

Erasmus School of
Social and
Behavioural Sciences

Reflections on science communication

Pearl Dykstra

LERU Stakeholders Conference
Brussels, 10 November 2022

Erasmus University Rotterdam



An amazing document!



Brings together issues that are often treated in isolation, such as

- open science
- commercialisation of science
- ethics of science practices
- science outreach
- attacks on science



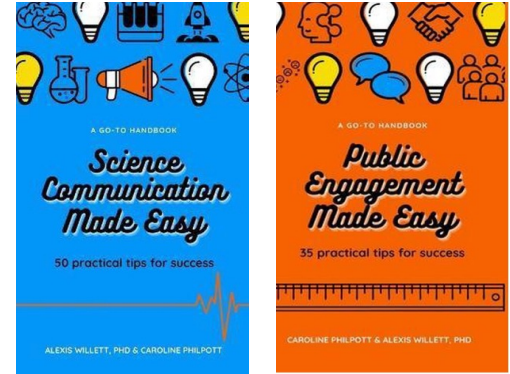
To be a public good, results of science need to be communicated



Erasmus

#14 Communication of science in two principal ways

- Formal (publications contributing to the record of science)
- Less formal (public debate, teaching, policy advising)
- Greater incentives for the formal



Terminology?

- Inward-facing (=fellow academics) versus outward-facing (=non-expert audiences)
- Policy advising can follow “formal” rules (transparency, peer review, etc.)

What about increasing emphasis on creating/showing impact of research?

- New “business” of science communication experts
- Greater need to enable/reward science communication activities

Erasmus

By Invitation | Combating online misinformation

Melissa Fleming and Jeremy Heimans on countering vaccine falsehoods

Traditional health messages don't convince the vaccine-hesitant, but there are digital techniques that can move the needle, say a UN official and a social entrepreneur



“Our work suggests that if organisations combine rigorous science with humour, humanity and a willingness to engage in the culture of the internet, they at least stand a chance in a frenetic information environment.”

Erasmus

#15 Impediments to formal communication of science

- High costs charged by commercial publishers
- Copyright surrender as free privatisation

What to do?

- Coordinated international action (ISC, UNESCO, Plan S, cOAlition S)
- Publishing infrastructures operating alongside commercial platforms (scientific societies)
- Universities renegotiating journal subscriptions

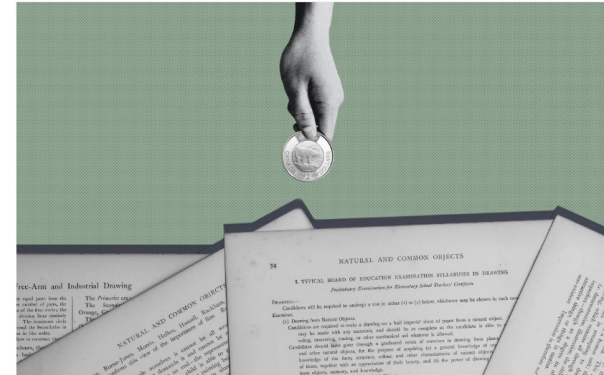


Photo edited by Mariah Wilson; photos courtesy of Unsplash.

Publishers in power: How capitalism debilitates science

#16 Digital revolution has democratized communication

- Mis- and disinformation
- Science needs to articulate its voice with
 - more care and precision, and
 - more attention to education

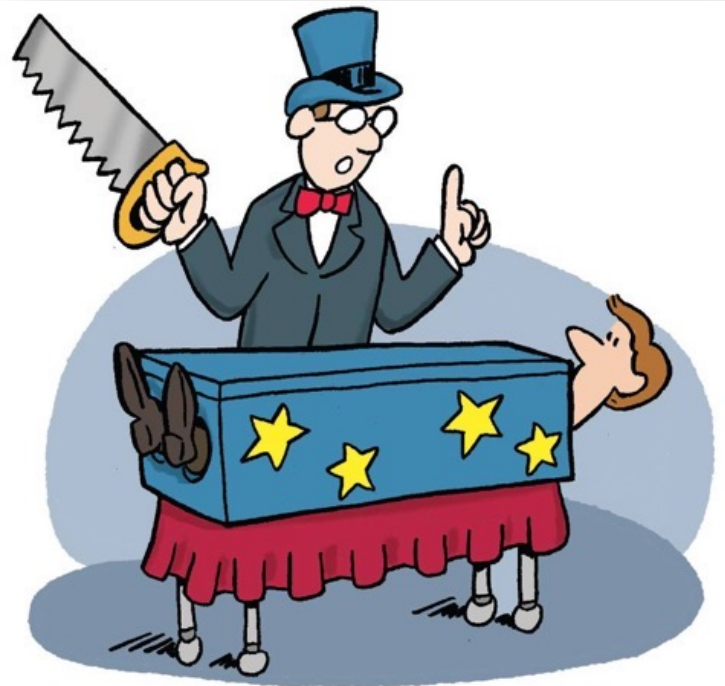


Crucially important

- Simplify, without “dumbing down”
- Elucidate the way in which research produces credible knowledge
- Use science communication tools, exercises, courses
- Avoid exaggerated press releases (Smeets, 2021)

Ezra

Communicate uncertainties



"Before we begin, a word of caution regarding results..."

- Limitations, analyses and interpretations of data
- Whether all aspects of the problem have been considered
- Whether assumptions differ from other studies

Parkhurst (2017): "good governance of evidence"

Erasmus

#17 Science communication: not only individual but also collective responsibility

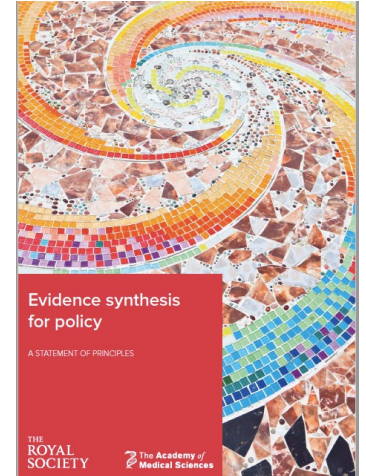
For urgent issues (e.g. climate change), international science organizations must engage in “responsible advocacy”

Making sense of science: a service to society!

ISC mission



The power of coordinated action!

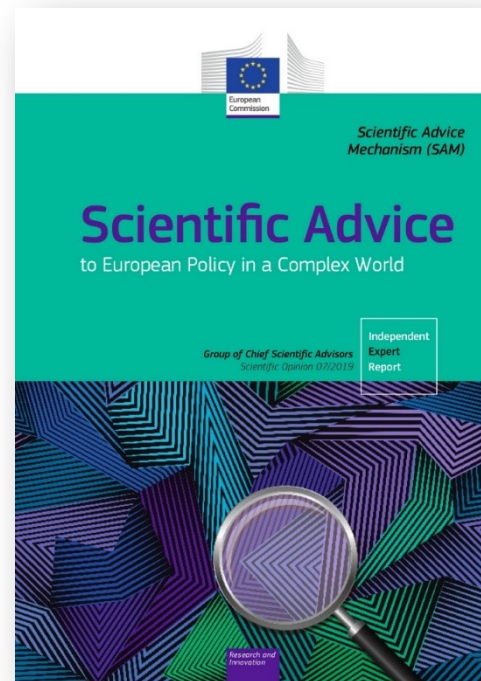


#18 Paradox of entering public policy debates

- Entering = scientists risk losing credibility (i.e. independence)
- Not entering = no counterbalance for lobbying and misinformation

The paradox can be avoided

- To ensure that trust in science is maintained, science advice needs to be provided in an impartial, reliable, relevant and transparent way
- The boundaries between science, scientific advice, and politics need to be clarified



Erasmus

Wrapping up

The editor-in-chief of *Science* (Holden) in a conversation with Alan Alda (Editorial, 23 September 2022)

Alda:

- We can't do much about the politics that's hurt science
- We can't do much about the whirlpool of internet communication that has not only hurt science, but every form of human intercourse
- But what we can do is communicate better

Holden:

- Scientists can't expect to get their message across to nonscientists if they can't get it across to each other.

A handwritten signature in black ink, appearing to read "Alan Alda".