more tools and research based on altmetrics.

As the volume of academic literature explodes, scholars rely on filters to select the most relevant and significant sources from the rest. Unfortunately, scholarship's three main filters for importance are failing:

- Peer-review has served scholarship well, but is beginning to show its age. It is slow, encourages conventionality, and fails to hold reviewers accountable. Moreover, given that most papers are eventually published somewhere, peer-review fails to limit the volume of research.
- Citation counting measures are useful, but not sufficient. Metrics like the h-index are even slower than peer-review: a work's first citation *can take years*. Citation measures are narrow; influential work may remain uncited. These metrics are narrow; they neglect



- Tackle the **disadvantages of bibliometrics** and complementing them
- Using online **reference managers** like *Zotero* and *Mendeley*
- **Non-traditional forms of publication** are increasingly important and should be considered

Current research on altmetrics

- Comparing 11 webometric indicators with WOS citations: correlations found for Twitter, Facebook wall posts, research highlights, blogs, mainstream media and forums; not enough evidence for Google+, LinkedIn, Pinterest, Q&A sites and Reddit (Thelwall et al., 2013)
- **Mendeley readers** a relatively good altmetrics indicator for citations later (Haustein et al., 2014; Mohammadi & Thelwall, 2014)
- Very few studies about **ResearchGate** (e.g., Thelwall & Kousha, 2015)



Discussion



- Are you currently using any altmetrics applications?
- What do you see as the main benefits and threats?
- Do you care about altmetrics for your publications?
- Is there an institutional reward for altmetrics?

A photograph of a paved road with a yellow center line, curving through a dry, hilly landscape. The hills are covered in yellowish-brown grass and some small shrubs. The sky is blue with scattered white clouds. A semi-transparent dark rectangle is overlaid on the bottom right of the image, containing the text.

3

Two examples
ImpactStory & Altmetric

ImpactStory

ImpactStory.

create about follow register log in

BETA
Send us your
feedback!

Tell the full story of your research impact.

ImpactStory aggregates [altmetrics](#): diverse impacts from
your articles, datasets, blog posts, and more.

Make my impact report

or, show me a
sample report

New!

Have you registered for an ORCID ID yet?
Create an ImpactStory report using

ORCID

We track impact
across the Web:

citeulike

crossref

delicious

DRYAD

F1000
FACULTY1000

f

github
SOCIAL CODING

MENDELEY

ORCID

PLOS

PubMed
Central

PubMed

ScienceSeeker

Scopus

slideshare
Present Yourself

twitter

WIKIPEDIA
The Free Encyclopedia

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Altmetric

We make article level metrics easy.



Scientists talk. Let's listen.

Every day, thousands of scholarly papers are being discovered, discussed and shared.

Altmetric tracks what people are saying about papers online on behalf of publishers, authors, libraries and institutions.

Find out more

Highly recommended

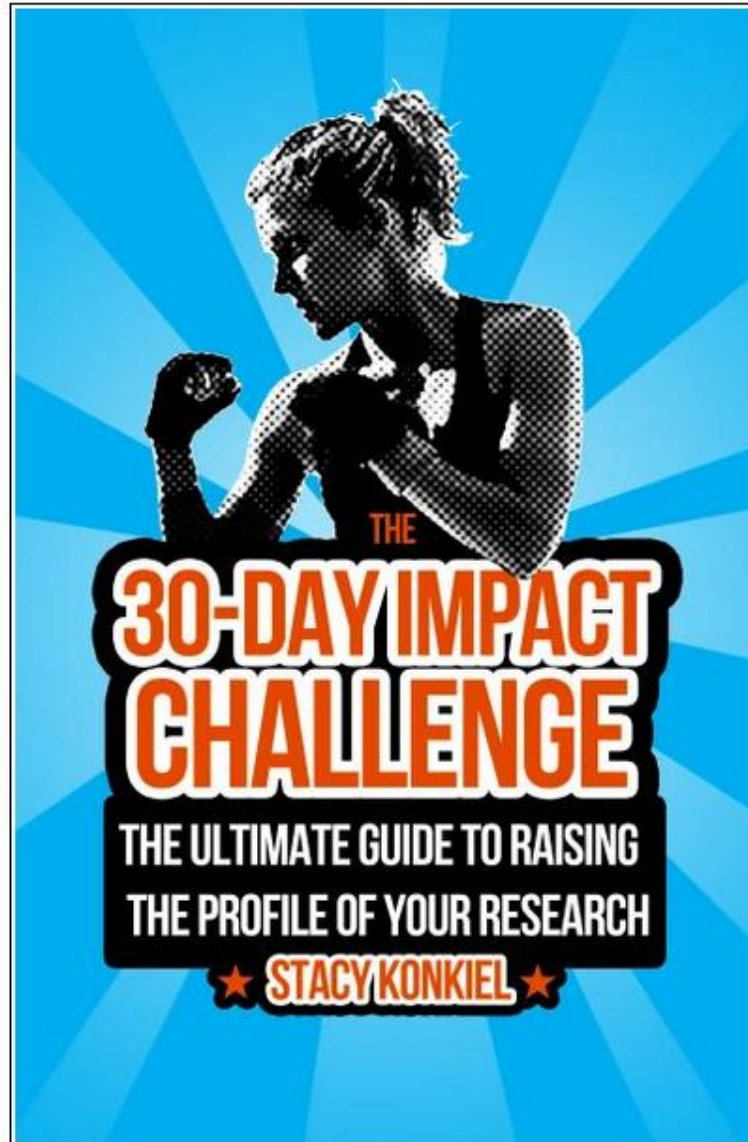


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Discussion



- Do these tools seem useful to you? Why (not)?
- Will you use them?
- What are the pros and cons of using such services?



**Thanks for your
Attention**

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