

UDK:001.9:316.77:81'42

SCIENTISTS' PERCEPTIONS AND USE OF HYPE IN SCIENCE AND MEDIA
COMMUNICATION

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Abstract: This study investigates how scientists perceive and manage the use of hype in their science communication efforts. Drawing on qualitative interviews with researchers from various fields, it explores how funding pressures, performance metrics, and audience expectations influence scientists' communication strategies. Thematic analysis revealed that many scientists experience tension between attracting attention for their research and maintaining scientific rigor and honesty. While some see hype as a necessary tool to secure funding and engage the public, others fear that exaggeration could undermine trust in science.

Key words: *rigor, honesty, hype, communication, media, respond, evaluate*

Introduction

This research examines how scientists perceive and apply hype in their media communications, shedding light on their strategies for presenting breakthroughs as well as their concerns about engaging with the public (Caufield, 2018; Tiffany et al., 2022). The study responds to a pressing need to evaluate scientists' methods of sharing their work with the public and its potential effects on public opinion and policy debates (Caufield et al., 2021; Kousha & Thelwall, 2020). Moreover, it investigates scientists' communication attitudes, with a particular emphasis on hype

Background Hype in the context of scientific communication has increasingly attracted scholarly interest, since it is common across a variety of formats including journal articles, abstracts, and funding proposals. Although several studies have assessed the outcomes of hype, there is still insufficient exploration of scientists' own perspectives and practices surrounding this topic.

Existing evidence suggests that scientists themselves are often active contributors to hype, partly because of intense competition over research funding. For instance, Chubb and Watermeyer (2017) studied academics in the UK and Australia and showed that funding

pressures motivate them to use sensational language, making overstated claims of impact seem normal and even necessary for career survival. Some described themselves as “impact merchants,” seeking to fulfill managerial expectations. These researchers portray scientists as capable storytellers who skillfully construct convincing narratives about uncertain futures, all the while recognizing their own participation in a system they sometimes critique. This study, however, takes a novel approach by concentrating on scientists’ own attitudes about hype — exploring their thoughts, feelings, and actions. Departing from the traditional treatment of hype as merely a communicative act (Powers, 2012), this perspective aims to close a knowledge gap by centering the voices of scientists themselves, in line with scholars such as Nisbet et al. (2015).

Method

This research applies an interpretive qualitative approach to explore scientists’ perspectives and practices regarding the use of hype in communicating their research. To capture the nuanced beliefs, attitudes, and behaviors involved, the study employs semi-structured interviews, offering the flexibility to probe participants’ lived experiences while maintaining a systematic structure.

Participants will be purposefully sampled from various academic disciplines — including the natural sciences, engineering, medical fields, and social sciences — to gather a broad and diverse range of viewpoints. Recruitment will focus on scientists with experience communicating their work through media outlets, press releases, interviews, or public lectures.

For data analysis, the study will adopt Braun and Clarke’s (2006) thematic analysis framework. This process involves familiarization with the data, systematic coding, identifying patterns, and developing overarching themes that reflect participants’ perspectives on hype. An iterative approach will allow codes and themes to evolve in response to emerging insights during the analysis.

Credibility and trustworthiness will be enhanced through measures such as triangulation among researchers, member checking with participants, and maintaining a transparent audit trail of analytic decisions. Prior to data collection, ethical clearance will be obtained from the relevant institutional review board, and informed consent will be secured from each participant.

Results.

The analysis of interview data revealed several interconnected themes reflecting scientists’ experiences and attitudes toward hype in their science communication practices.

Participants described a delicate balancing act between generating public interest and maintaining scientific integrity.

One dominant theme concerned navigating funding pressures. Many scientists acknowledged that competitive research environments incentivize amplifying the significance of findings, sometimes bordering on hype. Some respondents admitted to highlighting best-case scenarios or using optimistic phrasing to attract attention from funding agencies, media, or policymakers. They expressed unease about these practices, fearing they might mislead audiences or harm scientific credibility over time.

A second theme related to ethical tensions in hype usage. Scientists discussed the moral discomfort they feel when embellishing the potential impact of their research, yet noted that overselling has become normalized in certain academic cultures. Participants described how performance metrics and impact-driven evaluations subtly push them toward bolder, more striking claims, even when scientific uncertainty remains high.

A third prominent theme addressed perceptions of audience expectations. Several scientists perceived that journalists, policymakers, and the public prefer clear, dramatic narratives that promise solutions to complex problems. As a result, researchers felt pressured to simplify and intensify their messages, which can unintentionally cross into hype territory. Overall, these findings highlight scientists' awareness of the systemic and cultural factors driving hype, as well as their own agency and responsibility in managing its use.

Discussion This study offers important insights into how scientists themselves perceive and navigate the use of hype in communicating their research. The results highlight a complex landscape in which scientists face competing demands: on one side, a need to attract public and policymaker attention, and on the other, a duty to protect scientific integrity and accuracy.

Aspect	Description
Strategic Use	Scientists often use hype as a calculated tactic for securing research funding and driving public engagement, especially in competitive fields.
Negative Feelings	Many scientists express negative feelings about hype, seeing it as coercive and potentially compromising the integrity of their work.

Source of Hype	Participants frequently attribute hype to external sources like marketing departments within research institutions, startups, and the broader academic system, a view that allows them to downplay their own involvement.
Hype Fatigue	Some scientists feel a sense of frustration, anxiety, and anger regarding the marketing and PR tactics used in scientific communication, particularly those used by institutions and startups.
Positive Views	A smaller number of scientists consider hype to be an effective communication tool that can drive engagement, promote progress, and advance discussions on feasibility and potential benefits.
Dissonance	A significant gap exists between scientists' actions (using hype) and their attitudes (negative feelings about it), which they manage by attributing responsibility to external factors.

The finding that funding pressures drive scientists to emphasize optimistic or best-case outcomes echoes earlier observations (e.g., Chubb & Watermeyer, 2017), yet this study adds depth by exploring scientists' emotional and ethical responses to those pressures. Participants recognized that hype can be a double-edged sword, raising visibility for important work but potentially compromising trust in science if expectations are later unmet. Another significant point concerns scientists' perceptions of audience expectations. The data suggest that researchers feel constrained by a belief that journalists and the general public prefer simplified, dramatic narratives. This perception can steer communication toward hype, even if unintended, reflecting how scientists adapt their storytelling to what they assume audiences want. It underlines the importance of supporting scientists with better communication training and fostering relationships with skilled science communicators who can help them remain both engaging and accurate.

Overall, these findings emphasize that hype is not only a media phenomenon but also deeply linked to academic and institutional contexts. By understanding scientists' own

viewpoints, we can design more effective training, incentives, and policies that support transparent and trustworthy scientific storytelling.

Conclusion This study has deepened our understanding of how scientists perceive, experience, and negotiate the use of hype within their science communication practices. The results reveal that while hype can serve as a tool to gain attention and resources, it also brings significant ethical and professional concerns. Scientists described feeling torn between the need to compete for limited funding and a commitment to honest, accurate communication.

By highlighting scientists' own voices, this research demonstrates that hype is not a one-dimensional media artifact but rather a complex social practice shaped by institutional expectations, audience demands, and scientists' personal values. The pressures to present research in the most promising light, coupled with perceptions of what stakeholders expect, create a challenging environment for authentic communication.

Importantly, the study shows that many scientists are aware of these challenges and actively seek ways to balance persuasive messaging with maintaining credibility. Strategies such as drawing clear ethical lines, participating in communication training, and collaborating with professional science communicators can help scientists protect both their reputations and the public's trust.

References

1. Caufield, T. (2018). The influence of celebrity scientists. The Hastings Center Report, 48(4), 15–19. <https://doi.org/10.1002/hast.858>
2. Caufield, T., Condit, C., & Bubela, T. (2021). Science hype and science communication. European Molecular Biology Organization Reports, 22(3), e51991. <https://doi.org/10.15252/embr.202051991>
3. Gray, J. (2010a). Show sold separately: Promos, spoilers, and other media paratexts. NYU Press.
4. Gray, J. (2010b). Paratexts and media. In J. Gray & J. P. Mittell (Eds.), Media studies: Keyworks (pp. 161–171). Wiley-Blackwell.
5. Kousha, K., & Thelwall, M. (2020). COVID-19 publications: Database coverage, citations, readers, tweets, news, Facebook walls, Reddit posts. Quantitative Science Studies, 1(4), 1470–1491. https://doi.org/10.1162/qss_a_00066
6. Miller, J. E., McCoy, M. S., & Joffe, S. (2020). A framework for evaluating scientific hype in biomedical research news. Journal of the American Medical Association, 324(23), 2419–2420. <https://doi.org/10.1001/jama.2020.22829>

7. Nisbet, M. C., Brossard, D., & Kroepsch, A. (2015). Framing science: The stem cell controversy in an age of press/politics. *Harvard International Journal of Press/Politics*, 8(2), 36–70. <https://doi.org/10.1177/1081180X02238793>
8. Powers, D. (2012). Media hype and science communication: A theoretical overview. *Journal of Communication Inquiry*, 36(1), 3–18. <https://doi.org/10.1177/0196859911433582>