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REVIEW

Science communication and its role in communication research: reflections from the 4th Science Communication Preconference at ICA25

Reviewed Conference

4th Science Communication Preconference
at the 75th Annual Conference of the International Communication Association
Denver, CO, USA
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Reviewed by
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Abstract

Held one day before the 75th ICA conference, the fourth Science Communication Preconference brought together about 60 international researchers to explore the role and contribution of science communication to the broader field of communication research. The conference's emphasis on inclusion, global perspectives, and theoretical development, as underscored by two keynotes and 23 presentations, was highlighted by the official recognition of science communication as an ICA interest group — an encouraging milestone for the field at a time when science is increasingly under pressure.

Keywords

Science communication: theory and models; Science and media; Scholarly communication

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One day before the official opening of the 75th annual conference of the International Communication Association (ICA), the Science Communication Preconference was held for the fourth time — this year on the Spur campus of Colorado State University in Denver, USA. Approximately 60 registered participants met in the Mile High City to engage with the conference theme "Research on Science Communication: Role and Contribution to Communication Science and Beyond" across two keynotes, four panels, and 23 individual presentations. Organized by researchers from Australia, Austria, Brazil, China, Germany, South Africa, Switzerland, and the USA, the conference aimed not only to reflect on the role and contribution of science communication research for communication research and related fields, but also to further consolidate and promote the broad research field within and outside the usual approaches.

In her opening keynote, Sahana Udupa, a professor of media anthropology at LMU Munich (Germany), demonstrated the broad range of science communication research by addressing current challenges through the lens of three barriers. She highlighted how digital communication spaces place science under pressure from (1) social media abusive cultures (e.g., the "pleasure" of collective aggression), (2) political consultancy and digital influence operations (e.g., "disinformation for hire"), and (3) (discursive and territorial) ideologies (e.g., anti-immigrant rhetoric as dominant theme). These observations drew on findings from her recent work [see Udupa et al., 2021] and outline a complex landscape in which science communication (research) must increasingly navigate. Following this wide-ranging opening, the conference itself had a similarly broad scope.

1 ▪ Role and contribution of science communication research in related fields

Four was the number of the conference: in its fourth edition, it featured four panels that explored the role and contribution of science communication research to the broader field of communication research, each focusing on a distinct subfield, and, coincidentally, some sessions even took place on the fourth floor. While not all presentations aligned clearly with the selected subfields (illustrating the challenge of capturing the breadth of the research field), the panels nonetheless offered a sound overview of current science communication research.

As part of (1) journalism studies, presentations examined science communication in the context of journalistic reporting, such as the role of scientific experts in COVID-19 coverage in Japan and China, or the sourcing practices within science journalism (often associated with so-called "churnalism"). Regarding a conflict-based and negative bias in (science) journalism, one study examined the use of constructive elements in environmental journalism, showing that solution-oriented media coverage can have positive effects, for example, on efficacy perceptions.

At the interface between science communication and (2) political communication, several studies presented addressed the communication strategies of political actors and stakeholders in politicized topics, parliamentary debates, or discourses on X. Furthermore, studies emphasized the importance of publics in this research field. One contribution discussed the shift from the deficit model to "the empowerment model of the informed public", while another cross-national study of 16 countries found overall high support for

science-oriented politics. However, the latter study also highlighted that populist orientations are associated with skepticism toward science in politics — an important factor to consider in efforts to depoliticize science.

The panel on (3) communication and technology highlighted the significance of social media platforms such as Instagram and LinkedIn for science communication. These platforms were shown not only to help break down (visual) stereotypes and strengthen trust, but also to tailor communication to the target group. In addition to social media, search engines play an important role: a study analyzing Google search results in 21 languages revealed notable differences in the availability of high-quality scientific content across languages. As in previous conferences [see Fleerackers, 2022; Metag, 2024], artificial intelligence also emerged as a recurring theme. Research focused, for instance, on how voice-based AI systems act as intermediaries for science-related information, and how AI-generated imagery shapes science perceptions through visual metaphors.

Finally, a considerable number of presentations — even across all panels — related to the subfields of (4) health and environmental communication, whose close connection was illustrated in a study on the concept of communicating planetary health. While one study focused on health influencers, most contributions addressed climate change, such as a community science project that focused on climate solutions in Puerto Rico. The strong societal relevance of this topic was further emphasized by a study on public perception of and online engagement with various scientific topics, which found climate change (and vaccination) to be perceived as more socially significant than other selected scientific topics examined in the study.

2 ▪ Further science communication research within and outside the usual

The conference concluded with a keynote by Bruno Takahashi, a professor of environmental communication at Michigan State University (USA). He emphasized that future science communication research must increasingly take place beyond the usual, both in terms of diversity of studies and inclusion of voices across cultures, races, and especially countries most affected by climate change. As an example, he highlighted the journal *JCOM América Latina*,[1] which enables multilingual publication.

This appeal for broader inclusion was echoed in several presentations, which called for greater openness in science communication research toward cultural contexts and regions such as the Global South. At the same time, the need for further theoretical work was emphasized (e.g., reflections on the limitations of the deficit model, the conceptual boundaries of science communication, and a motivation theory framework). While most studies presented focused on science communication at the individual level — whether through the media, political discourse, or by scientists — research on the organizational settings was limited.

In sum, the conference demonstrated not only the scope and potential of the research field of science communication, but also its blind spots — gaps whose exploration is particularly important in times of global crises and increasing pressure on science itself. Against this

1. https://jcomal.sissa.it/.

backdrop, the news that science communication has finally found a home as an interest group within the ICA is all the more promising.

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