

SciComm as social conversation around science

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Scienza Tecnologia e Società



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Opinion

Is it TikTok or global crisis? How the world lost its trust in scientists like me

Giorgio Parisi



I was attacked online for presenting evidence on Covid - it made me reflect on how we can rebuild public faith in science

Mon 25 Sep 2023 10:58 EDT

“Rebuilding trust in science”



I am a Nobel laureate and I want to write an article about **growing mistrust of science in society** and **lack of confidence in scientists** among citizens



Title: **Rebuilding Trust in Science: Addressing the Growing Mistrust and Lack of Confidence in Scientists**

Introduction:

In an age of unprecedented scientific advancement and discovery, society is grappling with an unexpected and concerning phenomenon: a growing mistrust of science and a lack of confidence in scientists among citizens. Despite the remarkable progress in various scientific fields, skepticism towards scientific findings and skepticism towards scientists themselves are on the rise. This trend poses a significant threat to the foundation of evidence-based decision-making and the advancement of knowledge in our society.

Understanding the Mistrust:

Several factors contribute to the mounting mistrust of science. Misinformation and the rapid spread of unverified or misleading information through social media and other platforms have played a pivotal role in shaping public perception. The public often encounters conflicting information and contradictory findings, making it difficult to discern credible sources from unreliable ones.



Additionally, the commercialization of research and conflicts of interest further erode trust. Instances where financial interests influence research outcomes or where findings are selectively presented for commercial gains raise legitimate concerns about the integrity and impartiality of scientific endeavors.

Communication Gap and Public Perception:

The communication gap between the scientific community and the general public exacerbates the problem. Scientists often struggle to effectively communicate their research and its implications in a manner that is easily understood and relevant to the public. Jargon, complex language, or inaccessible academic articles can alienate the average citizen, leaving them feeling disconnected and mistrustful of the scientific process.

Media portrayal of scientific findings can also contribute to public mistrust. Oversimplification, sensationalism, or misrepresentation of research can distort public understanding and breed skepticism. Coupled with the personal biases or agenda of media outlets, these factors fuel skepticism and diminish public confidence in science.



Restoring Trust and Confidence: To address this growing mistrust, scientists, policymakers, and the media must collaborate to rebuild public confidence in science and the scientific community. Here are a few key strategies:

- 1. Improved Communication:** Scientists must enhance their communication skills, breaking down complex concepts into accessible language and engaging the public through various platforms, including social media, public talks, and interactive sessions.
- 2. Transparency and Integrity:** Maintaining transparency in research processes, addressing conflicts of interest, and upholding the highest standards of integrity will help regain public trust.
- 3. Education and Media Literacy:** Investing in science education and media literacy programs can equip the public to critically evaluate information and discern credible sources from misinformation.
- 4. Ethical Media Reporting:** Encouraging responsible and accurate reporting of scientific findings by the media, devoid of sensationalism and biases, is essential to rebuilding trust.



Conclusion:

Rebuilding trust in science and restoring confidence in scientists is an urgent and collective responsibility. By fostering open communication, upholding transparency and integrity, investing in education, and promoting responsible media reporting, we can work towards a society that values and trusts the scientific community, enabling us to collectively address the challenges of our time based on evidence and reason.

**THE PUBLIC
COMMUNICATION
OF SCIENCE**

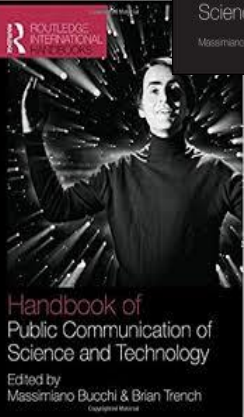
Edited by
Massimiano Bucchi and Brian Trench

CRITICAL CONCEPTS IN
SOCIOLOGY



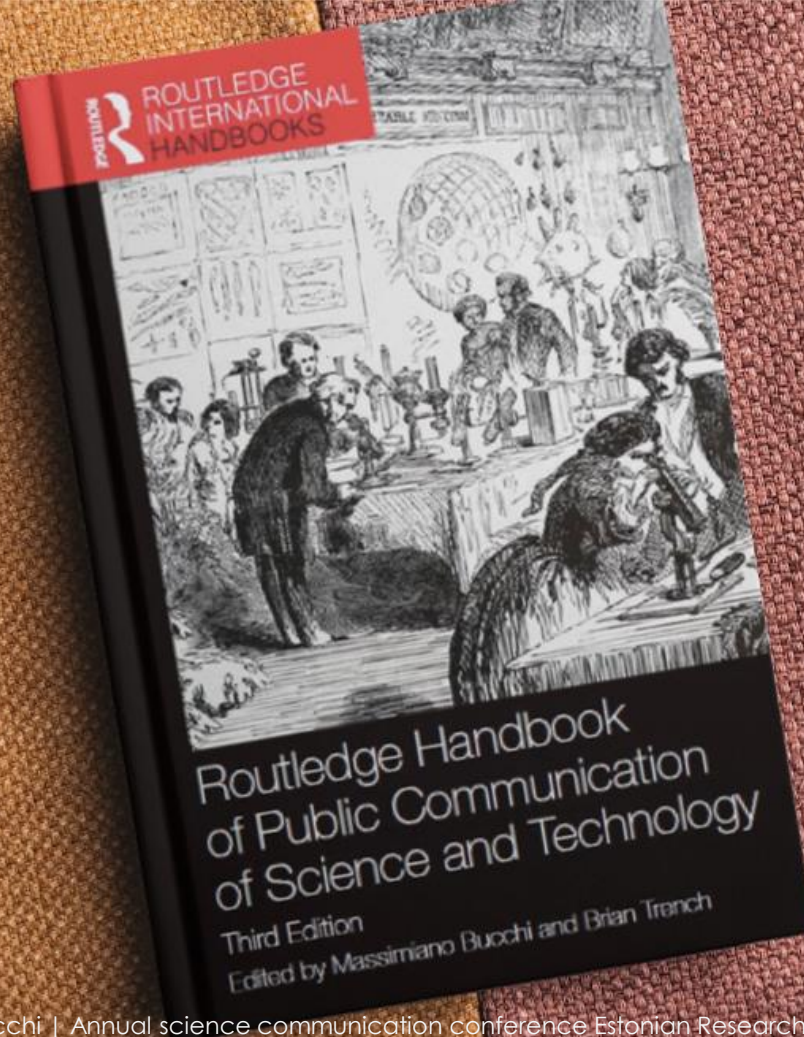
The Routledge Handbook
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Massimiano Bucchi and Brian Trench



Handbook of
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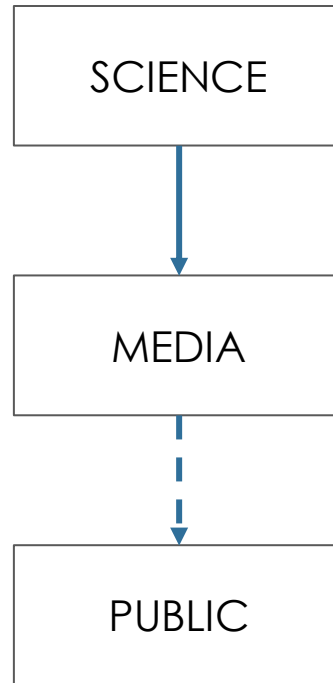


Routledge Handbook
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Third Edition

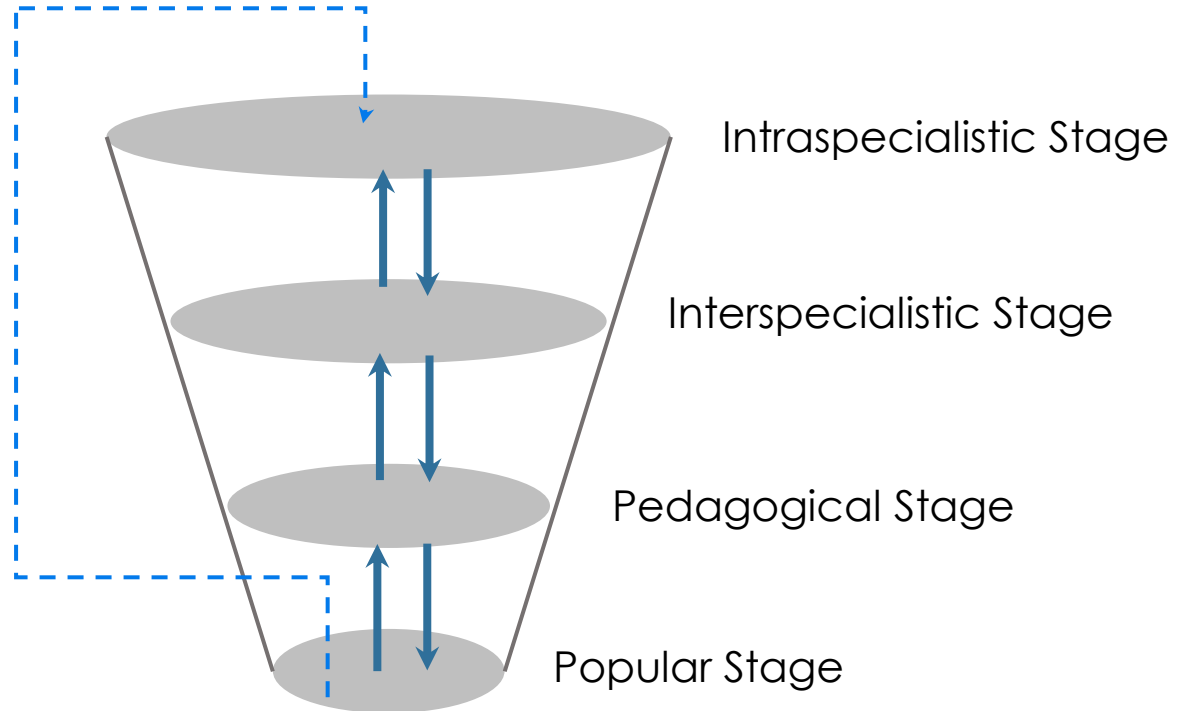
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The “diffusionist view” of science communication (aka deficit model)



A continuity model of science communication

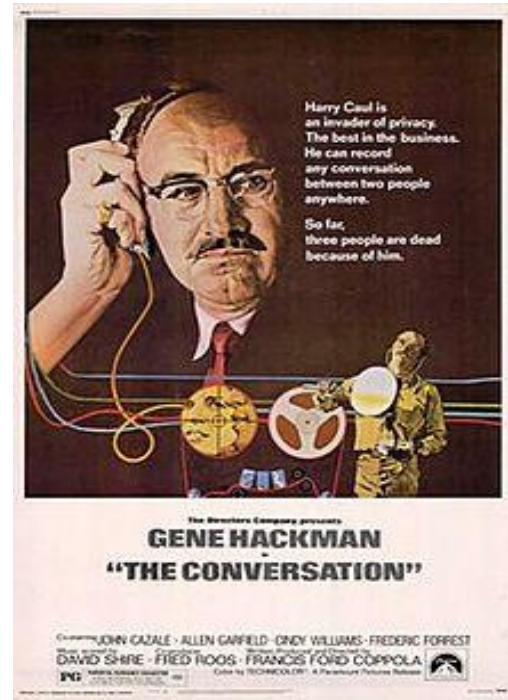
(Bucchi, 1998)



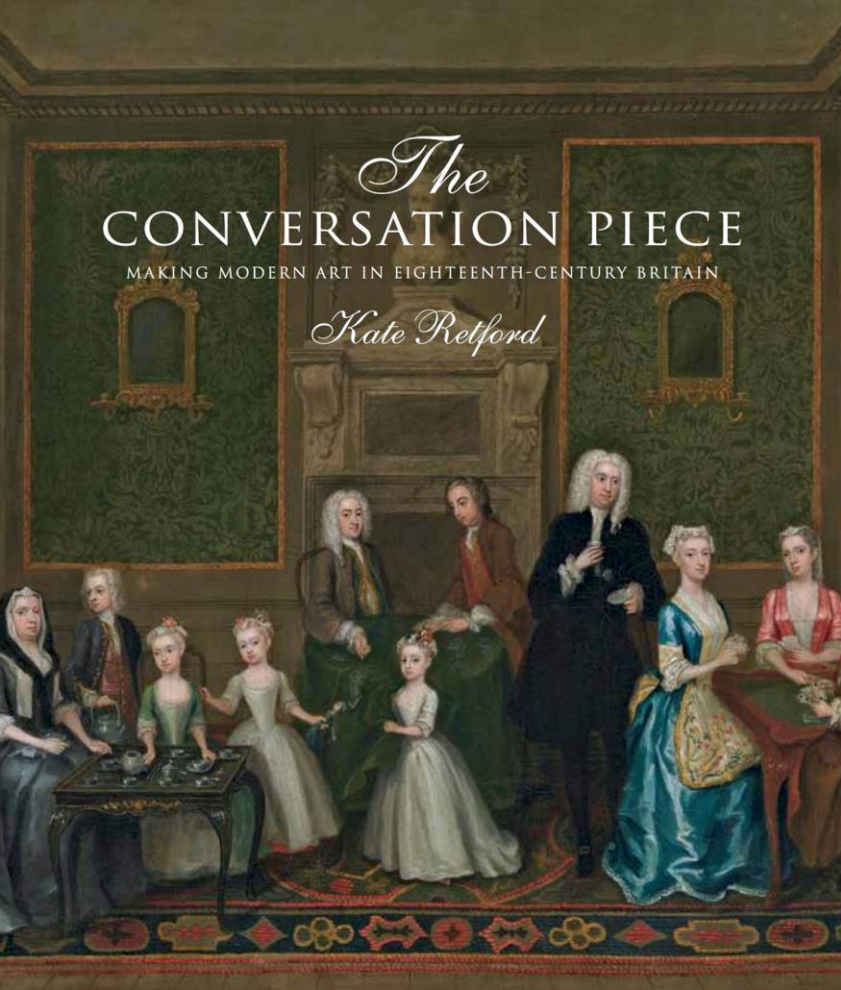
SciComm 2.0: the quality challenge & the “crisis of mediators” (Bucchi, 2013)

	SCIENCE COMMUNICATION 1.0	SCIENCE COMMUNICATION 2.0
<i>Dominant communication model</i>	Mediated, filtered	Direct to consumer
<i>Key actors</i>	Mediators, sometimes scientists (journalists, professional communicators, popularisation channels, science museums)	Research institutions, scientists, digital media corporations
<i>Relation between specialist and public communication levels</i>	Vertical, sequential	Horizontal, simultaneous, overlapping
<i>Quality assurance devices</i>	Editorial brand, channel reputation	?

SciComm as the social conversation around science (“Society talking about Science”)









Edition: **United Kingdom** ▾

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Why scientists should take more coffee breaks



Frameworks of the social conversation around science (Bucchi and Trench, 2021; adapted from Trench 2008)

Base model

DISSEMINATION

DIALOGUE

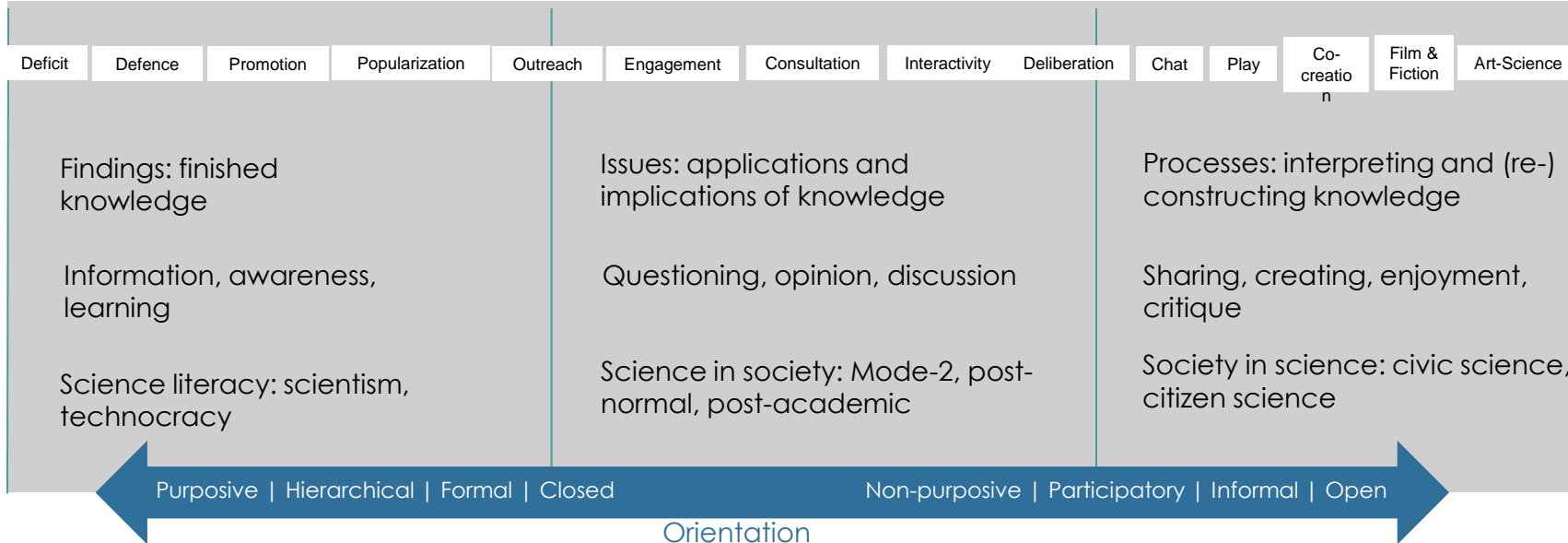
PARTICIPATION

Sci-comm applications

Aspects of science

Public issues

Social perspective



Which communication model(s) for science/public interaction? (Trench, 2006; Bucchi, 2008)

COMMUNICATION MODEL	EMPHASIS	DOMINANT VERSIONS IN SCIENCE COMMUNICATION	AIMS	IDEOLOGICAL CONTEXTS
Transfer Popularisation One-way, one-time	Content	DEFICIT	Transferring knowledge	Scientism Technocracy Rhetoric of the Knowledge Economy
Consultation Negotiation Two-way, iterative	Context	DIALOGUE	Discussing the implications of research	Social responsibility Culture
Co-production Multi-directional, open-ended	Content and Context	PARTICIPATION	Setting the aims, shaping the agenda of research	Civic science Democracy



AI and science communication

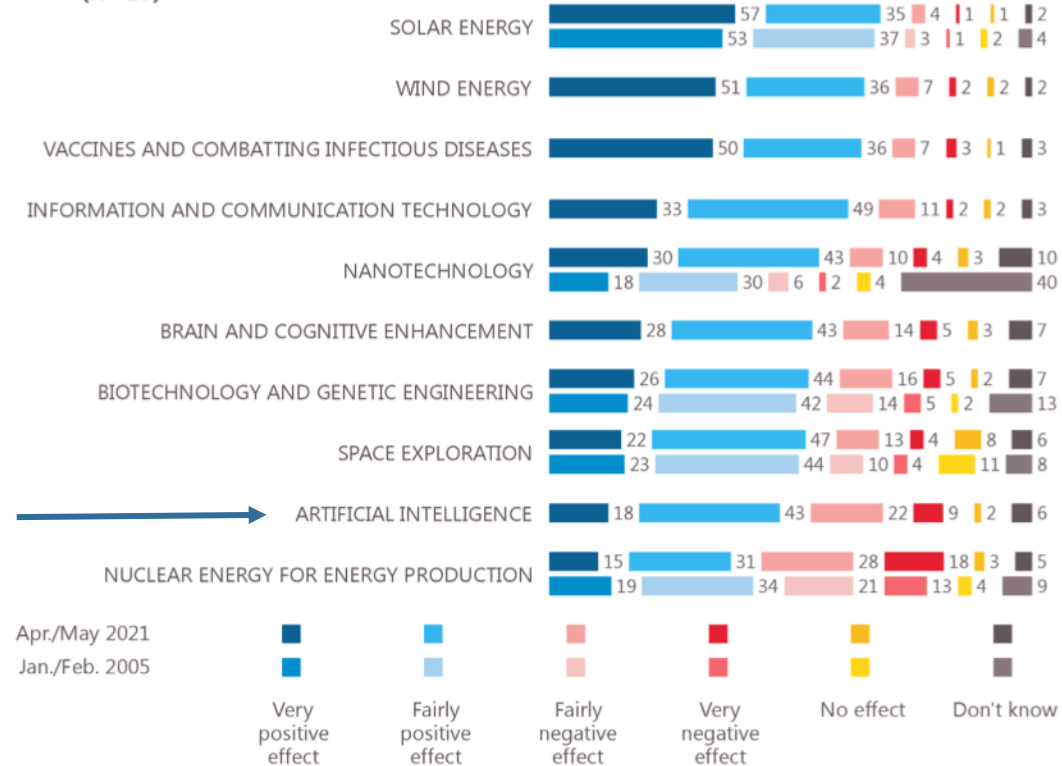
Increased AI agency: focus on public communication “**about**” AI and “**with**” AI
(Schäfer, 2023)

Need to analyze the **impact** of generative AI on science communication and on its broader ecosystem (e.g., “third mission” of universities)
(Schäfer, 2023)

Need to focus on **public perceptions** of AI in news production
(in different fields)

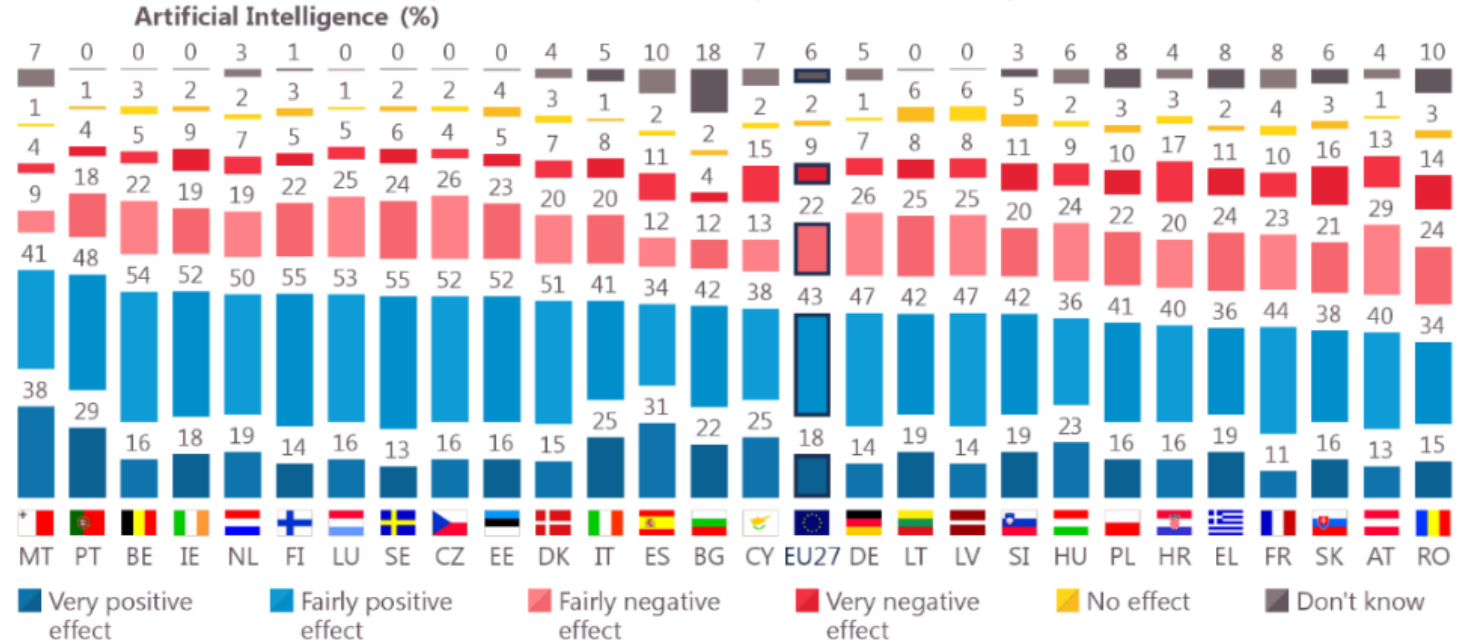
QA8a The following is a list of areas where new technologies are currently being developed. For each of these, do you think it will have a positive, a negative or no effect on our way of life in the next 20 years?

(% - EU)



(Special Eurobarometer 516, 2021)

QA8a.10 The following is a list of areas where new technologies are currently being developed. For each of these, do you think it will have a positive, a negative or no effect on our way of life in the next 20 years?



(Special Eurobarometer 516, 2021)

Public perceptions of artificial intelligence in Italy

(Observe Science in Society, 2023)

Recently, there has been a lot of talk about systems that help writing texts. Do you think these systems...

Should be encouraged as an excellent resource
for educational and work activities 12.9%

Can be used but must be strictly
regulated **54.1%**

Should be banned as they risk taking work and
responsibility away from people 17.3%

Don't know 15.7%

Public perceptions of artificial intelligence in Italy

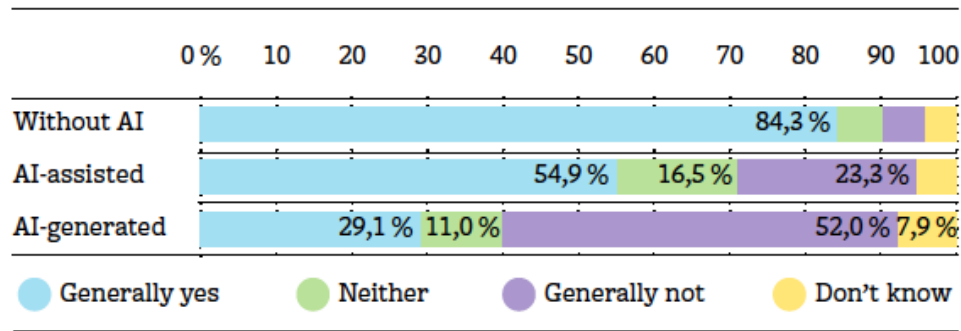
(Observe Science in Society, 2023)

How informed do you feel about artificial intelligence?

Highly informed	2.6%
Somewhat informed	25.6%
Poorly informed	52.9%
Not at all informed	15.8%
Don't know	3.1%

Artificial intelligence in news production: perception and acceptance among the Swiss population (Vogler et al., 2023)

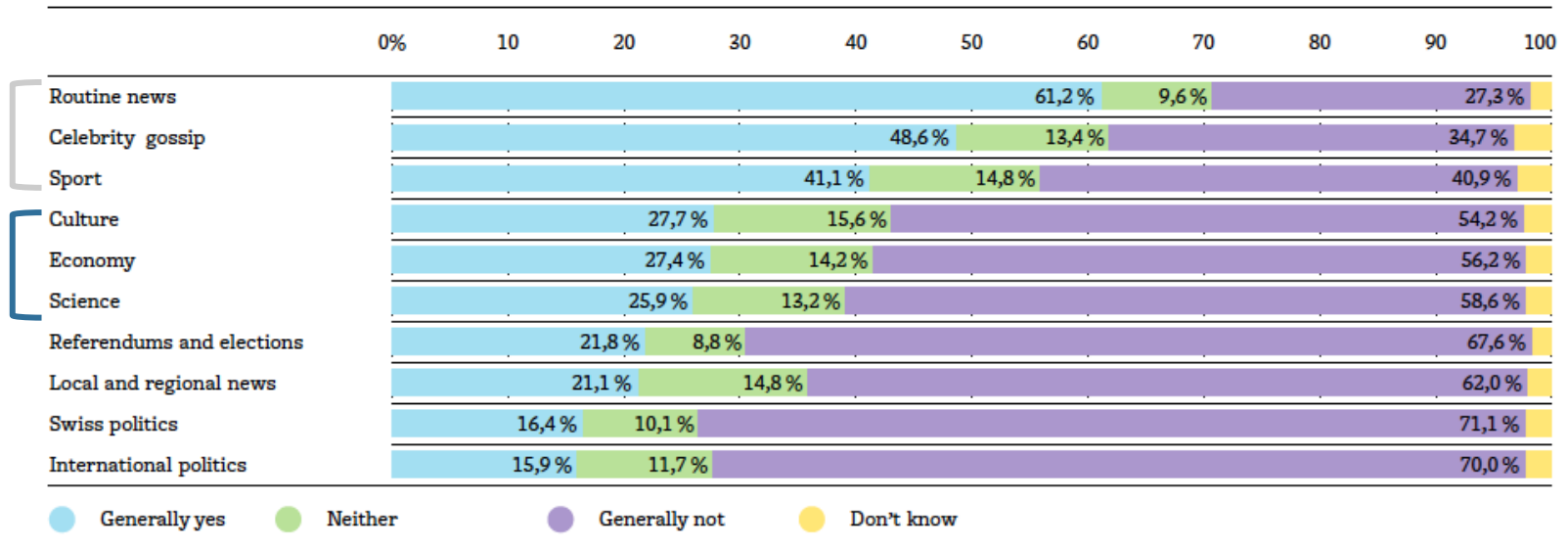
Extent to which respondents are willing to read news content written without AI, with the assistance of AI and wholly by AI (n 1,254)



The rate of public acceptance of AI news content generated depends on the considered **topic**

Artificial intelligence in news production: perception and acceptance among the Swiss population (Vogler et al., 2023)

The extent to which – for various topics – respondents would be willing to read news content written wholly by AI (n = 1,254)





AI and science communication: key issues

Transparency on which content is AI-generated or AI-assisted content

Quality of (science) communication and how to assess it

Blurred distinction between misinformation and disinformation when generative AI is involved

Researchers and **(scientific) institutions** cannot be caught unprepared

SciComm as the social conversation around science ("Society - including machines? - talking about Science")



Massimiano Bucchi | Annual science communication conference Estonian Research Council

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