ETH zürich

Science Communication for Agricultural Economists

Webinar: The relevance and essence of Communication

May 22, 2025, 11.00-12.00

Robert Finger (ETH Zürich, Switzerland)

AECP

In the context of your work, with whom do you think it is crucial to communicate?

https://www.menti.com/alrvgf3v4fkg menti.com / code: 1614 0573

Join at menti.com | use code 1614 0573

Mentimeter

In the context of your work, with whom do you think it is crucial to communicate?

37

Speaker notes

Communication – what, why, to whom, how?

- In the context of your work, with **whom** do you think it is crucial to communicate?
- **Why** is communication important to you?
- **What** do you want to convey?
- **How?** Which communication channels do you think are relevant for communicating in the context of your scientific work?

what, why, to whom, how – my own perception

Whom: other researchers (also outside ag econ), experts outside academia (administration, ministry, interest representation etc.), farmers, farmer associations, policy makers, industry, general public

What: research findings, research agendas (e.g. projects started), general science findings of interest, receive inputs for research questions (communication in both directions)

Why: translation, real-world impact, applicability, influence societal and policy debates and decision making, create awareness for problems, developments, complexities and solutions, receive input

How: different channels, tailored to target audience and topic. Social media crucial

“We asked young scientists to answer this question in the form of a tweet: Is social media good or evil when it comes to science communication? Read a selection of their thoughts below. “*

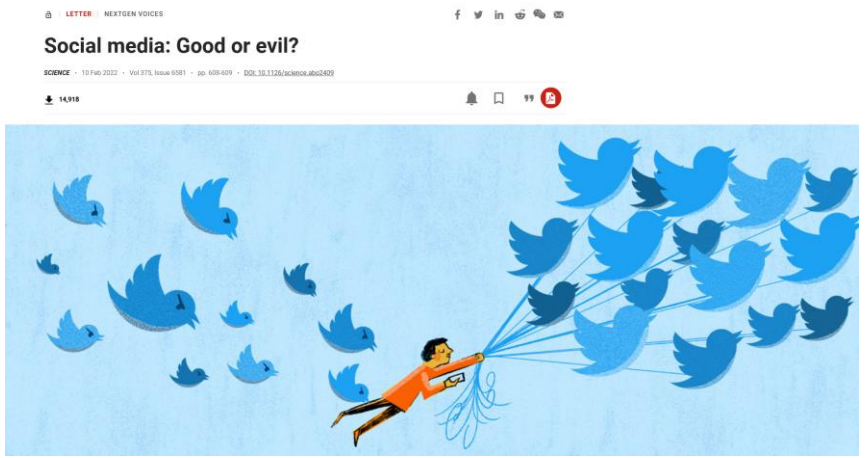
Social media has enabled delivery of information in an economically solvent manner to scientists and the general populace in all parts of the world, making science more accessible and equitable.

On social media, scientists have to be clear and succinct, an incentive to eliminate jargon and streamline the message.

Social media is becoming the go-to venue for science communication. Sharing science on social media means dealing with naysayers, but it also provides the opportunity to engage such people in thoughtful and productive science discussion.

Social media is a force for good. It levels the playing field (you don’t need to be a senior scientist to spread the message); you can reach a broad audience quickly and effectively; and it’s free to everyone (the writer and the readers).

Science relies on the public as much as the public relies on science. Social media empowers scientists with the tools to provide objective scientific discoveries directly to the public, without intermediaries (such as the media) that may be prone to modify the information.



ETH zürich AECP

*https://www.science.org/doi/10.1126/science.abo2409

Social media coverage can boost visibility and citation

Twitter promotion predicts citation rates of cardiovascular articles: a preliminary analysis from the *ESC Journals Randomized Study*

Ricardo Ladeiras-Lopes [1,2*†], Sarah Clarke [3‡], Rafael Vidal-Perez[4], Michael Alexander[5], and Thomas F. Lüscher[6]; On behalf of the ESC (European Society of Cardiology) Media Committee and European Heart Journal

[1]Cardiology Department, Gaia/Espinho Hospital Centre and Cardiovascular Research Centre, Faculty of Medicine, University of Porto, Rua Conceicao Fernandes, 4434-502 Vila Nova de Gaia, Portugal; [2]Cardiovascular Research Centre, Faculty of Medicine of the University of Porto, Alameda Professor Hernâni Monteiro, 4200-319 Porto, Portugal; [3]Royal Papworth Hospital, Papworth Road, CB2 0AY Cambridge, UK; [4]Department of Cardiology, Complejo Hospitalario Universitario de A Coruña, CIBER-CV, University of A Coruña, Lugar Jubias de Arriba 84, 15006 A Coruña, Spain; [5]European Heart House, Les Templiers 2035 route des colles, CS 80179 Biot, 06903 Sofia-Antipolis Cedex, France; and [6]Royal Brompton and Harefield Hospitals and Imperial College, Sydney Street, SW3 6NP London, UK

Received 5 November 2019; revised 13 January 2020; editorial decision 10 March 2020; accepted 11 March 2020

This manuscript has been handled by Guest Editor Prof. Chris Cannon, USA

Aims The association between the dissemination of scientific articles on Twitter and online visibility (including Altmetric score) is still controversial and the impact on citation rates has never been addressed for cardiovascular medicine journals.

Methods and Results The ESC Journals Study randomized 696 papers published in the ESC Journals family (March 2018–May 2019) for promotion on Twitter or to a control arm (with no active tweeting from ESC channels) and aimed to assess if Twitter promotion was associated with an increase in citation rate (primary endpoint) and Altmetric score. This is a preliminary analysis of 536 articles (77% of total) published until December 2018 (therefore, papers published at least 6 months before collecting citation and Altmetrics data). In the analysis of the primary endpoint, Twitter promotion of articles was associated with a 1.43 (95% confidence interval 1.29–1.58) higher rate of citations, and this effect was independent of the type of article. Both Altmetric score and number of users tweeting were positively associated with the number of citations in both arms, with evidence of a stronger association (interaction) in the Twitter arm.

Conclusion Therefore, a social media strategy of Twitter promotion for cardiovascular medicine papers seems to be associated with increased online visibility and higher number of citations. The final analysis will include 696 papers and 2-year scientific citation rate and is estimated to be concluded in March 2021.

Keywords Social media • Twitter • Altmetrics • Citations • Cardiovascular articles • Randomized study

PeerJ

Tweet success? Scientific communication correlates with increased citations in Ecology and Conservation

Clayton T. Lamb[1], Sophie L. Gilbert[2] and Adam T. Ford[3]

[1] Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada
[2] Department of Fish and Wildlife Sciences, University of Idaho, Moscow, ID, United States of America
[3] Department of Biology, University of British Columbia, Kelowna, British Columbia, Canada

ABSTRACT

Science communication is seen as critical for the disciplines of ecology and conservation, where research products are often used to shape policy and decision making. Scientists are increasing their online media communication, via social media and news. Such media engagement has been thought to influence or predict traditional metrics of scholarship, such as citation rates. Here, we measure the association between citation rates and the Altmetric Attention Score—an indicator of the amount and reach of the attention an article has received—along with other forms of bibliometric performance (year published, journal impact factor, and article type). We found that Attention Score was positively correlated with citation rates. However, in recent years, we detected increasing media exposure did not relate to the equivalent citations as in earlier years; signalling a diminishing return on investment. Citations correlated with journal impact factors up to ~13, but then plateaued, demonstrating that maximizing citations does not require publishing in the highest-impact journals. We conclude that ecology and conservation researchers can increase exposure of their research through social media engagement and, simultaneously, enhance their performance under traditional measures of scholarly activity.

ETH zürich AECP

Ladeiras-Lopes, et al. (2020). Twitter promotion predicts citation rates of cardiovascular articles: a preliminary analysis from the ESC Journals Randomized Study. *European Heart Journal*.
Lamb, C. T., Gilbert, S. L., & Ford, A. T. (2018). Tweet success? Scientific communication correlates with increased citations in Ecology and Conservation. *PeerJ*, *6*, e4564.

Scientific Communication – my personal experience

- Science basis is key: papers, presentations etc.
- Direct dialogue with stakeholders (politicians, NGOs, farmers organizations, industry)
- Interviews for newspaper, TV, radio, Podcasts
- Blog for specialized audience in German or French, https://agrarpolitik-blog.com (awarded GEWISOLA Price)
- Contribution general public outreach (general blogs, podcasts, talks, …)
- Social media: LinkedIn, Bluesky, (less on: Mastodon, X) (English and German)

Bringing science across needs targeting

Very few people come across your research by accident
- about 3 million papers were published in 2022*
- communication and targeted approaches can make a difference!

Most of our target audience…
- will not read a paper, even if topic is of interest and open access
- does not care about full details of the methods
- does not like reading in English

Becoming good in writing for non-scientific audience (and social media) can make you a better writer, researcher and teacher

Communication in both ways: opportunity for inputs from stakeholders

Science communications that fulfill this mission must perform four interrelated tasks:

Task 1: Identify the science most relevant to the decisions that people face.

Task 2: Determine what people already know.

Task 3: Design communications to fill the critical gaps (between what people know and need to know).

Task 4: Evaluate the adequacy of those communications.

Fischhoff (2013, PNAS)

ETH zürich AECP

*https://www.science.org/content/article/scienceadviser-scientists-are-publishing-too-many-papers-and-s-bad-science

Hofmann, B., Finger, R. et al. (2023). Barriers to evidence use for sustainability: Insights from pesticide policy and practice. *Ambio*, *52*(2), 425-439.
Fischhoff, B. (2013). The sciences of science communication. *Proceedings of the National Academy of Sciences*, *110*, 14033-14039.

Communication is great but also comes with obstacles (1/2)

Communication often not differentiates whether science is shaky
- make solid science a basis for communication

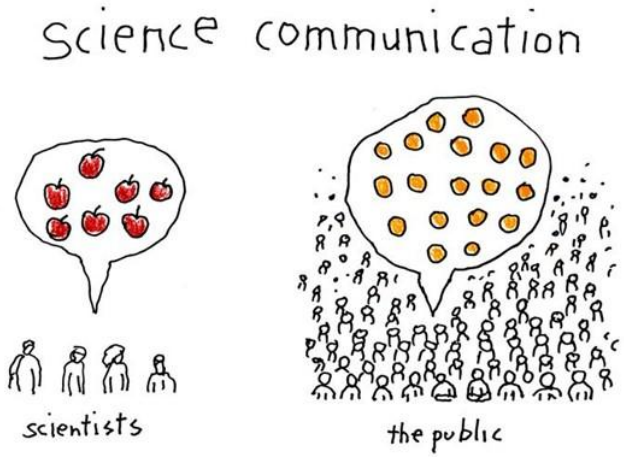
How is your evidence and communication used?
- (few) truth-seeking and sense-making actors, (many) utility-maximizing actors
- → risk of biased interpretation

There is no free lunch
- communication takes time (but you can start small)

Scientists are no media professionals and vice versa (and that's fine)
- determine, who does what

truth-seeking actors make decisions based on the best available scientific evidence
sense-making actors seek to integrate scientific evidence into their belief systems
utility-maximizing actors strategically employ scientific evidence to pursue predefined interests

Hoffmann et al. 2023



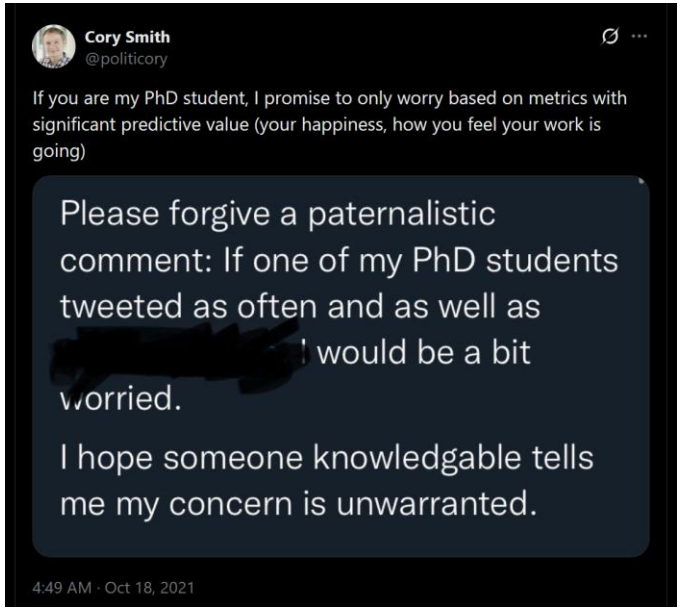
*https://www.science.org/content/article/scienceadviser-scientists-are-publishing-too-many-papers-and-s-bad-science

Hofmann, B., Finger, R. et al. (2023). Barriers to evidence use for sustainability: Insights from pesticide policy and practice. *Ambio*, *52*(2), 425-439.

Communication is great but also comes with obstacles (2/2)

Communication and higher visibility will create feedback
- …and this is not always positive
- simplification and shortening is a risk
- more exposure can make you impactful but also vulnerable

How to manage your professional communication channels?
- private versus professional content
- the internet (and people) do not forget ☺



Kardashian Index

Article Talk

From Wikipedia, the free encyclopedia

The **Kardashian Index** (**K-Index**), named after media personality Kim Kardashian, is a satirical measure of the discrepancy between a scientist's social media profile and publication record.[1][2] Proposed by Neil Hall in 2014, the measure compares the number of followers a research scientist has on Twitter to the number of citations they have for their peer-reviewed work.

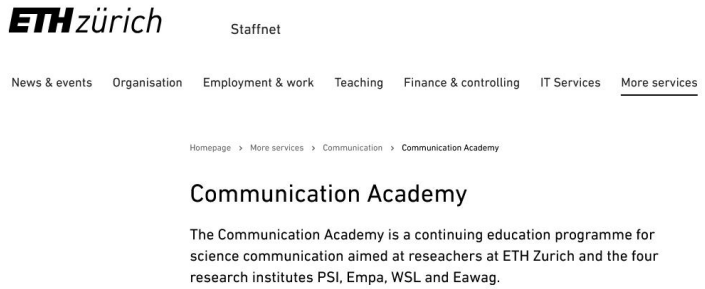
ETH zürich AECP

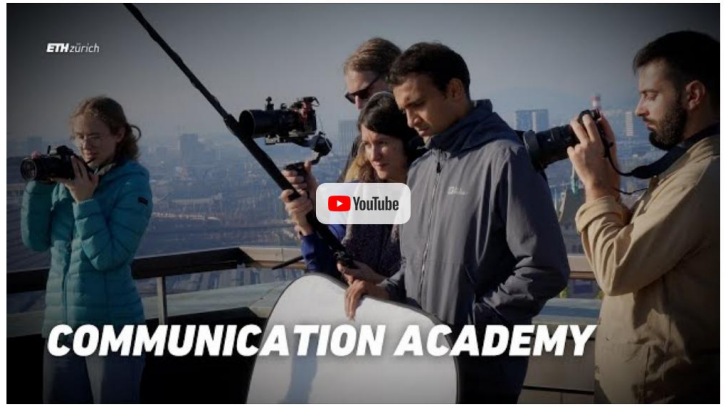
*https://www.science.org/content/article/scienceadviser-scientists-are-publishing-too-many-papers-and-s-bad-science

Hofmann, B., Finger, R. et al. (2023). Barriers to evidence use for sustainability: Insights from pesticide policy and practice. *Ambio*, *52*(2), 425-439.

Conclusions

- To make a difference and have an impact, communication of science and by scientists is needed
- Based on strong research
- Targeting and translation needed
- Communication comes with obstacles and costs
- Get engaged and get support





ETH zürich AECP

https://ethz.ch/staffnet/en/service/communication/communication-academy.html

Thank you!

rofinger@ethz.ch
www.aecp.ethz.ch
https://agrarpolitik-blog.com/

LinkedIn

Bluesky

ETH zürich AECP