

Impact as a driver for OA

Future of Academic Impact Conference

4th December 2012

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wellcometrust

Overview

- Brief overview of how Wellcome Trust undertakes evaluation
- Look at development of OA policy as a driver for impact
- Discuss OA and impact



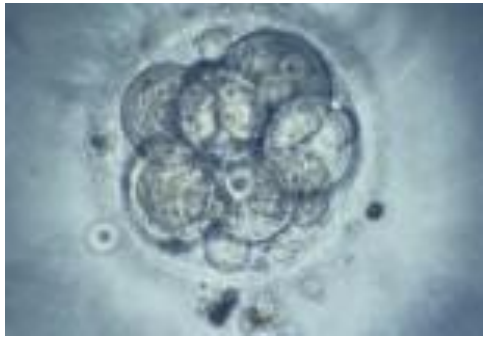
"Our discovery of DNA fingerprinting was of course totally accidental ... but at least we had the sense to realise what we had stumbled upon."

Sir Alec Jeffreys, inventor of DNA fingerprinting which has revolutionised forensic science & the criminal justice system



The long road to discovery

early 1960s



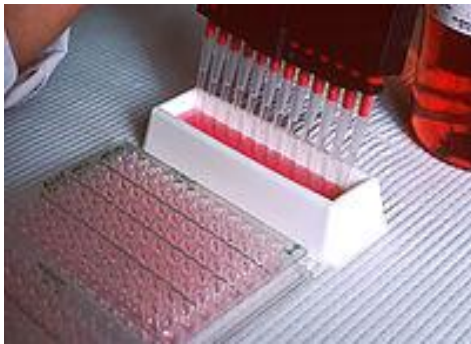
In vitro fertilisation (IVF)

18 years between Robert Edwards first cultivating & maturing human eggs in the lab & first test tube baby being born

1978



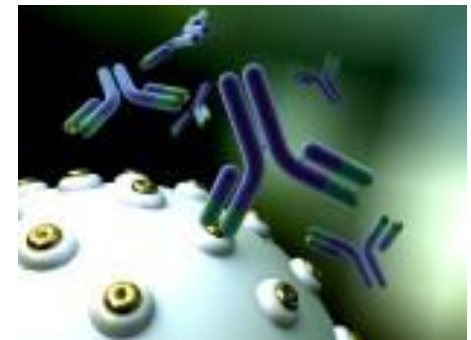
early 1970s



Monoclonal antibodies

30 years between Milstein & Kohler manufacturing first monoclonal antibodies & widespread adoption in therapies

early 2000s



**APPLICATION FOR
AN INVESTIGATOR AWARD**

F. Peer reviewed publications

Please list up to 20 of your most significant peer reviewed publications. Please ensure that at least 5 of these publications are from within the last five years. Provide the citation in full, including full title of publication; all *authors**; and journal title, year, volume and pages. For 10 of these publications, please also provide a statement describing the significance of the findings (Up to 50 words per publication).

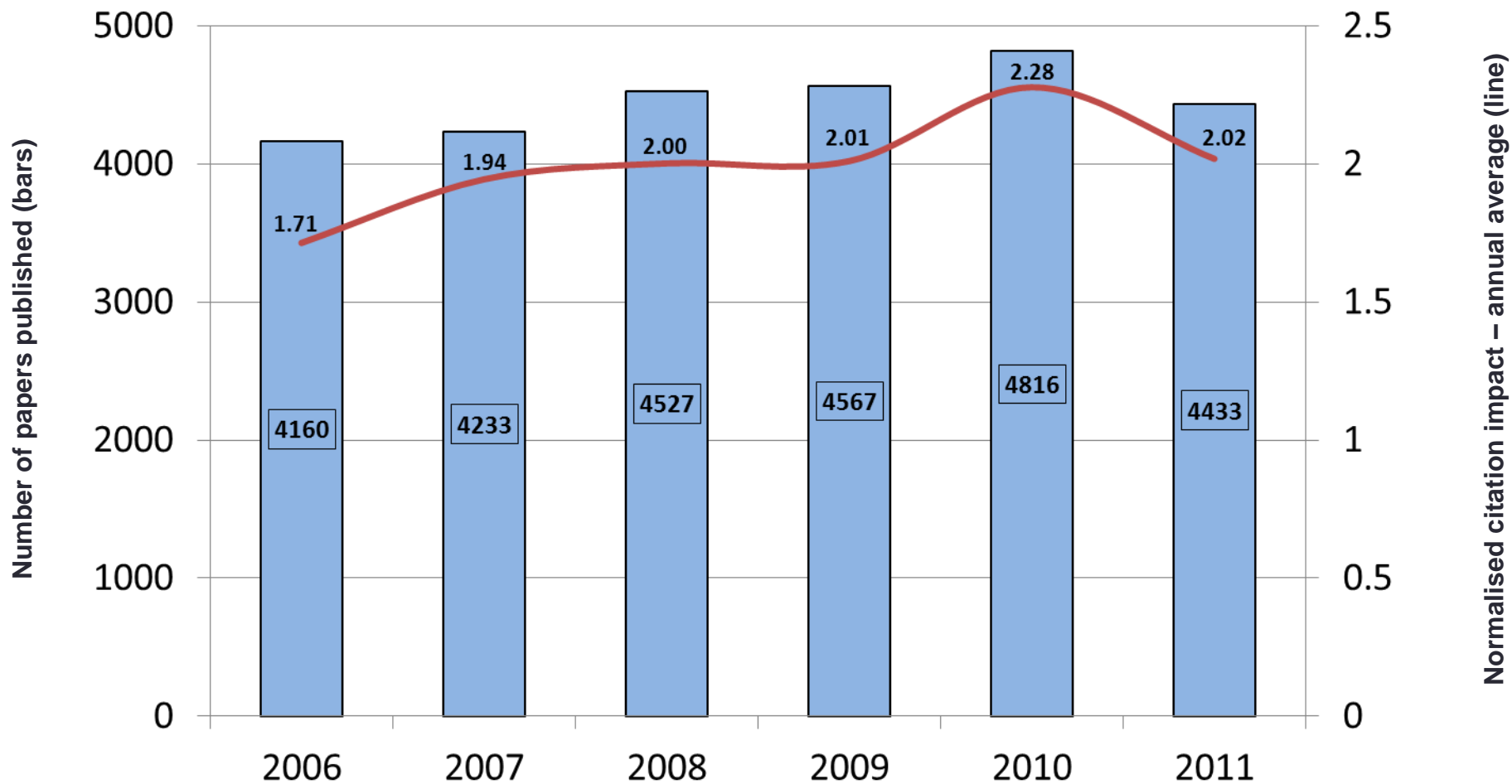
For original research publications please indicate those arising from Trust-funded grants in bold, and provide the **PMCID** reference for each of these. Please refer to guidance notes.

*(*All authors, unless more than 10, in which case please use 'et al', ensuring that your position as author remains clear.)*

Monitoring progress: WT's key indicators

Outcomes	Key indicators of progress
Discoveries	<ol style="list-style-type: none">1. significant advances in the generation of new knowledge2. contribute to discoveries with tangible impacts on health
Applications	<ol style="list-style-type: none">3. contribute to the development of enabling technologies, products and devices4. uptake of research into policy and practice
Engagement	<ol style="list-style-type: none">5. enhanced level of informed debate in biomedicine6. significant engagement of key audiences & increased reach
Research leaders	<ol style="list-style-type: none">7. develop a cadre of research leaders8. evidence of significant career progression among those we support
Research environment	<ol style="list-style-type: none">9. key contributions to the creation, development and maintenance of major research resources10. contributions to the growth of centres of excellence
Influence	<ol style="list-style-type: none">11. significant impact on science funding & policy developments12. significant impact on global research priorities and processes

Volume and normalised citation impact of Wellcome Trust-associated papers 2006-2011



Data: Thomson Reuters 2012

OA and impact: why did the Trust develop an OA policy?

- “Access denied” – trigger event
- Primary aim: to maximise return on our investment
 - in line with Trust’s mission
 - encourage others to build on the research we have funded
 - funding the research is a job only part done – a fundamental part of funders’ missions is to ensure the widest possible dissemination and unrestricted access to that research



▶ Publications A-Z

▶ Wellcome News

▶ Wellcome History

▶ Annual Review

▶ Annual Report and Financial Statements

▶ Strategic Plan 2010-20

▶ SPIN

▶ Grantholders newsletter

▶ Reports

▶ Books

▶ Wellcome Library Year in Review

Grants e-newsletter

No. 1, October 2005

Contents

1. Introduction
2. Open and unrestricted access to published research
3. Grant Conditions
4. Benefits of open and unrestricted access
5. Next steps
6. Open access papers: recent highlights.

1. Introduction

Welcome to the pilot edition of the Wellcome Trust Funding e-newsletter. The aim of this newsletter is to provide you with important information about new funding initiatives and changes in policies and procedures.

In this first issue we focus on how the Trust plans to maximise the **impact** of the research it funds, through its support of open and unrestricted access to published research.

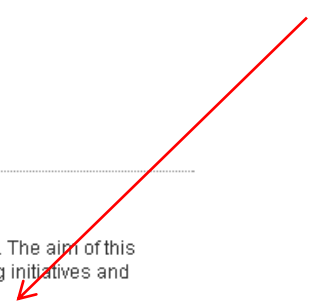
2. Open and unrestricted access to published research

To meet its mission – to foster and promote research with the aim of improving human and animal health – the Wellcome Trust has a commitment to ensuring that the research it funds can be freely accessed.

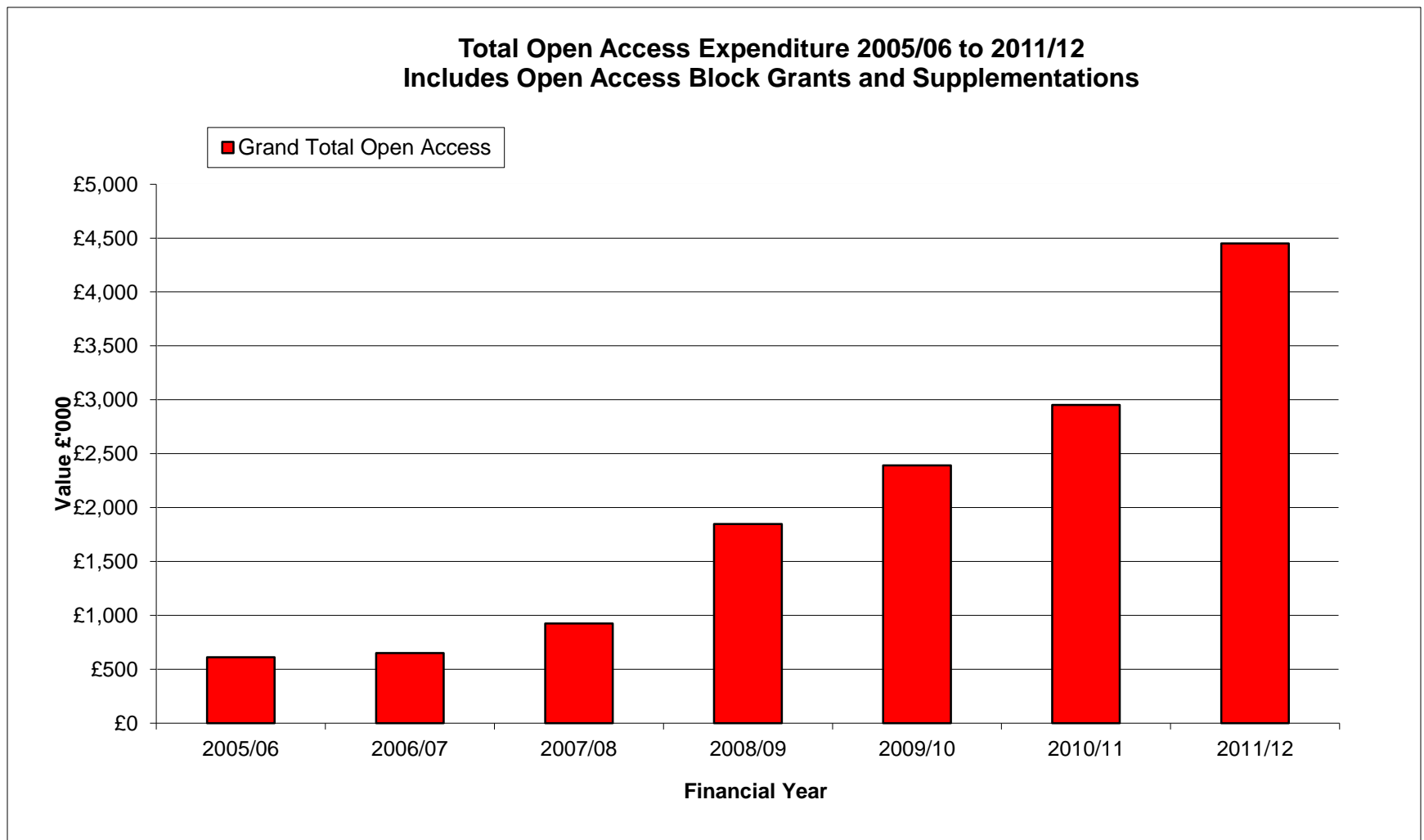
The [Human Genome Project](#) conclusively demonstrated the benefits of sharing information in an open and unrestricted way; the Trust now plans to extend this approach to research published in peer-reviewed journals.

The full [position statement](#) in support of open and unrestricted access to published research can be found on the Wellcome Trust website.

OA and impact: a clear relationship from the start



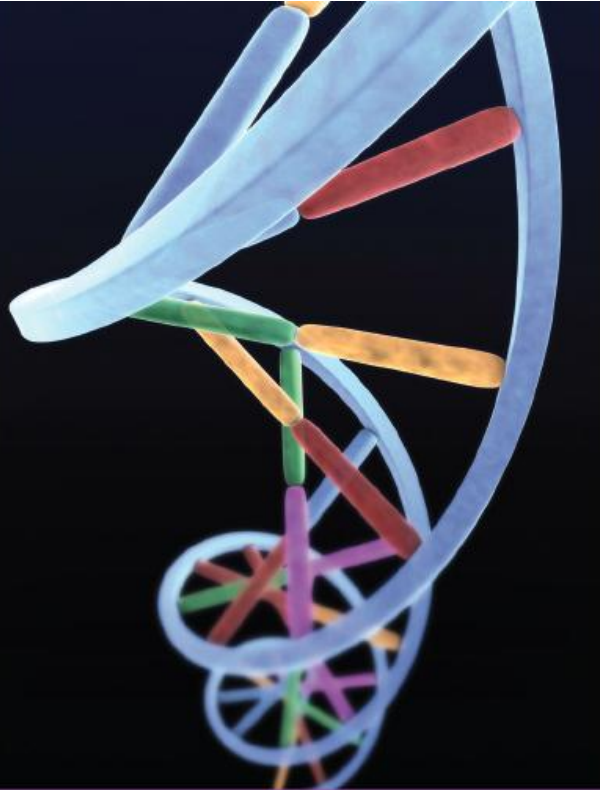
Wellcome Trust spend on OA



OA Impact – greater usage (at least downloads)

- Studies have demonstrated that OA articles are downloaded more than non OA articles
 - *Articles placed in the open access condition received significantly more downloads and reached a broader audience within the first year...than subscription-access control articles.* [Davis: <http://dx.doi.org/10.1096/fj.11-183988>]
- Jury still out on whether OA leads to greater citations
 - Eysenbach: *The average number of citations of OA articles was higher compared to non-OA articles* <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1459247/>
 - Davis: *Thirty six months after publication, OA articles were cited no more frequently than articles in the control group. No significant citation differences were detected at 12, 18, 24, and 30 months after publication.* <http://www.bmj.com/content/341/bmj.c6854>

OA Impact – reuse



Economic Impact of the Human Genome Project

How a \$3.8 billion investment drove \$796 billion in economic impact, created 310,000 jobs and launched the genomic revolution

Prepared by Battelle Technology Partnership Practice

May 2011



Open access – policy requires CC-BY

- OA policy now specifies that research, for which an OA fee is paid, must be licenced using CC-BY
 - Trust believes that full research and economic benefit of published content will only be realised when there are no restrictions on access to, and reuse of, this information
- Will introduce this requirement from April 2013
 - Working with RCUK on this requirement



CC-BY has potential to increase reach (impact) of our research

- “Heineken effect”
 - Trust-funded research can be “promiscuous” and be made available from multiple locations, reaching parts other researcher can’t reach
- New, derivative works can be created
 - Translations, lay summaries, wikipedia entries
 - New knowledge as a consequence of text-mining
- Commercial exploitation possible



Trust exploring value of “alt-metrics”

- WT have always stated that it is the *“intrinsic merit of the work, and not the title of the journal in which an author's work is published, that should be considered in making funding decisions”*
- Growing support for Article level metrics

The screenshot shows the article metrics page for the paper 'An integrated encyclopedia of DNA elements in the human genome' by The ENCODE Project Consortium, published in Nature 489, 57-74 (06 September 2012). The page displays various metrics including total citations (21 from CrossRef, 4 from Scopus), sharing and bookmark metrics (161 tweets, 16 Facebook shares, 3 Google+ posts, 6 news mentions, 4 Reddit posts, 14 blog posts), and mentions in news, blogs, and Google+ (6 news articles, 14 scientific blogs, 3 Google+ posts). A 'Data not available' icon is shown for Web of Science. The page is last updated on 6 November 2012 at 14:47:32.

nature International weekly journal of science

Home | News & Comment | Research | Careers & Jobs | Current Issue | Archive | Audio & Video | For Authors

Archive | Volume 489 | Issue 7414 | Articles | Article | Metrics

NATURE | ARTICLE | METRICS **OPEN**

Metrics for:
An integrated encyclopedia of DNA elements in the human genome
The ENCODE Project Consortium
Nature 489, 57–74 (06 September 2012) | doi:10.1038/nature11247

Total citations

Data not available (Web of Science) | **21** (CrossRef) | **4** (Scopus)

Sharing & bookmark metrics

Tweets	161	Facebook	16
Google+	3	News	6
Reddit	4	Blog posts	14

Mentions in news, blogs & Google+

News articles (6) | Scientific blogs (14) | Google+ posts (3)

Menschliches erbgut: der datensatz des lebens ist online
Die Zeit

Human genome is much more than just genes
AAAS Science News

Team releases sequel to the human genome
ScienceNews

Breakthrough study overturns theory of 'junk dna' in genome
The Guardian

[View all news articles >](#)

Last updated: 6 November 2012 14:47:32

192817 Page views

All articles supported by the Wellcome Trust

Pick new articles:

› Mentioned in the past

› With keyword

› In these journals

› With identifiers

› From publisher

› With Medline subjects

▼ Funded by

the Wellcome Trust

› Mentioned at any time on

› Order by

[reset filters and search terms](#)

Show matching articles ›

Articles 2,648

Activity 11,469

Journals 679

Export to Excel

Save these filters as a report

Standard

Tiled

Condensed



326

Online social network size is reflected in human brain structure Proceedings of the Royal Society B: Biological Sciences

- ▲ A different social network effect of Facebook - online network size is reflected in human brain structure
- ▲ $r=0.322$ means about 10% only of amygdala volume accounted for by online networking size Grossly overstated claims
- ▲ Is social networking changing our brains? A new study published in #Proceedings B suggests so! Read the #OA
- ▲ New study: Online social network size is reflected in human brain structure @mitocw #neuroscience



222

How unrealistic optimism is maintained in the face of reality Nature Neuroscience

- ▲ How unrealistic optimism is maintained in the face of reality #neuroscience #psychology #optimism #social #cognition
- ▲ Maintaining unrealistic optimism in the face of reality involves diminished neural coding of undesirable info
- ▲ How unrealistic optimism is maintained in the face of reality : Nature Neuroscience : Nature Publishing Group
- ▲ Positive, positive....yes read this: How unrealistic optimism is maintained in the face of reality: Nature Neuroscience



198

Verbal and non-verbal intelligence changes in the teenage brain Nature

- ▲ #pmslas El QI dels adolescents pot variar considerablement segons un estudi publicat a Nature. and a paper on #neuroplasticity
- ▲ Coeficiente intelectual varía con la edad según estudio publicado en la revista Nature.
- ▲ general verbal and non-verbal abilities are closely linked to the sensorimotor skills involved in learning



326

Mentioned by

- 253 tweeters
- 3 Facebook users
- 2 news outlets
- 10 science blogs
- 19 Google+ users
- 2 Reddit threads

Readers on

- 114 Mendeley
- 9 CiteULike
- 0 Connotea

Actions

Open report in new tab

Twitter Facebook News Blogs Google+ Reddit Demographics

So far Altmetric has seen **285** tweets from **253** accounts.



Luis Soto
@luissotopr

<http://t.co/RNepc140>

21 Nov 11



Evelien
@Evelien_Ph

Interessante lectuur! <http://t.co/szShzsad>

22 Jun 12



MariekedeKort
@MariekedeKort

Online social network size is reflected in human brain structure - <http://t.co/p7UF7Zq7>

19 Oct 11



peter nikken
@peter_nikken

Hersenomvang en -structuur jongeren hangt direct samen met hun gebruik van sociale media; vraag is wel wat was er eerst <http://t.co/YS8MEZGF>

19 Oct 11

Reply Retweet Favorite



Sascha H
@Hobbbes

RT @nadia_z: So the number of Facebook friends is linked to our #brain structure, boosting social cognition? Chicken-&-egg-problem: <http://t.co/ZY8ILG5z>

19 Oct 11

Conclusion

- Increasing the impact of our research was a key factor in developing OA policy
- OA articles are already being downloaded (and read?) more than non-OA
- OA research can be re-used, thus further increasing its reach
- To maximise impact of your research, make it OA

