



**Digitalization Research: Its Challenges and its Implications for Society**



# **Public, Science Mediator and Institutional Actor Perspectives on Responsible Research and Trust in Science**

## **- Implications for Digitalization Research**

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# POIESIS Research Project



# Objectives

- investigates the **relationship** between research integrity, public engagement in research, and trust in research.
- examine how **scientific misconduct**, questionable research practices, poor or absent communication, and/or misinformation affect public trust.
- **Examines the various role that institutions** related to research, communication, and funding play in promoting a research climate that is conducive to society's trust in science

# Output

Recommendations on how to address societal mistrust

Recommendations on how to strengthen public engagement and responsible research practices

Recommendations on how to communicate science responsibly

# Research Studies

Patterns in  
existing  
survey data

Public  
deliberation  
workshops  
(169 citizens)

Mediators  
and  
researchers  
(119 interviews)

Institutional  
stakeholders  
(22 FG, 131 actors, 7  
workshops - 84  
actors)

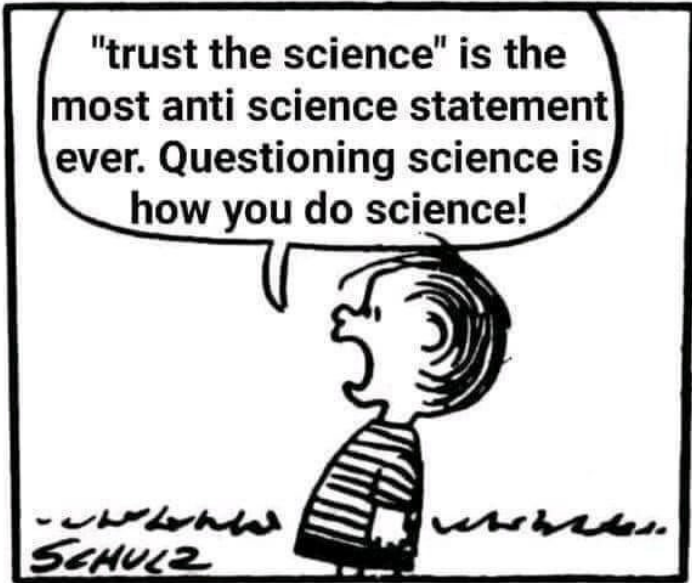
Survey  
experiment  
2800 respondents

61 Danish participants representing citizens, institutional and non-institutional actors, and communicators within research, research support, as well as research and knowledge dissemination



# Trust in Research

# Trust and skepticism



- Trust in research is central to our society and to the significance of research (trust *within* and *in* science)
- However, there are also reasons for a certain degree of **skepticism** or distrust.
- Trust and distrust are, in the same way, an integrated part of democratic governance, trust culture, and an 'institutionalized distrust' (O'Doherty 2023; Uttenthal 2024).
- Is there necessarily a **paradox** between trust and skepticism? (both *default trust* and *vigilant trust* inherent to epistemic trust, Origgi 2014 in F. Hendriks et al.2016)

# Trust in Science

- Trust in research is a **complex** and multifaceted issue, shaped by **risk-taking**
- Trust is **relational and contextual** and depends on a wide range of factors, e.g., related individual and societal factors such as lived experiences, morality, faith, trust in institutions, socioeconomic conditions, knowledge of science, etc. (Master and Resnik 2013; Seethaler 2019; Wellcome Global Monitor 2019).
- "Trust should not be perceived as an object, but rather as a phenomenon with at least **three different aspects**: a psychological aspect (the trust that a person experiences emotionally), a normative aspect (whether someone should have trust or not), and a relational aspect (the nature of the relationship between a 'trustor' and the party they either trust or do not trust)." (O'Doherty 2024, 4).

# + Is there a Crisis of Trust in Science?

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Generally, there is a **high level of trust in science** - but also significant challenges related to distrust, e.g. concerns about government interference in research (Gallup, 2019; Editorial, Nature, 2024)

New EU Barometer survey (2025):

- “83% of citizens think that the overall influence of science and technology is positive. 67% equally agree that science and technology make our lives easier, healthier and more comfortable.

The rise of **digitalization has amplified the need for trust** in science

- → “Digitization transforms the conditions for creating and maintaining trust” (Blöbaum 2016, p. vi) → new actors, new organizations, and new ways of communicating, but also new possibilities for gaining access to people, additional sources, and institutions.

Manipulation and mis/disinformation – new forms of risk evaluations

# + Trust in Science and Digitalization Research

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Denmark is a leading European country in digitalization – high level of trust but also skepticism and inequality in competences and trust

Danish survey on **Danes' digital understanding**, digital skills, digital behavior, and their trust in algorithms:

- Variations in digital literacy and skills among Danes highlight a significant generational divide in digital inequality. Seventy-three percent of respondents showed moderate trust in algorithms, reflecting a "healthy" skepticism, especially among the digitally proficient (Lorenzen et al.2023, CDAI project)

Danish survey on Danes' understanding, attitudes toward, and use of (generative) artificial intelligence.

- Difficulty distinguishing between accurate and misleading information online. Widespread skepticism and a lack of trust in the technology (Lorenzen et al.2024)

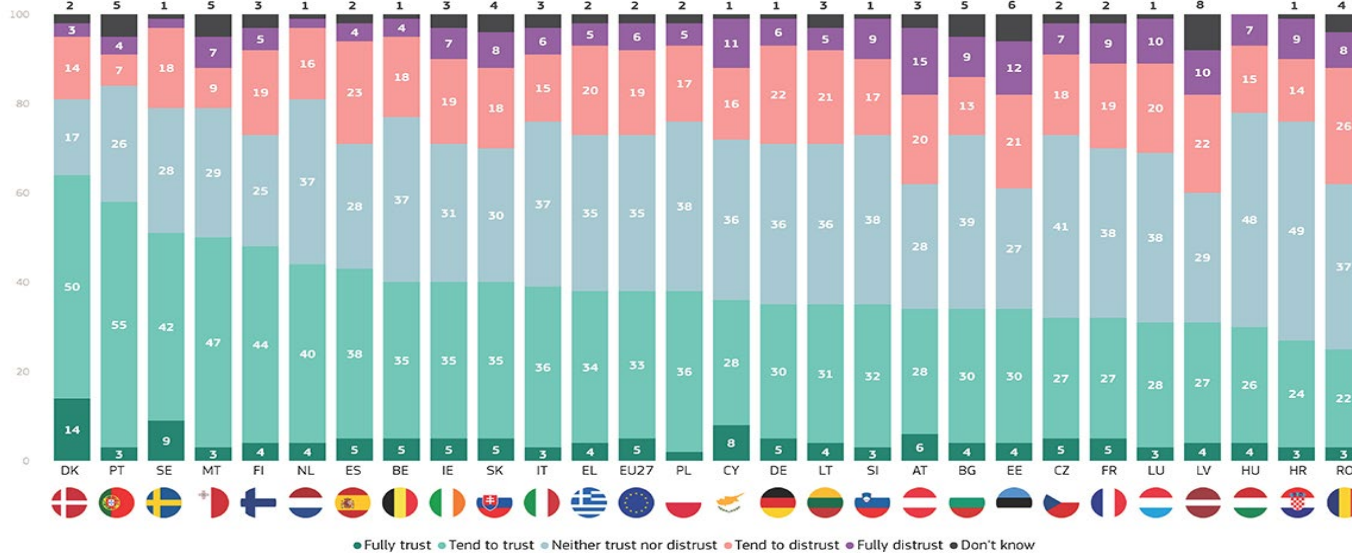
## **Digital psychiatry:**

Digital psychiatry can both create and deepen societal inequalities.

Elderly citizens are less engaged with digital tools and more skeptical of them, as are those with lower socioeconomic status compared to those with higher status (Dyrlev 2024)

# Trust in Science and Digitalization Research

QA20. To what extent do you trust scientific research and discoveries that are created with the help of artificial intelligence (AI)?



**Views about science and technology:**  
 “Renewable energies (87%), **information and communication technology (79%)** and vaccines and combatting infectious diseases (77%) will have a positive effect on our way of life in the next 20 years”.

**Artificial intelligence:**  
 Mixed views: (38%) trust scientific research and discoveries created with the help of AI **(25%) distrust this type of research.**  
 “half of EU citizens (50%) agree that AI used in science advances scientific discoveries that will lead to solutions to major challenges such as climate change and serious diseases”. (EU Barometer Survey, 2025)

EU Barometer 2025. European citizens’ knowledge and attitudes towards science and technology



# Main Findings

Challenges and Opportunities for Strengthening Trust in Research



# Science and Society

- A **complex relationship** between science and society and increasing pressure on the legitimacy of universities and researchers. From institutional to distributed trust (Thunert, 2021, VERITY).
- **No general crisis of trust** in research, but challenges in certain areas (lower trust in France and Greece).
  - Influences increased politicization and ideological instrumentalization of science.
  - Concerns about government interference in research (political influence) and scientific misrepresentation.
  - Concerns about conflicts of interest, lack of independence from economic and ideological interests, and insufficient focus on the arm's length principle.
  - No major mobilization against research, but examples of distrust and skepticism toward certain technological innovations.
  - Focus on the limits of expertise in relation to objectivity and activism.
- Trust in research is also a question of whether **researchers themselves trust** scientific institutions.



# Citizen Involvement and Science Communication

- Positive involvement of the public, but **differing opinions on the effect** → Participatory processes that fail to deliver on their promises can generate **public mistrust** (more criticism in Greece, France, Spain, and Germany)
- Skepticism about the **quality of data** and involvement in decision-making processes due to a lack of expertise
- **Science communication** is a crucial factor for trust in science—more than research integrity and public involvement
- Currently often a reactive and uncoordinated strategy
- **Irresponsible science communication** poses a major challenge and requires navigation in a complex media landscape, often characterized by disinformation and conflicting representations of science
- **Transparency**, clarity and accessibility of sources are important
- **Social media generally perceived as an untrustworthy** means to scientific information by members of the public, whereas traditional and well-reputed media such as TV, newspapers and radio are seen as more trustworthy.
- The reputation, credibility, and legitimacy of research communicators (both institutions and individuals) are crucial.



# Research Integrity

- Institutions and control functions are crucial, but a **heterogeneous landscape** across European countries
- The **global nature of research**: research integrity (RI) could benefit from greater political harmonization, infrastructure, formalized procedures, and support
- High degree of research integrity in Denmark, Germany, and Portugal – less agreement on the state of affairs in Greece, the UK, Spain, France, and Greece
- Cases of **misconduct** can undermine trust, but overall have less impact
- Conflicting expectations and directives - between principles and practice.
- Promoting **openness and transparency** in science by making research protocols, data, and dissemination available to any member of society are considered key to scientific integrity.



# Implications for Digitalization Research

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Certain research areas cause greater skepticism—surveys indicate that digitalization and AI prompt uncertainty despite their acknowledged innovation potential → pose challenges for digitalization research and reconfigured trust relations

Additional research into public perceptions and societal responses

## Science communication:

- Transparent, ethical research and clear communication are key to public trust. Open-access publishing, data sharing, and collaboration enhance accessibility and understanding of science (Fostering trust in the Digital Age, report from TrustOn event)

## Citizen engagement:

- The promotion of a culture of social integration requires the mobilization of all actors in the chain of mediation and digital ecosystem –building of partnerships between e.g. mediators and researchers
- Attention to broad inclusion to reduce digital vulnerability

## Institutional focus:

- What institutional frameworks and conditions can strengthen trust? (O’Doherty 2023)
- Clear incentive structures for researchers, sufficient training, and institutional support.

United Nations Global Principles for Information Integrity (2024)



# Implications for Digitalization Research

## **Factors driving trust - highly complex:**

- Transparent and strong research communication, high professional standards (RI), and citizen and stakeholder engagement can only partially influence trust in research. Other key factors include financial and political independence, research organization, general trust in institutions, and politicization—shaped by political, historical, economic, and research-related contexts and developments.

**Countering politicization** - Strengthening collaboration between research and political actors.

**Building and maintaining a culture of trust** - cannot be taken for granted.



Thank you