

# Altmetrics and impact

COPE, 19<sup>th</sup> August 2015

Betsy Donohue  
VP, Publisher Business Development



Getting credit where credit is  
due

~~Altmetrics and impact~~

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# This talk

- Why are altmetrics of interest to authors, publishers & institutions?
- How are they used
- What are the benefits
- Things we've learned
- How are they abused

# Several different tools available

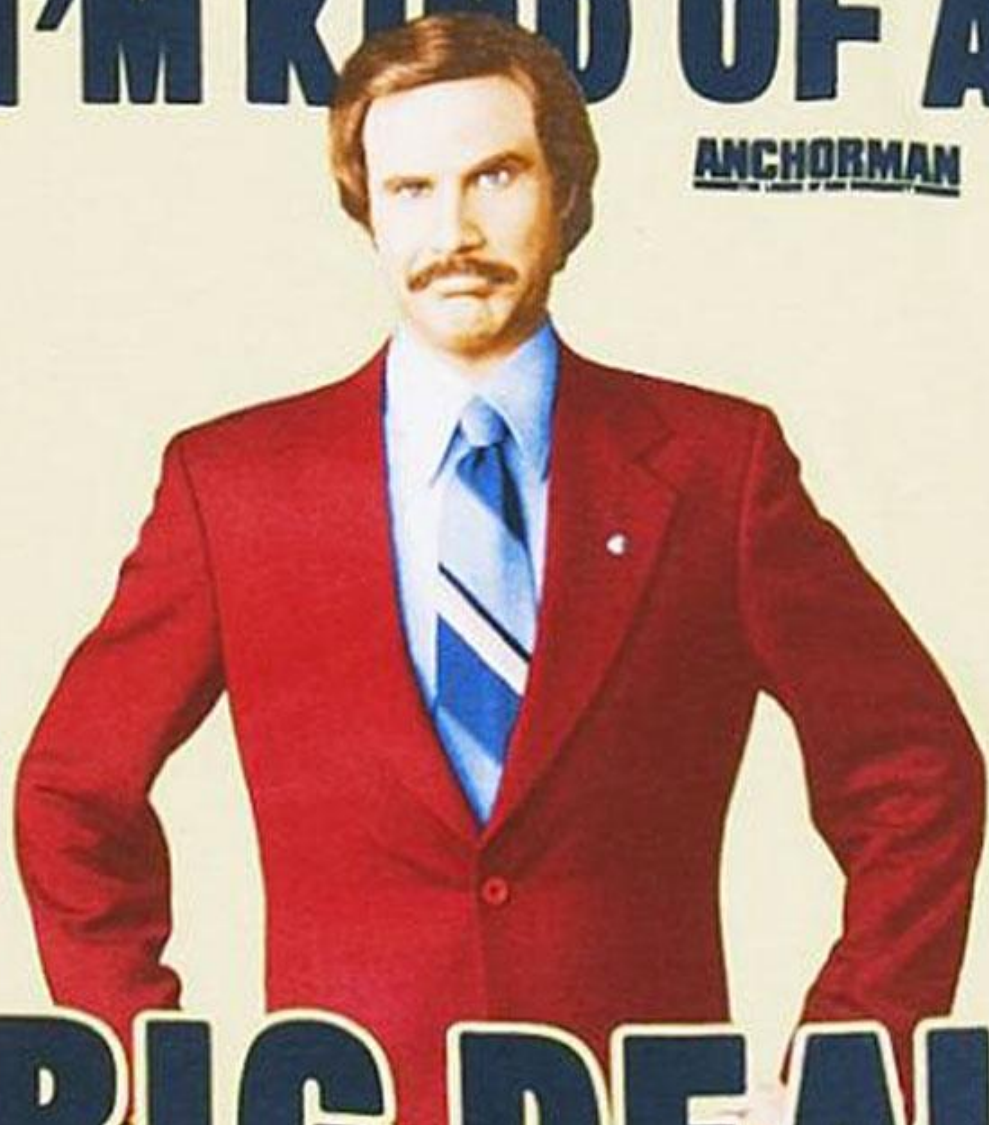




You say tomato...

**I'M KIND OF A**

**ANCHORMAN**  
THE LATEST FROM THE ANCHORMAN SERIES



**BIG DEAL**

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But there is another driver

# Bad news for researchers?

- You're under pressure to justify
  - Yourself
  - Your research
- Both internally and externally



# Good news for researchers?

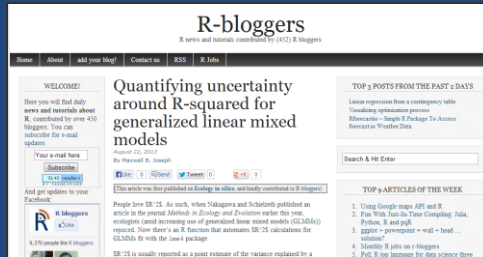
Funders and institutions are increasingly looking for or considering other types of:

- Impact
- Research output
- Contribution

# Altmetrics

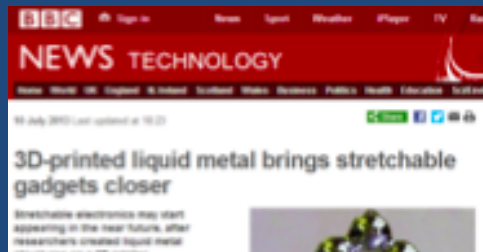
Take a broader view of  
impact to help give credit  
where credit is due

# Example: social & mainstream media



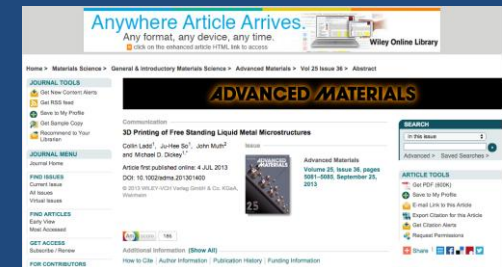
Blogs, reviews, comments

Including Faculty of 1000, PubPeer, MathOverflow and the world's largest curated index of academic blogs.



Newspapers & magazines

International titles, both mainstream and niche.



Social media



**brant faircloth** @brantfaircloth · Apr 8

What makes me happiest about our bird paper ([plosone.org/article/metric...](https://plosone.org/article/metric...)) is that largest % of readers are general public [altmetric.com/details.php?ci...](https://altmetric.com/details.php?ci...)

[View summary](#)

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# Example: policy documents



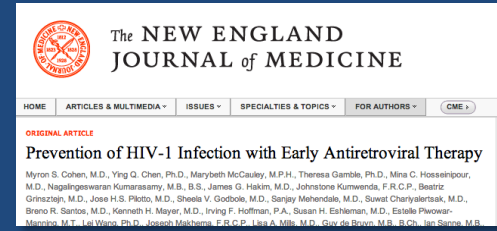
World Health Organization  
(WHO)  
“Policy on collaborative TB/HIV activities:  
guidelines for national programmes and other  
stakeholders”



Intergovernmental Panel on  
Climate Change (IPCC)  
“Managing the Risks of Extreme Events and  
Disasters to Advance Climate Change  
Adaptation”



National Institute for Health  
and Care Excellence (NICE)  
“Delivering Accident Prevention at local  
level in the new public health system: Road  
safety policy and links to wider objectives”



How people use altmetrics data



altmetrics



**Web**

Images

News

Videos

Shopping

More ▾

Search tools

About 536,000 results (0.29 seconds)



RESEARCH & INNOVATION

- To gauge the overall popularity of the article
  - **87%** of respondents strongly agreed or agreed
- To discover and network with researchers who are interested in the same area of their work
  - **77%** strongly agreed or agreed
- To understand a paper's influence on the scientific community
  - **66%** strongly agreed or agreed
- To determine what journal to submit their next paper to
  - **60%** of respondents strongly agreed or agreed
- To determine areas of research to explore
  - Only **37%** of respondents strongly agreed or agreed



Altmetric Explorer Reports dashboard Explore the data Explore my institution Help - Logged in -

# Lilliput University

All mentioned articles by BLACKBURN, Elizabeth H

Pick new articles:

You've chosen to see articles by BLACKBURN, Elizabeth H.  
[Look at all articles instead](#)

- > Mentioned in the past
- > With keyword
- > In these journals
- > With identifiers
- > From publisher
- > With handle prefix
- > With Medline subjects

Summary report Articles Activity Journals

Export articles Save these filters as a report API

Standard Tiled Condensed

**182**

**Accelerated telomere shortening in response to life stress** Proceedings of the National Academy of Sciences of the United States of America  
 Abstract [...]
   
BLACKBURN, Elizabeth H
   
Multidisciplinary

**58**

**Intensive meditation training, immune cell telomerase activity, and psychological mediators.** Psychoneuroendocrinology  
 Abstract [...]
   
BLACKBURN, Elizabeth H

Browsing by author



Browsing by department



Altmetric Explorer Reports dashboard Explore the data Explore my institution Help - Logged in -

# Lilliput University

46 authors 6,791 items 525 mentioned

Authors Departments Journal subjects Custom groups

Type to filter A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ALL

All departments	46 authors	6,791 articles	525 have metrics
Department of Humanities	11 authors	1,432 articles	153 have metrics
School of Social Sciences	11 authors	1,432 articles	121 have metrics
Department of Life Sciences	35 authors	5,359 articles	433 have metrics
School of Medicine & Medical Science	6 authors	1,341 articles	105 have metrics
School of Natural Sciences	29 authors	4,056 articles	299 have metrics



What are the benefits?

# For authors

- See who is talking about their work, and what they're saying
- Better manage their online reputation – ensure work isn't being misinterpreted
- Find evidence of influence and engagement for job and funding applications



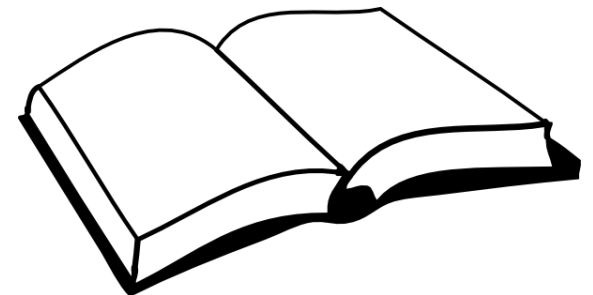
# For institutions and funders

- Identify success stories to help develop future strategy
- Uncover developing fields
- Get the fuller picture of a researcher



# For publishers

- Monitor the success of marketing and PR activity
- Identify new audiences (or markets)
- Gathering evidence for future strategy decisions
- Support existing authors and institutional customers



# For editorial

- Encourage future submissions
- Track which content is of most interest and can possibly be repurposed
- Identify high profile authors to attract
- Discover potential reviewers
- Report back to editorial boards and society stakeholders



Some things we've learned

More complementary than  
alternative to really



# Alt metrics



Implies an emphasis on the quantitative  
that doesn't actually exist.

Metrics makes people think of being  
judged (unfortunately)

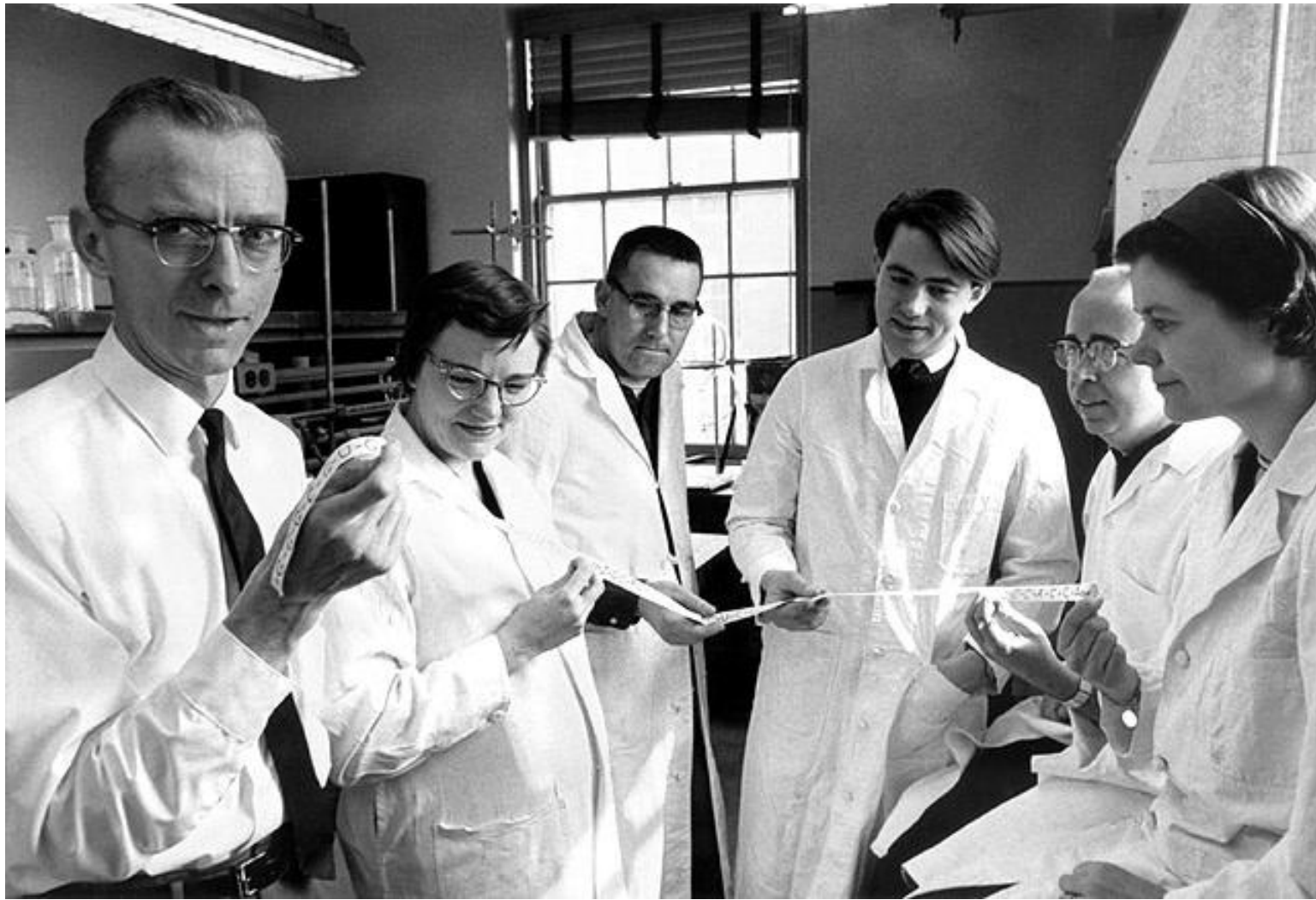
# Do Altmetrics Work? Twitter and Ten Other Social Web Services

**Mike Thelwall<sup>1\*</sup>, Stefanie Haustein<sup>2</sup>, Vincent Larivière<sup>3</sup>, Cassidy R. Sugimoto<sup>4</sup>**

**1** School of Technology, University of Wolverhampton, Wolverhampton, United Kingdom, **2** École de bibliothéconomie et des sciences de l'information, Université de Montréal, Montréal, Québec, Canada and Science-Metrix Inc., Montréal, Québec, Canada, **3** École de bibliothéconomie et des sciences de l'information, Université de Montréal, Montréal, Québec, Canada and Observatoire des sciences et des technologies, Centre interuniversitaire de recherche sur la science et la technologie, Université du Québec à Montréal, Montréal, Québec, Canada, **4** School of Information and Library Science, Indiana University Bloomington, Bloomington, Indiana, United States of America

People like to relate it to citations!  
Scholarly altmetrics correlate with  
citations. Public engagement / policy &  
practice altmetrics don't.







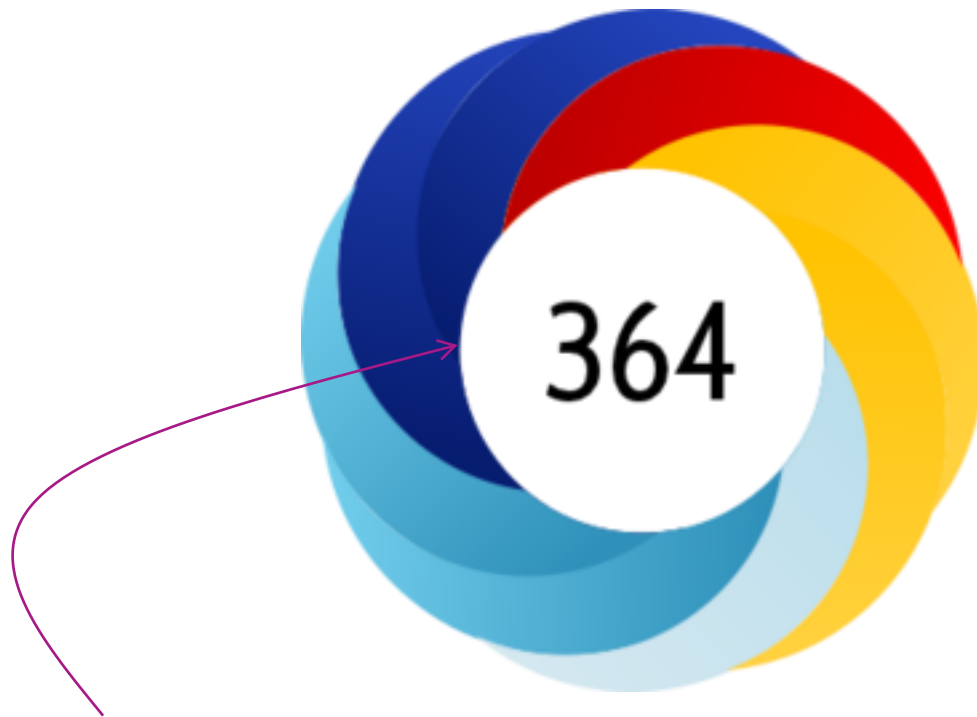
How people (ab)use altmetrics data

"The more any quantitative social indicator (or even some qualitative indicator) is used for social decision-making [...] the more apt it will be to distort and corrupt the social processes it is intended to monitor."

Donald Campbell,  
1976



# Quantifying attention



Altmetric  
score

<http://support.altmetric.com/knowledgebase/articles/83337-how-is-the-altmetric-score-calculated>



# Why score at all? To allow ranking

Altmetric Explorer

Reports dashboard

Explore the data

Groups management

Help

## Articles from "University of São Paulo" and in PubMed

### Pick new articles:

> Mentioned in the past

> With keyword

> In these journals

> With identifiers

> From publisher

> With handle prefix

> With Medline subjects

> With subjects

> Matching PubMed query

Articles 1,000

Activity 18

Journals 598



A randomized double-blind placebo-controlled study of the long-term efficacy and safety of diethylpropion in the treatment of



The anxiolytic effect of cannabidiol on chronically stressed mice depends on



Creatine supplementation in fibromyalgia: A double-blind, randomized, placebo-controlled trial.

**Arthritis care & research**



A spiderless arachnophobia therapy: comparison between placebo and treatment groups and six-month follow-up study.

**Neural plasticity**



Treatment of advanced hepatocellular carcinoma with very low levels of amplitude-modulated

#### Altmetric score of 27

Mentioned in 1 Google+ posts  
Picked up by 1 news outlets  
Blogged by 2

8 readers on Mendeley  
0 readers on Connotea  
0 readers on CiteULike

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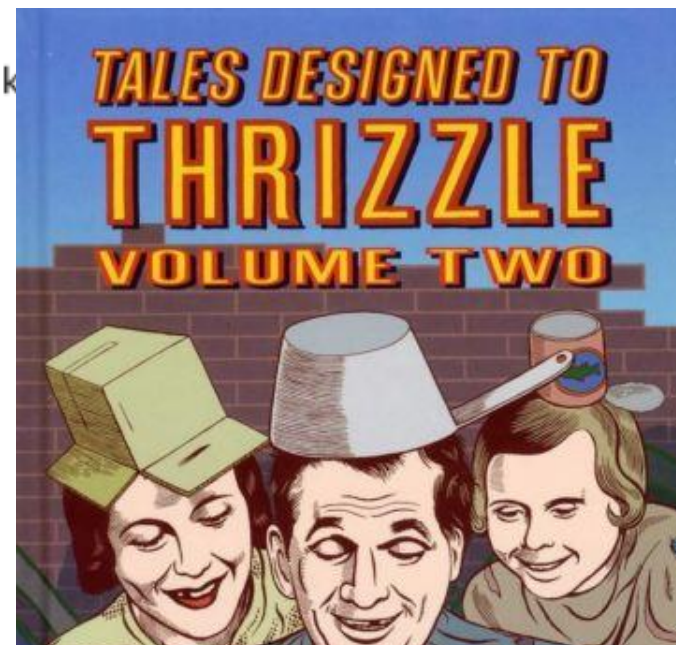
CMAJ December 12, 2000 vol. 163 no. 12



## *Research of the Holiday Kind*

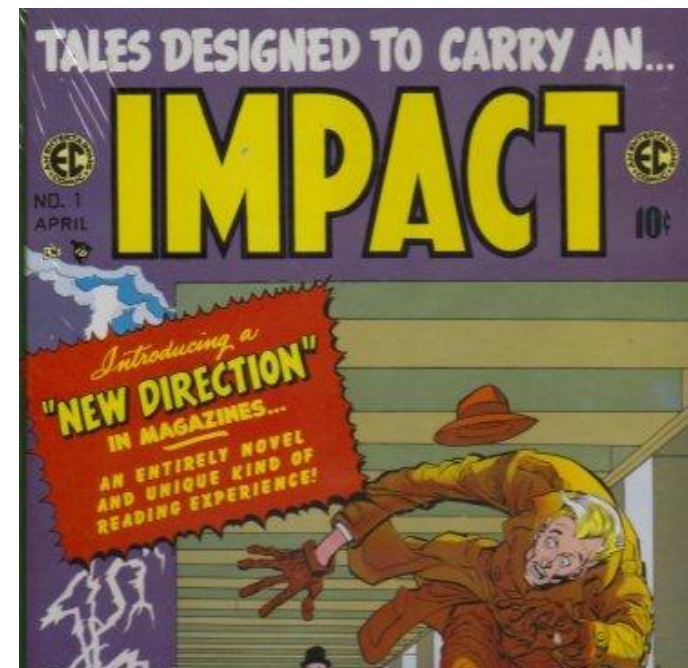
# **Pathology in the Hundred Acre Wood: a neurodevelopmental perspective on A.A. Milne**

Sarah E. Shea, Kevin Gordon, Ann Hawkins, Janet Kawchuk  
Donna Smith



## Effect of daily aspirin on long-term risk of death due to cancer: analysis of individual patient data from randomised trials

Prof [Peter M Rothwell](#) FMedSci [a](#) , Prof [F Gerald R Fowkes](#) FRCPE [b](#), Prof [Jill FF Belch](#) FRCP [c](#), [Hisao Ogawa](#) MD [d](#), Prof [Charles P Warlow](#) FMedSci [e](#), Prof [Tom W Meade](#) FRS [f](#)

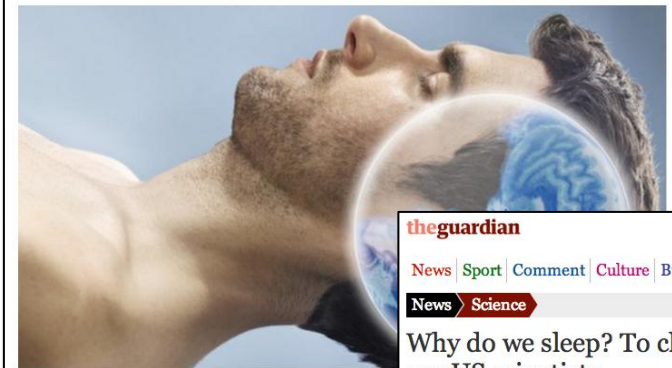




17 October 2013 Last updated at 19:23

# Sleep 'cleans' the brain of toxins

By James Gallagher  
Health and science reporter, BBC News



The brain uses sleep to wash away the waste toxins built up over hard day's thinking, researchers have shown.

The US team believe the "waste removal system" is one of the reasons for sleep.

Their study, in the journal *Science*, showed brain cells shrink and open up the gaps between neurons and allow fluid to wash the

## Top Stories

Syria talks 'm  
Why Beckha  
Girl removed  
Energy boss

## Features



## Why do we sleep? To clean our brains, say US scientists

Cerebral spinal fluid found to pump around the brain of sleeping mice, flushing out waste products like a big dishwasher

Ian Sample, Science correspondent  
theguardian.com, Friday 18 October 2013 10.11 BST



Scientists say they may have found the reason why we need to sleep. Photograph: Corbis

Scientists in the US claim to have a new explanation for why we sleep: in the hours spent slumbering, a rubbish disposal service swings into action that



## SLEEP

# Your Brain Cells Shrink While You Sleep (And That's a Good Thing)

By Belinda Luscombe @youseless | Oct. 17, 2013 | 4 Comments

Share Like Tweet +1 28 in Share 20 Pin it Read Later

In a predatory world, sleep doesn't make much evolutionary sense. Why would any creature lie down, shut its eyes and not move for about a third of a day? It's like an invitation to be eaten.

Now a new study out of the University of Rochester Medical Center (URMC) suggests sleep is necessary for the brain to get rid of waste. The study, published in the journal *Science*, also reveals that the brain's cells shrivel up by 60% while we sleep to wash away the cellular garbage more effectively. Researchers believe that all the cleaning activity is one of the reasons the brain uses about as much energy while in



Getty Images/Flickr RM

- Sleep · Health & wellbeing
- Society
- Health
- World news
- United States
- More news

## More on this story



Skull of Homo erectus throws story of human evolution into disarray

# Miniature Donkey Talk

The TALK of the donkey world



In This Issue:

Acute Liver Failure    Ultrasound Looks In  
The Irish Donkey    Avoid "Attractive Nuisance"

**POTATO STORAGE INTERNATIONAL**  
www.potatostorageinternational.com

**Packaging:**  
A cost saving packaging system

www.potatostorageinternational.com



## Recumbent Cyclist News

The Recumbent Enthusiast's Newsletter — Since 1993 — #007 Nov/Dec 2006



Butler 2002 — New power stroke  
Aero (Bike) — Performance  
control the day after 100% 100%  
100% 100% 100% 100% 100% 100%



Butler 2002 — New power stroke  
Aero (Bike) — Performance  
control the day after 100% 100%  
100% 100% 100% 100% 100% 100%



### The Volvo Tour

"The Volvo is a true tourer, finding a better performing, lighter weight,  
more comfortable recumbent in this price range."  
— An author's view, 100% 100%

Butler 2002 — New power stroke  
Aero (Bike) — Performance  
control the day after 100% 100%  
100% 100% 100% 100% 100% 100%

Butler 2002 — New power stroke  
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control the day after 100% 100%  
100% 100% 100% 100% 100% 100%

The Volvo is a true tourer, finding a better performing, lighter weight,  
more comfortable recumbent in this price range."  
— An author's view, 100% 100%

The Volvo is a true tourer, finding a better performing, lighter weight,  
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— An author's view, 100% 100%

### Inside

100% 100% 100% 100% 100% 100%  
100% 100% 100% 100% 100% 100%  
100% 100% 100% 100% 100% 100%

100% 100% 100% 100% 100% 100%  
100% 100% 100% 100% 100% 100%

100% 100% 100% 100% 100% 100%

# Gaming the system



# Gaming?

- Alice asks her friends to retweet her.

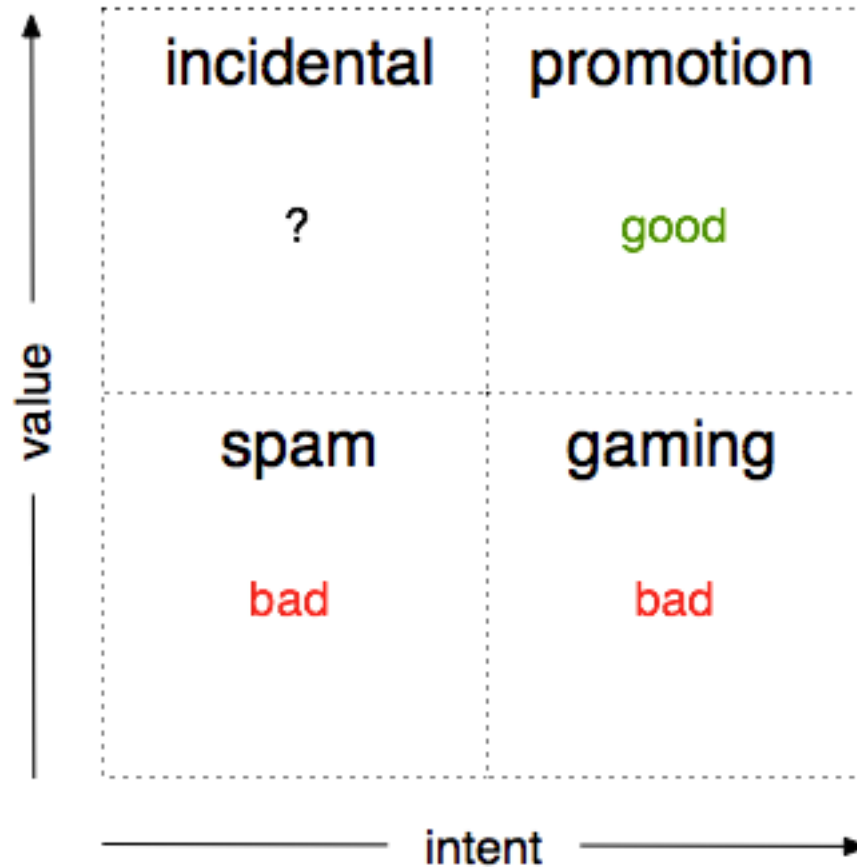
# Gaming?

- Bob likes Alice's paper. He shares it with all his friends and asks them to retweet him.

# Gaming?

- Alice pays \$5 for 100 retweets

# Four types of suspicious attention







# Microcystis Aeruginosa and Underwater Light Attenuation in a Hypertrophic Lake (Hartbeespoort Dam, South Africa)


Twitter

Score


Demographics

So far Altmetric has seen **34** tweets from **1** accounts.

## Mentioned by

 1 tweeters

## Readers on

 0 Mendeley

 1 CiteULike

## Track this article

- Get email updates when this article is shared



Hartbeespoort Dam  
@Hartbeespoort Dam  
193 followers

I am 97.588% full. Microcystis aeruginosa and underwater light attenuation in a hypertrophic... <http://t.co/Ni3up8AfU0> #harties

23-Mar-2013



Hartbeespoort Dam  
@Harties\_dam  
193 followers

I am 98.984% full. Microcystis aeruginosa and underwater light attenuation in a hypertrophic... <http://t.co/3RyYnnha> #harties

08-Feb-2013



Hartbeespoort Dam  
@Harties\_dam  
193 followers

I am 97.610% full. Microcystis aeruginosa and underwater light attenuation in a hypertrophic... <http://t.co/3RyYnnha> #harties

14-Feb-2013



Hartbeespoort Dam  
@Harties\_dam  
193 followers

I am 97.074% full. Microcystis aeruginosa and underwater light attenuation in a hypertrophic... <http://t.co/3RyYnnha> #harties

15-Feb-2013



# What can be done?

- Make underlying data available, visible
- Only track sources that can be audited
  - Some interesting sources fail this test e.g. downloads and private Facebook activity
- Automatically flag up suspicious activity, then manually curate
- Have a standard process in place to deal with gamed articles, notify the journal

# In future

- Educate on responsible use of metrics
- Work with institutional and publisher partners to increase awareness
- Newly-launched Altmetric Ambassadors program to help spread the word

# Thanks for listening!



b.donohue@digital-science.com



@altmetric