

The Double-Edged Power of Social Media in the Age of Misinformation

OVER the years, technology has evolved drastically that it has almost transformed all aspects of our lives, and so has social media. There was a time when simple messages were the option in our mobile phones, but now it has all transformed into deeply engaging content. Scrolling on our phones even without any purpose has become a casual habit. Eventually, social media became an integral part of our lives. In the past few years, social media has evolved so rapidly that it has changed the way we communicate with each other. Now we can have real-time interaction at a global level.

However, behind this transformation exists a bothersome paradox — the same systems that are connecting the world are also increasing the spread of misinformation. In fact, it was not long ago, in the early days of the COVID-19 outbreak, that there was a constant flow of posts and videos online advocating natural or home remedies against the virus.

If we look at the processing of traditional media, there, editorial filters serve as “gatekeepers”. These play an important role in ensuring the accuracy and credibility of information to be circulated among the masses. This traditional method may slow the dissemination of information, unlike social media. Because social media prioritises speed and immediacy, often at the cost of careful validation. Besides, another problem that could intensify the problem is the increasing use of AI tools, which can quickly produce and spread overtly simplified or misleading scientific content.

We can witness that it has become a very enjoyable activity to share, like, and reshare the content within seconds, often without verification. According to *The Global Risks Report 2026, 21st Edition — Insight Report* by the World Economic Forum, rapid technological advances and innovation are opening up major opportunities by improving areas such as healthcare, education, farming, and infrastructure. But at the same time, these developments are also introducing serious concerns. The report further highlights the issues around misinformation and disinformation, along with cybersecurity threats, as they stand out as some of the most pressing challenges that society is facing.

Similarly, a study titled “Large-scale analysis of online social data on the long-term sentiment and content dynamics of online (mis)information,” published in 2025 in *Computers in Human Behavior*, analysed millions of posts and found that misinformation is not just widespread but also evolves over time, and shapes public opinion and decision-making. According to an investigation by *The Guardian* in 2025, more than half of the top trending mental health advice on short-form videos contained misinformation, which could possibly be harmful to vulnerable users.

The social media platforms are created around a framework that focuses on engagement metrics, for example, likes and shares. Consequently, the misinformation spread is quicker than truth.

Social media is not inherently a dangerous thing; rather it is a tool, majorly depending on how it is used. If it is used critically and responsibly, it can be helpful in the quick sharing of information and public engagement. However, its careless use can easily lead to the spread of misinformation and distorted facts.

A multi-layered response to address this problem is the need of the time. The technological fixes may help to resolve the issue, for example, fact-checking systems, adjustments in algorithms, and “prebunking” strategies. Moreover, digital literacy is another aspect that is equally important. The users must be vigilant enough to critically evaluate every piece of information. In today’s technological landscape, when anyone can float information and algorithm is deciding its visibility, it becomes the responsibility of individuals increasingly to decide mindfully “what to trust”. Without doing so, even the best gatekeepers may struggle to limit the spread of misinformation. So, it is true that the challenge of social media is technological and societal both.

We celebrate National Technology Day every year on 11 May, so this day serves as a reminder to us: Technological advancements must be in alignment with responsible and informed use.

Sonali Nagar

DIRECTOR
Dr Geetha Vani Rayasam

EDITOR
Sonali Nagar

LAYOUT & DESIGN
Manender Singh

PRODUCTION
Ashwani Kumar Brahmi
Arun Uniyal
Anil Kumar

BUSINESS DEVELOPMENT
Dr Yogesh Suman

COVER DESIGN
Manender Singh


National Institute of Science Communication and Policy Research
सीएसआईआर-निस्र

Science Reporter is published monthly by the National Institute of Science Communication and Policy Research (NIScPR), CSIR Dr KS Krishnan Marg, New Delhi-110 012. NIScPR assumes no responsibility for statements and opinions advanced by the authors or for any claims made in the advertisements published in *Science Reporter*.

For Editorial Queries: Ph.: 91-011-25843130; Email: sr.niscpr@csir.res.in

For Sales & Subscription Related Queries: EPABX: 011-25846301-07 Extn. 289; Email: psmsupport.niscpr@csir.res.in

For Advertisement Related Queries: Ph.: 91-011-25843359, EPABX: 011-25846301 Extn. 291; Email: psmsupport.niscpr@csir.res.in

Website: <http://www.niscpr.res.in>

Subscription: (w.e.f. 1 January 2023) Inland: 1 yr: ₹ 750/-; 2 yrs: ₹ 1425/-; 3 yrs: ₹ 2025/- Foreign: 1 yr (Air Mail): US \$ 108 (Annual)

© 2026 National Institute of Science Communication and Policy Research (NIScPR), New Delhi