THE PROBLEM OF TRUST IN SCICOMM:
TRANSFORMING GLOBAL SCIENCE COMMUNICATION WITH ADAPTIVE MANAGEMENT OF LOCAL UNCERTAINTIES

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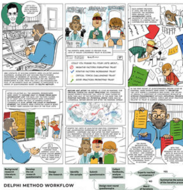
To explore the bond of **trust between science communication and lay publics**, we gathered a pool of experts including **researchers/academics**, **journalists** and **scicomm practitioners** based in **Italy** and **Belgium**. Using the **Delphi method** we answered the following research questions:

- ***Q1:*** According to the experts consulted, what are the critical **topics**, the key **factors**, the possible **risks** and the good **practices** that can affect the bond of trust between general public and science communication?
- ***Q2:*** Is there **consensus** among the experts on the above mentioned issues?

METHODOLOGY



DELPHI METHOD WORKFLOW

SEE OKOLI & PAWLOWSKI (2004), SKULMOSKI, HARTMAN & KRAHN (2007), MARCHAIS-ROUBELAT & ROUBELAT (2011).

RESULTS

CONSENSUS NOT FOUND

POSITIVE FACTORS INCREASING TRUST IN SCICOMM AMONG LAY AUDIENCES

- Increase scientific awareness starting from school
- Communicate complexity in an open and transparent way
- Encourage the habit of critical thinking
- Promote dialogue between people, experts and institutions
- [illegible]

POTENTIAL RISKS AND THREATS THAT CAN UNDERMINE TRUST IN SCICOMM

- Lack of critical thinking
- Dissemination of false pseudo-scientific information
- Ideological propaganda
- Anti scientific beliefs coming from culture, education or relationships
- [illegible]

CONSENSUS EMERGED

CONCERNED DOMAINS WHERE TRUST IN SCICOMM PLAYS A KEY ROLE

- Vaccines
- Climate change
- Role of Pharma companies
- Environmental issues
- Medical sciences
- Communication of health risks
- Public health issues

BEFORE:
GMOs
Topics related with an increased perception of risk
Biotechnology

● = Strong consensus emerged BEFORE and AFTER Covid-19 pandemic spread
BEFORE = Strong consensus emerged only in 2019 BEFORE Covid-19 pandemic spread

GOOD PRACTICES THAT COULD PROMOTE TRUST IN SCICOMM

- Activities in primary school to stimulate curiosity and passion for research
- Provide training about communication techniques to scientists and researchers
- Promote scientific literacy in school textbooks
- Joint initiatives between scientific institutions and the media, especially at the local level
- Public events about science

BEFORE:
Understand society concerns and engage the audience as stakeholders
Implement regulations and laws based on scientific evidence
Organize meetings with researchers and patients to promote trust in medical science
Make scientific role models more visible
Promote public science-based debates before taking public health decisions

AFTER:
Direct encounters with science communicators and scientists
Science festivals targeted to lay audience and young people

● = Strong consensus emerged BEFORE and AFTER Covid-19 pandemic spread
BEFORE = Strong consensus emerged only in 2019 BEFORE Covid-19 pandemic spread
AFTER = Strong consensus emerged only in 2020 AFTER Covid-19 pandemic spread

CONCLUSIONS

Our exploratory research provided **four sets of qualitative factors** which may prove useful for further investigation and local scicomm practice, expressing **consensus** (for **topics** and **practices**) and **uncertainty** (for **risks** and **opportunities**). Such factors emerged from a meaningful pool of experts when asked about the bond of trust in science communication that connects lay public(s) to scientific endeavour(s).

Besides the consensus emerged over **key topics** and **good practices** to foster trust in scicomm, the disagreement over **root causes for trust and mistrust** detected with the Delphi method revealed **meaningful factors of uncertainty** in the practice of science communication.

These uncertainties confirm that communication models based on the abstraction of a generic "lay audience" are affected by the **lack of information about the specific context**, community, culture and cultural history, biases, demographic composition, misinformation and social debate characterizing the social system and the target audience where the model is applied.

The qualitative outcomes of this research, combined with previous literature on the topic of trust in scicomm, suggest an opportunity to **transform science communication practice with an "adaptive approach" to different contexts and needs**, choosing between deficit, dialogic and participative **models**, covering a wide spectrum of **topics**, using an extended set of **practices**.

STRATEGIC IMPLICATIONS

REFERENCES

[illegible]

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