

How to maximize science communication efficacy by combining old and new media

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My Perspective

- Private sector Environmental Scientist
- Climate blogger (The Guardian, Skeptical Science)
- Not an academic, but published a few scientific papers
- Second author on *Quantifying the consensus on anthropogenic global warming in the scientific literature* (Cook et al. 2013)
- Tremendously successful communication of that paper

Cook et al. (2013)

Altmetric #11 most talked-about paper

-  Comparative effectiveness of exercise and drug interventions on mortality outcomes: metaepidemiological study
BMJ **OPEN ACCESS** #7
[See Altmetric report](#)
-  Association of Nut Consumption with Total and Cause-Specific Mortality
New England Journal of Medicine #8
[See Altmetric report](#)
-  Private traits and attributes are predictable from digital records of human behavior
Proceedings of the National Academy of Sciences #9
[See Altmetric report](#)
-  Difficult Sudoku Puzzles Created by Replica Exchange Monte Carlo Method
arXiv **OPEN ACCESS** #10
[See Altmetric report](#)
-  Quantifying the consensus on anthropogenic global warming in the scientific literature
Environmental Research Letters **OPEN ACCESS** #11
[See Altmetric report](#)

Still most-read paper in ERL 18 months later

Most read | **Most cited** | **Latest articles** | **Select articles** | **Featured articles**

In the last 30 days

[Quantifying the consensus on anthropogenic global warming in the scientific literature](#) 
John Cook *et al* 2013 *Environ. Res. Lett.* **8** 024024
[View abstract](#) [View article](#) [PDF \(501 KB\)](#)

[Global assessment of urban and peri-urban agriculture: irrigated and rainfed croplands](#)
A L Thebo *et al* 2014 *Environ. Res. Lett.* **9** 114002
[View abstract](#) [View article](#) [PDF \(1.07 MB\)](#)

[Modulation of UK lightning by heliospheric magnetic field polarity](#)
M J Owens *et al* 2014 *Environ. Res. Lett.* **9** 115009
[View abstract](#) [View article](#) [PDF \(746 KB\)](#)

[Maximum warming occurs about one decade after a carbon dioxide emission](#) 
Katharine L Ricke and Ken Caldeira 2014 *Environ. Res. Lett.* **9** 124002
[View abstract](#) [View article](#) [PDF \(495 KB\)](#)

[CH₄ and N₂O emissions embodied in international trade of meat](#)
Dario Caro *et al* 2014 *Environ. Res. Lett.* **9** 114005
[View abstract](#) [View article](#) [PDF \(1.95 MB\)](#)

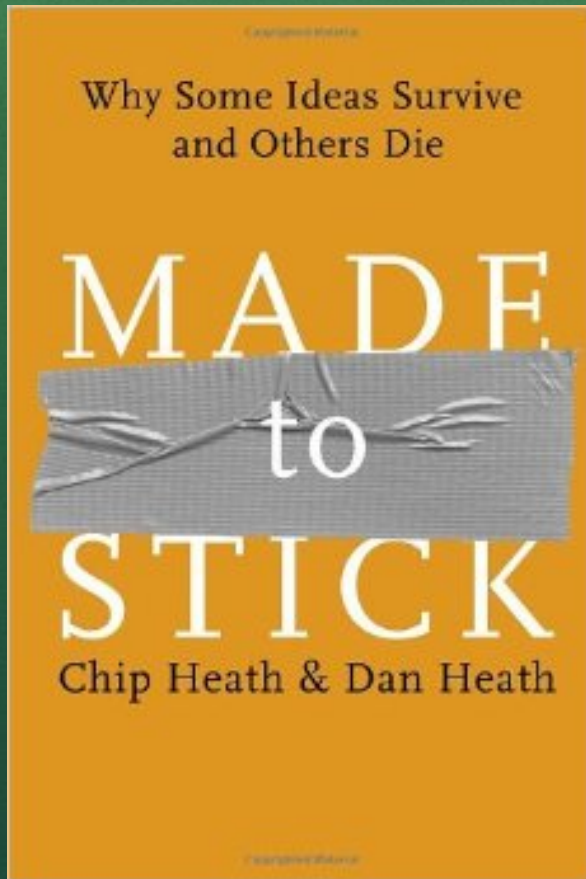
[Conspiratory fascination versus public interest: the case of 'climategate'](#)
Stephan Lewandowsky 2014 *Environ. Res. Lett.* **9** 111004
[View abstract](#) [View article](#) [PDF \(118 KB\)](#)

270,000+ Downloads

Most in all
Institute of Physics
Journals

(#2 has 110,000)

How we did it: Sticky Messaging



- Simple
- Unexpected
- Credible
- Concrete
- Emotional
- Stories

Keep It Simple, Stupid



Good Story

- Citizen science effort by a team of international volunteers
- Largest survey of its kind (12,000 abstracts reviewed)
- Maximized transparency
 - Published in open access journal
 - Created a website to allow public replication
- Same 97% result with two independent methods (credible)
- Result debunked two popular & important myths
 - Reality: 97% consensus vs. 55% public perception
 - Reality: consensus is growing

Traditional Media

- University press releases from academic co-authors
- Contacted environmental journalists
- Conducted interviews

New Media

- Wrote blog posts about the paper and results
- Contacted other climate bloggers
- Created shareable graphics
- Engaged in social media (Twitter, Facebook)

Elon Musk Tweet (1.3M followers)



Elon Musk ✓

@elonmusk



Following

In reality, 97% of scientists agree that we face serious human generated climate change [skepticalscience.com/97-percent-con ...](http://skepticalscience.com/97-percent-con)



RETWEETS

580

FAVORITES

185



11:15 AM - 25 May 2013

President Obama Tweet (51M followers)



A screenshot of a tweet from Barack Obama (@BarackObama). The tweet text reads: "Retweet if you agree it's time to #ActOnClimate." Below the text are icons for reply, retweet, favorite, and a menu. The main content is a green graphic with a sunburst pattern. At the top of the graphic is the Obama "O" logo. The central text says "97% OF SCIENTISTS AGREE". Below that, a blue banner contains the text "CLIMATE CHANGE IS CAUSED BY HUMANS". At the bottom of the graphic is the URL "BarackObama.com/Climate". The tweet's engagement statistics show 6,133 retweets and 1,226 favorites. A row of profile pictures of users who interacted with the tweet is visible at the bottom.

Barack Obama 
@BarackObama 

Retweet if you agree it's time to [#ActOnClimate](#).



97%
OF SCIENTISTS AGREE

CLIMATE CHANGE IS CAUSED BY HUMANS

BarackObama.com/Climate

RETWEETS: **6,133** FAVORITES: **1,226**



Keys to Effective Newspaper & Blog Writing

- Interesting headline is critical (“click-bait”)
- Don’t bury the lede! Intro paragraph like abstract
- Keep it simple and short
 - 700–1,000 words
 - 8th grade level
- Tell a story if possible
- Include simple figures/graphics
- Summarize key points at the end

Maximizing Science Communication Efficacy

- Keep it simple, focus on key points of research
- If possible, tell a story
- Combine old and new media
 - University press release
 - Talk to journalists
 - Talk to bloggers
 - Take advantage of social media
 - Create simple, clear figures/graphics