

Altmetrics and impact

Euan Adie

COPE, 17th April 2015



Getting credit where credit is due

~~Altmetrics and impact~~

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COPE, 17th April 2015



This talk

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

Several different tools available

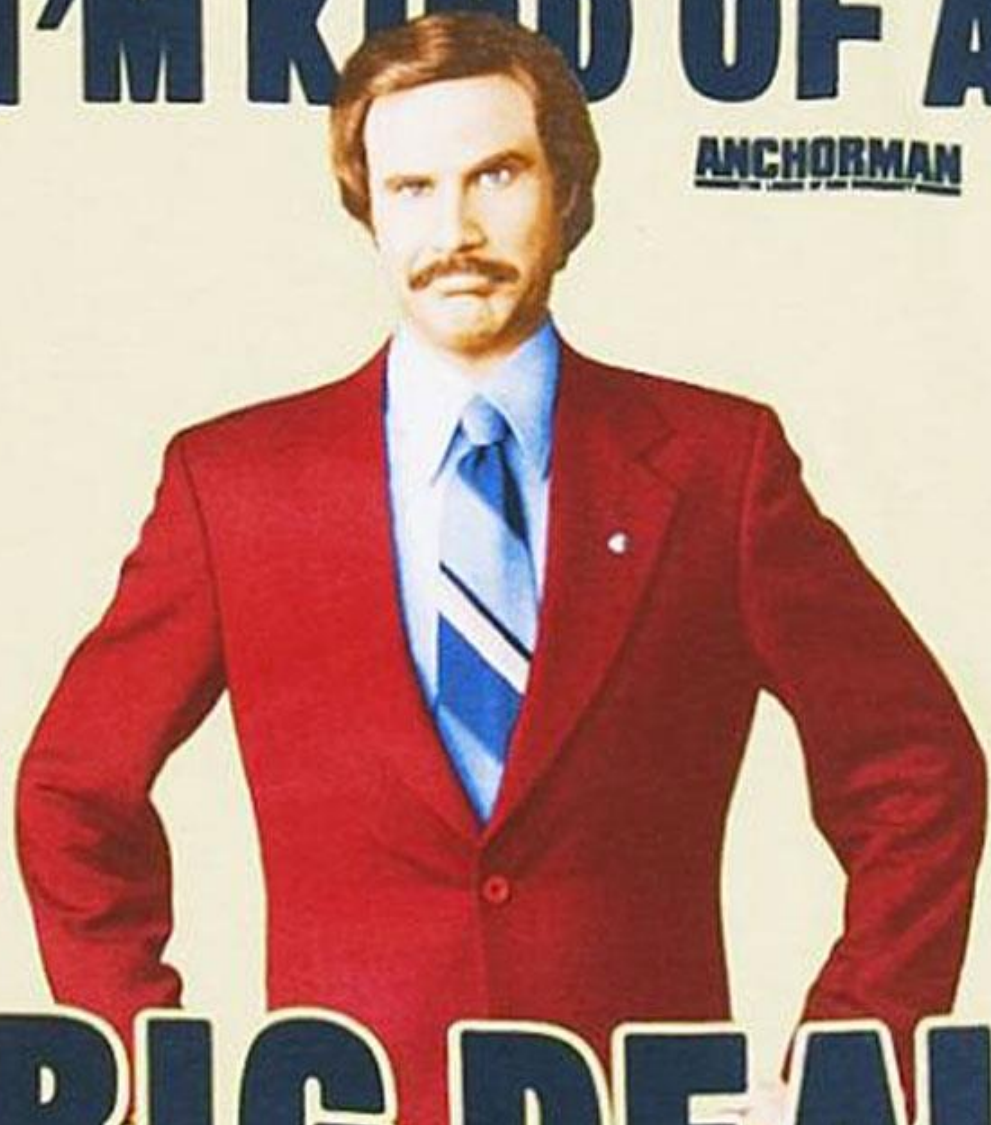




You say tomato...

I'M KIND OF A

ANCHORMAN



BIG DEAL

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

The Evaluation Gap

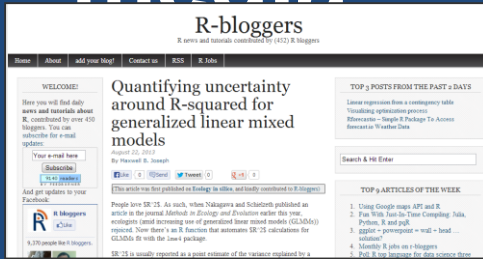
<http://citationculture.wordpress.com/>



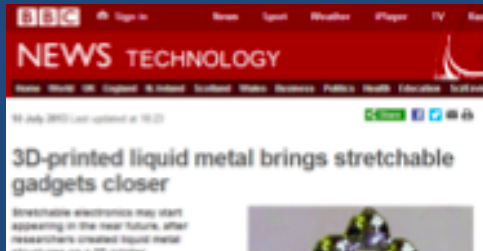
Altmetrics

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

Example: social & mainstream media



Blogs, reviews, comments, faculty of 1000, PubPeer, MathOverflow and the world's largest curated index of academic blogs.



Newspapers & magazines, both mainstream and niche.



Social media



brant faircloth @brantfaircloth · Apr 8

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

[View summary](#)

[Reply](#) [Retweet](#) [Favorited](#) [More](#)

Example: policy documents



World Health Organization (WHO)

“WHO policy on collaborative TB/HIV activities: guidelines for national programmes and other stakeholders”



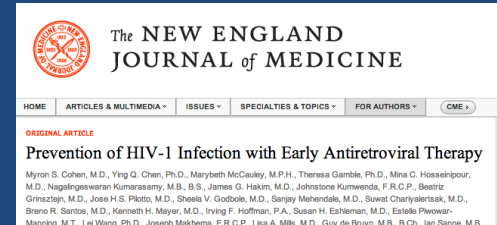
Intergovernmental Panel on Climate Change (IPCC)

“Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation”

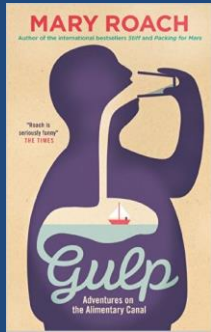


National Institute for Health and Care Excellence (NICE)

“Delivering Accident Prevention at local level in the new public health system: Road safety policy and links to wider objectives”

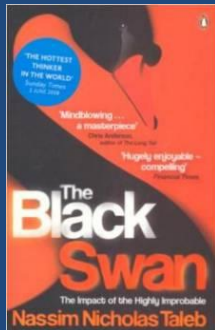


Example: popular non-fiction



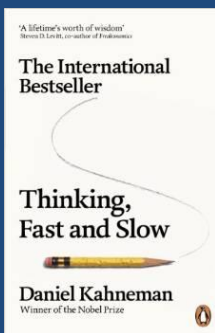
Gulp

“America’s funniest science writer’ (Washington Post) takes us down the hatch on an unforgettable tour.”



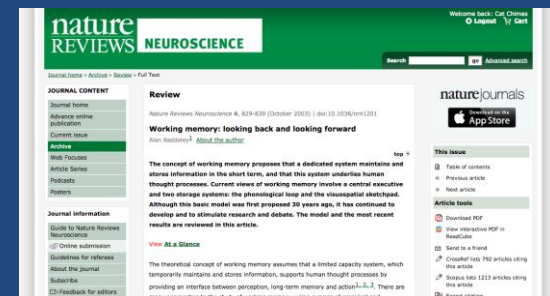
The Black Swan

“Since being published in 2007, as of February 2011 has sold close to 3 million copies. It spent 36 weeks on the New York Times Bestseller list; 17 as hardcover and 19 weeks as paperback. It was published in 32 languages.”



Thinking Fast and Slow

“The basis for his Nobel prize, Kahneman developed prospect theory to account for experimental errors he noticed in Daniel Bernoulli's traditional utility theory.”



How people use altmetrics data



altmetrics



Web

Images

News

Videos

Shopping

More ▾

Search tools

About 536,000 results (0.29 seconds)



- 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	288 have metrics

Some things we've learned

More complementary than
alternative to really



Alt metrics

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

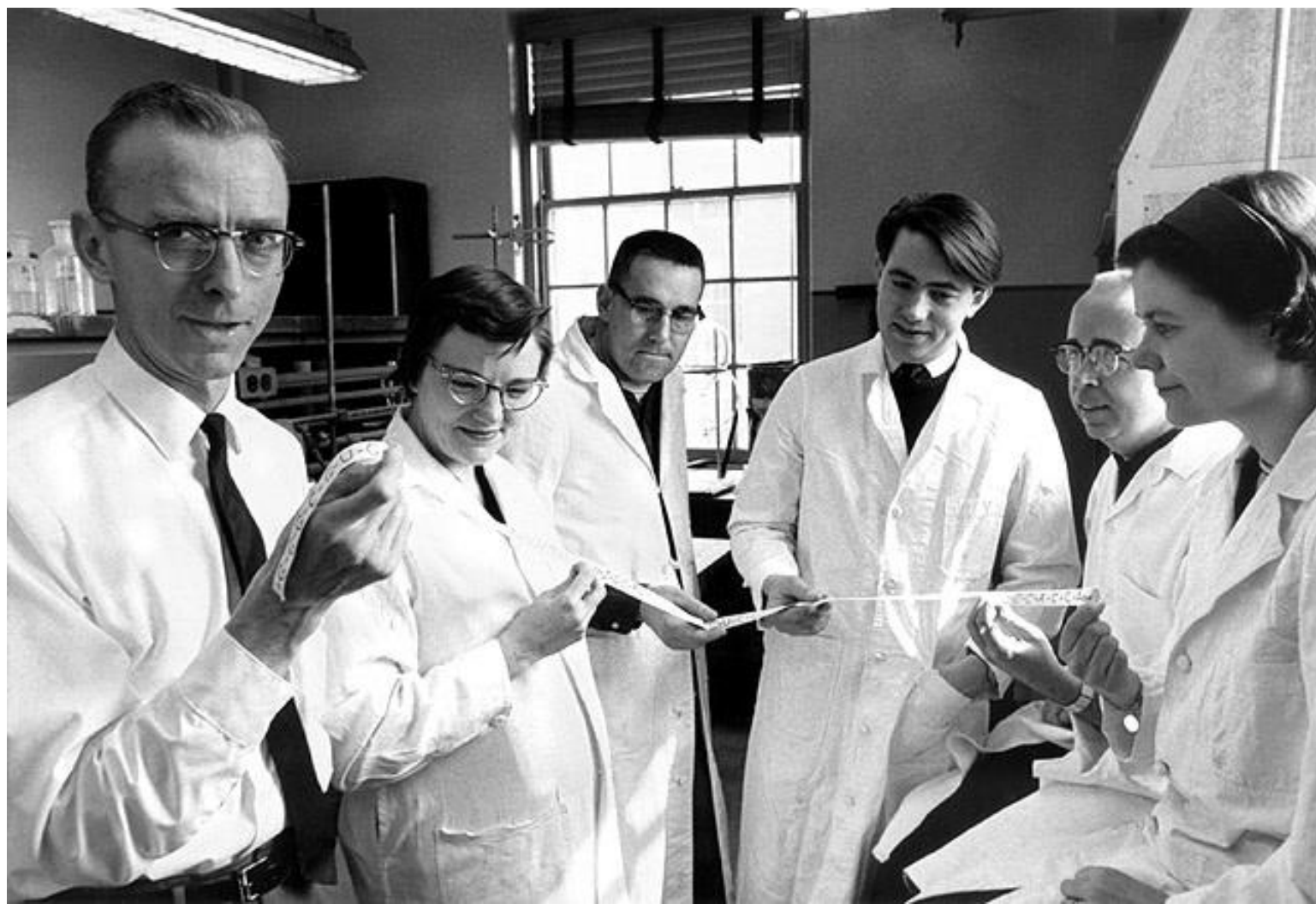
Metrics makes people think of being
judged (unfortunately)

Do Altmetrics Work? Twitter and Ten Other Social Web Services

Mike Thelwall^{1*}, Stefanie Haustein², Vincent Larivière³, Cassidy R. Sugimoto⁴

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 are very keen to relate it to citations!
Scholarly altmetrics correlate with citations.
Public engagement / policy & practice
altmetrics don't.





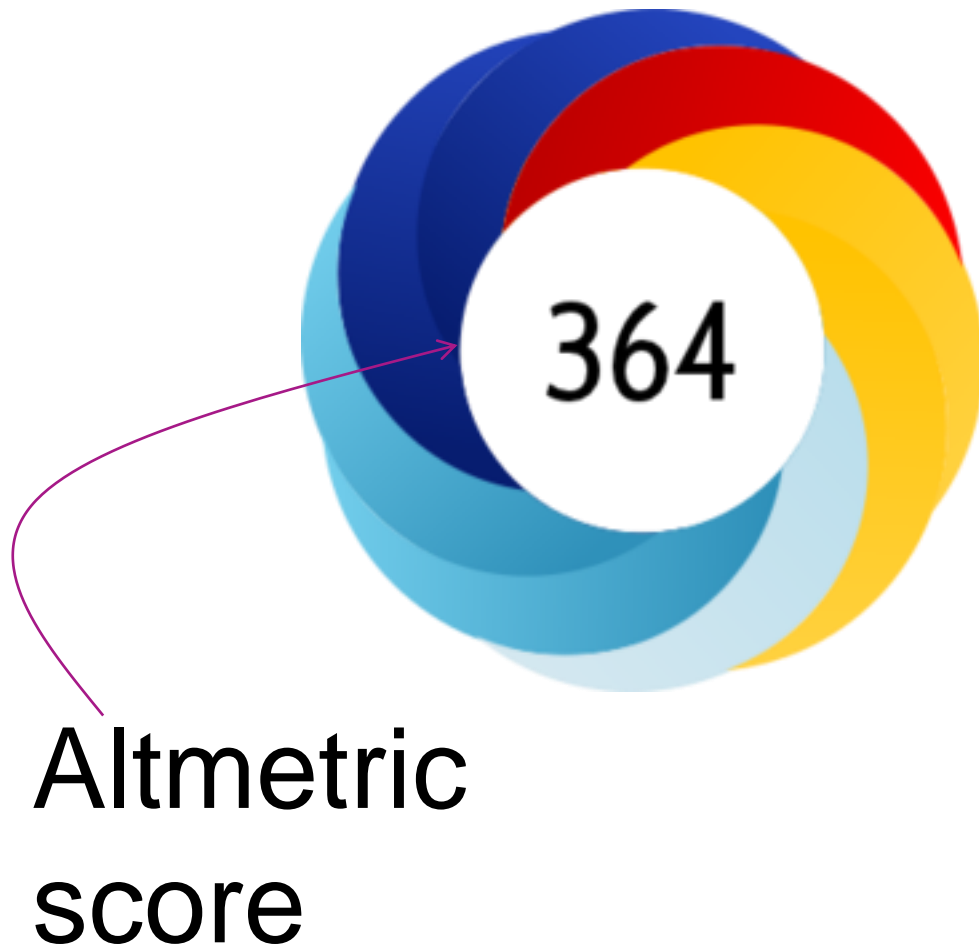
How people (ab)use altmetrics data

"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



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 16

Journals 598



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



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

Arthritis care & research



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

Click for more details



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

Neural plasticity



The anxiolytic effect of cannabidiol on chronically stressed mice depends on



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

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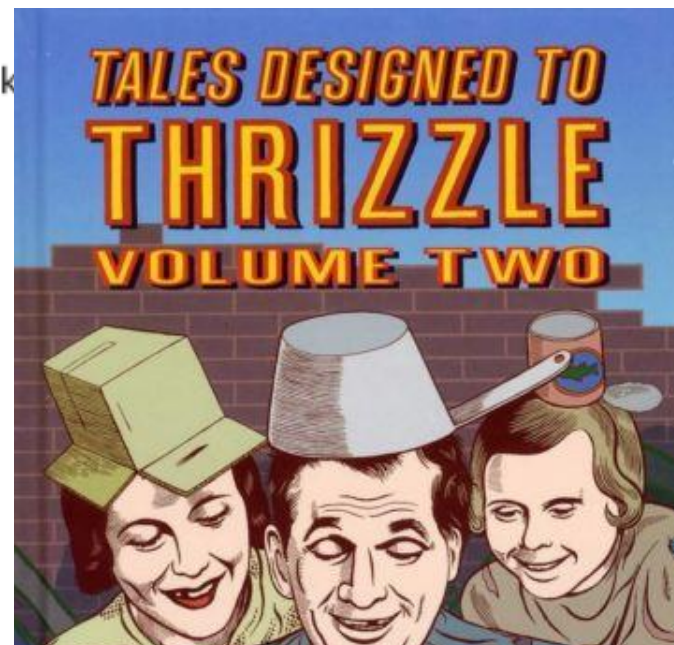
CMAJ December 12, 2000 vol. 163 no. 12



Research of the Holiday Kind

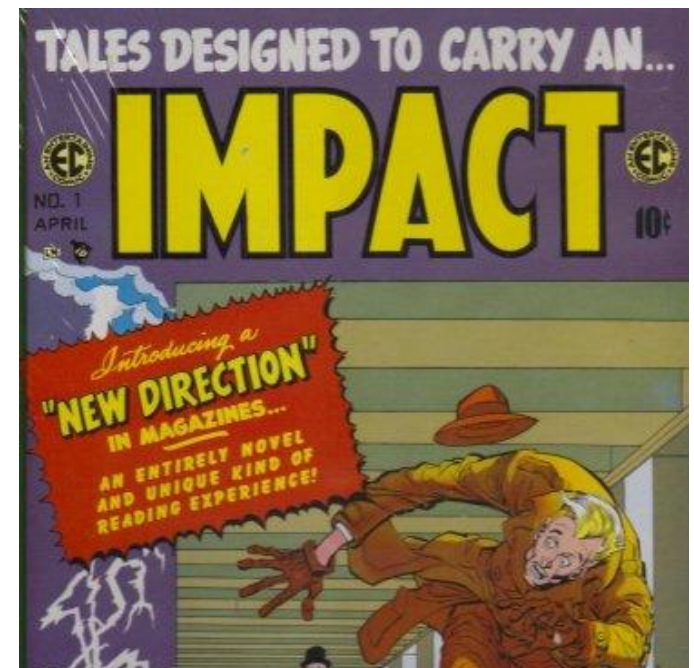
Pathology in the Hundred Acre Wood: a neurodevelopmental perspective on A.A. Milne

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 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 open up the gaps between neurons and allow fluid to wash the

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- Girl removed
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Why do we sleep? To clean our brains say US scientists

Cerebral spinal fluid found to pump around the brain 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

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Committed
Life, love and the pursuit of sanity

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

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

f Share f Like 2.5k Tweet 321 +1 28 in Share 20 PinIt 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

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- 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
 1999 2000 2001 2002

»» Packaging:
 A cost saving packaging system

www.potatostorageinternational.com

Recumbent Cyclist News

The Recumbent Enthusiasts' Newsletter - Since 1990 - #007 Nov/Dec 2006

Don't miss! - See page 10 for
 Alan Roberts - an interview
 about the life after 100% SCI's
 riding, see page 10

Plus: "Remotely Controlled"
 on the new LightFoot
 bike, see page 10

The Volvo Tour
 "The Volvo is a serious-looking, better performing, lighter weight,
 more comfortable recumbent in the price range
 of a touring bike." - Fred

Inside

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 Fred
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 by Alan Roberts R
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 26 Volvo Classic Bike Orders R

READ Your List:
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www.volvocars.com

Volvo is the Best Bike of the
Volvo recumbent looks like
 the most popular bike 2006
 from the previous survey of light foot
 on with their satisfaction 20-20 1999
 recumbent. The first bike was built
 for the Volvo Tour by JSP Systems
 with the design of Volvo. Volvo pro
 design started in Sweden, for more
 and more. Worked on an amazing
 technology of the light side. The re
 sult is a lot of spare components with
 the best available degree of quality.
 When you have got all the wheels
 and parts, Volvo's 2006 Tour is a real
 technology.

Continued on page 2

Gaming the system



Gaming?

- Alice asks her friends to retweet her.

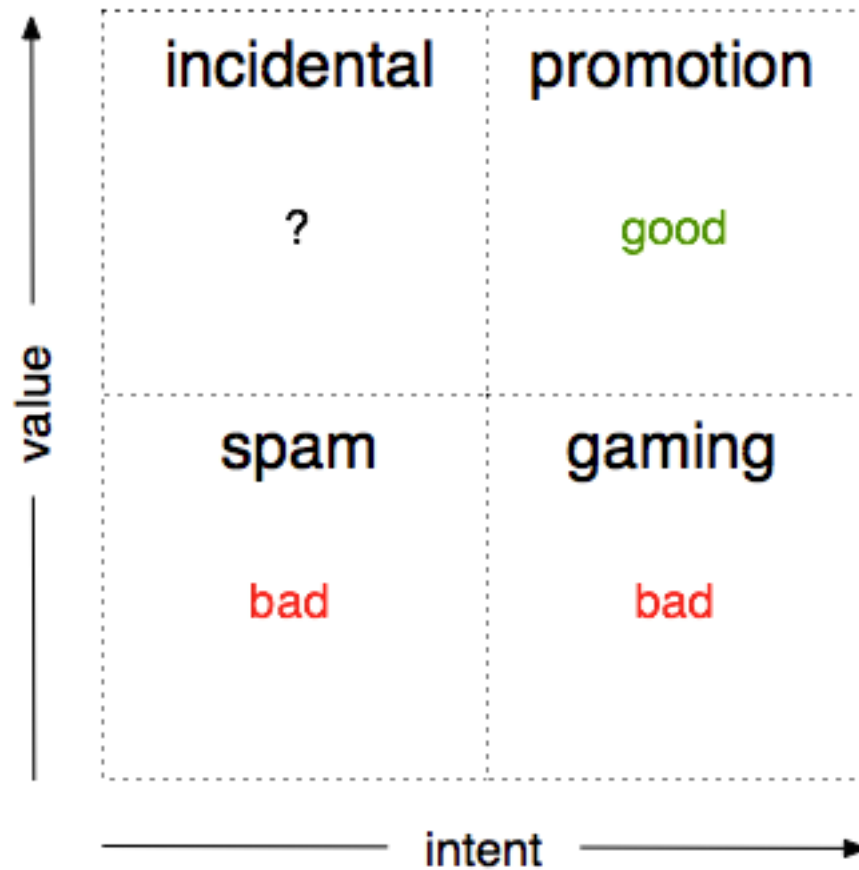
Gaming?

- 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






1

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

Thanks for listening!



euan@altmetric.com



[@altmetric](https://twitter.com/altmetric)