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Science Media As An Agent Of Social Transformation In Viksit Bharat 2047: A Sociological Analysis

Author:
Ms. Manjari Nandy
The Maharaja Sayajirao University of Baroda, Vadodara
ORCID: 0000-0003-1065-8378

Abstract: Science media has emerged as an important agent of social transformation in the making of Viksit Bharat 2047. As a social institution, media shapes values, attitudes, and behaviour by spreading scientific knowledge through newspapers, television, digital platforms, and community radio. This paper examines the role of science media in national development and analyzes its sociological impact on public awareness, modernization, and behavioural change. Campaigns such as Pulse Polio, COVID-19 vaccination drives, Swachh Bharat, and Digital India illustrate how science communication has influenced health practices, sanitation habits, digital literacy, and acceptance of innovation.

From a sociological perspective, science media supports modernization by encouraging rational thinking and scientific temper. At the same time, unequal access to information reflects existing social inequalities based on class, caste, gender, and the rural-urban divide. Marginalized communities often remain excluded due to illiteracy, poor internet connectivity, and language barriers. The spread of misinformation through social media also weakens trust in science and public institutions.

The paper further highlights the need for inclusive strategies such as regional-language content, community participation, digital access, and media literacy programmes to make science communication more democratic and effective. It argues that strengthening science media can reduce knowledge gaps, empower citizens, and accelerate equitable development. Therefore, science media is not only a source of information but a concrete sociological force essential for achieving the vision of a modern, inclusive, and developed Viksit Bharat 2047.

Keywords: Science Media, Social Transformation, Viksit Bharat 2047, Modernization, Social Inequality, Scientific Temper

Viksit Bharat 2047 is an embodiment of India's ambition to be a developed, inclusive, and technologically sophisticated nation by the time it celebrates 100 years of its independence. Realising this vision demands not only economic development but also significant social change, especially with respect to the production, dissemination and use of knowledge. In this perspective, science media is an important institutional agent in the mediation of scientific knowledge and society. The media is a potent socialising agent influencing public attitudes, values and patterns of conduct through the flow of

information (McQuail, 2010).

In the last several decades, science communication in India has grown in an unprecedented manner through newspapers, television channels, digital platforms and community radio. Public access to scientific knowledge on health, environment, agriculture and technology has increased. This expansion has accelerated even more with the rise of digital infrastructure and mobile connectivity. However, access to science media is still uneven and reflects wider societal inequalities based on class, caste, gender and location (NSSO, 2019).

From a sociological standpoint, science media is not just a neutral channel of information. It plays an active part in the construction of social reality, in the way people see the world, in the way they act and in the legitimation of specific forms of knowledge. It has an important function in cultivating scientific temper, a value specifically enshrined in the Indian Constitution. At the same time, it functions within the existing power and inequality systems that influence who has access to information and how that information is understood.

Science media as an agent of social transformation: A study in the context of Viksit Bharat 2047. The paper contends that science media contributes to modernisation and development, but its transformative potential is restricted by structural inequities and the issues of disinformation. It is therefore imperative to strengthen inclusive and equitable science communication for the achievement of sustainable and democratic development.

Conceptual and Empirical Foundations of Science Media:

The relationship between media and society has been a central concern of sociological theory. McQuail (2010) describes media as a vital social institution which generates public opinion, cultural norms and collective behaviour. The media does not reflect social reality; it also produces social reality through the construction of stories and the framing of issues.

Habermas (1989) proposes the public sphere in which media functions as a facilitator of rational-critical debate among citizens. Science media contributes to the public realm by disseminating scientific knowledge and discussing issues related to health, environment, technology etc. This encourages democratic participation and knowledge-based decision-making.

Modernisation theory is an important framework for understanding the role of science media. Inkeles and Smith (1974) defined modernisation as “the adoption of rational thought, scientific knowledge and new social structures”. The science media has a critical role in promoting scientific temper and supporting behavioural change. Development of scientific temper is considered as a vital element for the national prosperity of India (Kumar, 2006).

However, critical perspectives indicate that access to media and information is not equally distributed. Bourdieu (1986) observes that cultural capital determines the extent to which people are able to acquire and understand information. Marginalised groups may be excluded from scientific media and people with higher levels of education and social standing are more likely to gain benefits from them. Castells (1996) stresses the digital divide and argues that the unequal access to technology produces new forms of social inequality in the network society.

Recent research shows the problems of disinformation. The speed at which false or misleading information can spread via digital media undermines trust in scientific and public institutions (Wardle & Derakhshan, 2017). Especially in contexts with limited science literacy where people may struggle to tell real from fake information.

Literature suggests that science media can be a facilitator of social transformation, but its success is conditioned by macro-level structural issues such as inequality, access and trust.

Science Media in Modernization, the Public Sphere and creation of the Cultural Capital:

The paper reviews three important sociological techniques in assessing the role of science media in societal transformation; modernization, the public sphere and cultural capital.

Modernisation hypothesis first stresses the importance of scientific knowledge for progress in society. The media dissemination of scientific information contributes to the creation of rational attitudes and modern behaviours (Inkeles & Smith, 1974). Thus, science media is an agent of modernity affecting the thought and behaviour of people.

Secondly, Habermas's (1989) notion of the public sphere emphasises the importance of communication to democratic society. The media of science gives a space for public discourse and debate, as citizens can have contact with scientific issues and participate in decision-making processes. This function is especially important in a varied country such as India where the public understanding of science can effect policy outcomes.

Third, Bourdieu's (1986) concept of cultural capital provides a useful lens for understanding the inequity of access to science media. Education and socio-economic position of individuals influence their access to, interpretation of, and use of scientific information. This view highlights the necessity to tackle systemic barriers to equitable access to knowledge.

Together, these theoretical perspectives provide a robust framework for interpreting science media as an agent for social change and a site of inequity.

Methodology:

The paper is a qualitative study based on the analysis of secondary data. It uses academic literature, government records and documented case studies of public campaigns to study the function of science media in India. The aim of the study is to analyse the existing sources to discover the patterns and trends of science communication and its societal influence.

Employing case-based examples offers an empirically grounded knowledge of the working of science media in practice. The study is not based on primary data collecting but presents a theoretically informed analysis of available evidence.

Science Media as an Agent of Transformation:

Science media has been significant in impacting public behaviour and social change in India. Some of the most striking examples of this change are seen in public health initiatives. For example, the use of mass media in the Pulse Polio campaign to create awareness about the vaccination was essential in almost eradicating polio from India (WHO, 2018).

Similarly, during the COVID-19 pandemic, science media played an important role in spreading knowledge about the virus, preventive measures and immunisation . Government initiatives used television, social media and mobile communications to reach significant parts of the population and influence health behaviours (MoHFW, 2021).

Swachh Bharat Mission is another example of how media may create behaviour change. The government also ran extensive efforts to improve sanitary practices and encouraged individuals to adopt cleaner habits

(Government of India, 2019). These initiatives highlight the potential of science communication to influence social norms and practices.

Further, Digital India efforts have also increased access to information, and enabled wider engagement in the digital economy (MeitY, 2022). These projects have promoted digital literacy, hence increasing individuals' access to scientific knowledge and participation in technology developments.

These instances show that science media is not just a source of knowledge, but also an active agent of social change, affecting behaviour and contributing to national progress.

Digital Inequalities and Structural Disparities in Access:

Science media has the potential to be transformational yet it is not equally available to all areas of society. Structural disparities based on class, caste, gender and location provide major impediments to entry. Government reports indicate that rural populations often suffer from poor internet connectivity and infrastructure while marginalised communities may not have the literacy abilities to engage with scientific information (NSSO, 2019).

The digital divide is large, especially in India, and access to digital technology is not equal. Urban populations generally enjoy access to high-speed internet and many media platforms, but rural communities often depend on conventional media like radio and television. This gap hinders their access to a variety of up-to-date scientific information (Castells, 1996).

Moreover, language is the key to access to science media. Most of the available content is in English or other main regional languages, excluding individuals who speak less generally used languages. This entrenches existing inequities and limits the reach of science communication.

Addressing these difficulties requires focused efforts to improve infrastructure, promote literacy and make content available in different languages. The rise of digital media has also enabled the fast dissemination of disinformation, which is a great challenge to science communication. False information regarding health, vaccinations and technology can destroy public trust and lead to damaging behaviours (Wardle & Derakhshan, 2017).

For example, during the COVID-19 epidemic, misinformation around vaccines and treatments sowed confusion and hesitancy among portions of the public. This underscores the significance of reputable and trustworthy science communication to build public trust. It's not just about the facts, it's about transparency and interaction to build trust. Science media must be proactive in fighting misinformation with evidence-based content and promoting critical thinking.

Pathways to Inclusive Science Communication:

Science media needs to be inclusive and interactive to be most effective. This translates into providing material in local languages, connecting with local communities and responding to the specific needs of marginalised populations. Community radio and grassroots communication initiatives can help reach people that are otherwise excluded from mainstream media.

Improvements in digital infrastructure are also key to closing the digital gap. The need of the hours is rapid investment in connectivity and access to devices so that more people can benefit from science communication. At the same time, media literacy courses are required to equip people with the abilities to critically assess information.

These initiatives can make science media more democratic and successful, contributing to equitable development.

Synthesis and Implications:

This paper's analysis underscores the dual function of science media as both a catalyst for social change and a mirror of prevailing inequality. The influence of science media on modernisation and behavioural change is determined by structural factors, including access, literacy, and trust.

The results indicate that science media must be considered within the context of wider social dynamics. Its efficacy is contingent upon its alignment with policies designed to mitigate inequality and foster inclusiveness. In the absence of such integration, science media may exacerbate existing gaps instead of mitigating them.

Moreover, the function of science media in influencing public debate highlights the necessity of preserving legitimacy and confidence. In an age of misinformation, the capacity to deliver correct and dependable information is essential for societal progress.

Scientific media serves as a significant catalyst for societal development within the framework of Viksit Bharat 2047. It moulds knowledge, affects behaviour, and facilitates modernisation. Nonetheless, its potential may be completely actualised only if concerns of inequity and disinformation are resolved. Inclusive and equitable science communication is vital for closing knowledge disparities and empowering individuals. By enhancing science media and ensuring its accessibility, India may advance towards realising its vision of a developed, inclusive, and knowledge-driven society.

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