A JOURNAL BY SISSA MEDIALAB

JCOM

REVIEW

Reviewed book: *The Science Media Interface: on the Relation Between Internal and External Science Communication*

Reviewed Book

Broer, I., Lemke, S., Mazarakis, A., Peters, I. and Zinke-Wehlmann, C. (Eds.) (2023). *The Science Media Interface: on the Relation Between Internal and External Science Communication*.
Berlin and Boston: Walter de Gruyter GmbH

Reviewed by

Laura Moorhead

Abstract

The Science Media Interface explores how scientists and their institutions orient their research and publication criteria and processes towards those of journalists and media organizations as a way to gain public attention. The editors present an impressive range of methods, from bibliometrics, an adaptation of the Delphi method, ethnography, mixed-methods analysis, and the path analysis method.

Keywords

Public engagement with science and technology; Scholarly communication; Science and media

Received: 31st January 2025
Accepted: 3rd February 2025
Published: 4th March 2025

Research, as we know, enters public discourse in a myriad of ways and forms. In particular, scientists, science communicators, journal editors, and journalists share scientific facts and findings; however, their professional norms, practices, and goals vary. All act as arbiters and gatekeepers of knowledge in their own ways. Typically, scientists decide what to study and where to publish, and science communicators choose which findings to promote (and where). Journal editors, in turn, pick and choose what to publish and publicize among journalists working to influence what information makes it to laypeople. Yet, today's digital media encourage overlaps and, in turn, interwoven relationships that affect both external and internal forms of science communication. This book considers the interplay between these once disparate groups and their effect on the scholarly communication system, particularly in regard to the often overlooked measures of impact evaluation.

Fundamental to this book and the studies it presents is the COVID-19 pandemic, which brought to the fore the responsibility and pain points shared by researchers and journalists alike. Each group, with its own professional mandate to share knowledge with the public, needs to understand the other's modes of communication. The editors, in their introduction to the book, highlight how these groups, despite their differences, share many of the same struggles. Notably, there is the push "to produce more content in less time", often with fewer and fewer resources. There is also the ongoing drive "to search, select, verify, contextualize, and evaluate" more and more scientific output for a growing number of outlets and diverse platforms. Clearly, few, if any, science communicators have an easy job these days.

The Science Media Interface offers broad appeal, with the editors exploring how scientists and their institutions orient their research and publication criteria and processes towards those of journalists and media organizations as a way to gain public attention. This is likely an area of interest among researchers from science of science, bibliometrics, science communication, and journalism studies, as well as journalists reporting on science and health. The book consists of five studies presented as standalone chapters, with the first three chapters analyzing how journalists report on research (e.g., through a reliance on press releases, science media centers, and preprints) and the last three chapters considering the effects the media have on scientists (e.g., the degree of coverage allotted, the interplay between promotion and received attention of research, and a questioning of journalism's capacity to focus public attention). The book largely presents the work of German scholars within German settings; however, the efficient tome — just over 190 pages — has international if not universal appeal, with contributors from scientometrics, science studies, communication science, and journalism research.

In the first chapter, Enrique Orduña-Malea and Rodrigo Costas analyze press releases published by EurekAlert! from 1996 until 2021, as well as tweets and webpages inclusive of URLs referring to EurekAlert! press releases. They convincingly argue that the volume and online dissemination of these press releases make them relevant in the measurement of science communication-scientometric research interactions. In the next chapter, Irene Broer explores the intermediary role of Science Media Center Germany through its construction of science news with routines of curation, selection, framing, and broadcasting that connect the norms of science and journalism. Broer maps how SMC Germany produces public knowledge that negotiates journalistic and scientific norms. In Chapter 3, Arno Simons and Alexander Schniedermann consider preprints in the German news media before and during the pandemic through a comparative mixed-methods analysis, adding to the larger call from researchers that journalists be more transparent about their use of preprints. They also call

attention to the phenomenon of preprints becoming a newsworthy and ongoing topic outside of the pandemic.

Moving into the latter portion of the book with Chapter 4, Max Brede, Athanasios Mazarakis, and Isabella Peters ask what drives researchers — primarily senior scientists in economics and business — to seek out research publications found in the news? The authors relied on a three-phased variation of a Delphi survey followed by a focus group, and reported that expert opinion and methodological quality were key drivers for these researchers. In the fifth chapter, Steffen Lemke, Athanasios Mazarakis, and Isabella Peters study the interplay between research articles' promotion (via press releases, embargos, a journal's prestige) and their received attention (in mainstream news media, Twitter, and academic citations). The authors relied on the path analysis method and a dataset of research articles constructed through empirical data from Web of Science, Altmetric.com, EurekAlert!, and Science Media Center Germany. They found considerable associations between promotion in external science communication and the attention research articles receive through mainstream and social media, particularly in regard to promotion through embargo emails and press release promotions.

The final chapter, by Markus Lehmkuhl, Nikolai Promies, and Melanie Leidecker-Sandmann, is the book's most provocative. The authors push against the notion that journalism has social significance. Instead, through their assessment of the social impact of science reporting, they posit that journalists rarely succeed in focusing public attention on individual scientific events or actors. In fact, they explain, "Only a tiny part of the scientific study output is even mentioned in journalistically dominated dissemination media. And of this tiny part, journalism … focuses public attention through congruent selection on a small proportion: approximately one tenth of the studies selected." The authors also highlight a continued concern, that journalists rely on a very small number of individual journals (i.e., *Science*, *Nature*, *Lancet*, *JAMA*, and *PNAS*), which function as de facto agencies for scientific studies relevant to the public. As such, there was little empirical substance for what the authors call "the theoretical optics of the medialization thesis" in the consideration of feedback from real media coverage.

Collectively, these chapters offer readers a valuable view into the science-media interface and previously under-researched phenomena through the evolving practices of internal and external science communication. The book considers scientific results as communicated to the public and calls into question the underlying assumption that science reporting by journalists has significant social impact. Together, the studies from these chapters also offer an impressive range of methods, from bibliometrics, an adaptation of the Delphi method, ethnography, mixed-methods analysis, and the path analysis method. Each shares inspiration and a potential path for future studies.

About the author

Laura Moorhead is an associate professor at San Francisco State University's Journalism Department and a researcher with the ScholCommLab at Simon Fraser University. A former contributing editor at PBS/Frontline World and senior editor at Wired, she explores tensions between journalistic practices and ideals. She considers what narratives are elevated by journalists and how they report societal issues such as homelessness and access to health information and scientific research. Laura also researches access to knowledge and is a council member of the Markkula Center for Applied Ethics at Santa Clara University. She holds a Ph.D. from Stanford University.

lauralm@sfsu.edu @lauramoorhead

How to cite

Moorhead, L. (2025). 'Reviewed book: *The Science Media Interface: on the Relation Between Internal and External Science Communication*'. *JCOM* 24(01), R04. https://doi.org/10.22323/2.24010704.

ISSN 1824-2049. Published by SISSA Medialab. jcom.sissa.it