# CINEMATIC REPRESENTATION OF THE BHOPAL GAS TRAGEDY – EXPLORING THE HEALTH COMMUNICATION NARRATIVE

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## ABSTRACT

With increase in interest in health communication, there has been a significant rise in mass media campaigns which not only address a wide variety of needs defined by policymakers but also helps them to expand their reach and spread health messages globally. Cinema as an effective form of media constructs and reconstructs discourses on health communication. However, in terms of the quantum of work in this space, the output is meagre. This study uses social construction of reality as the theoretical basis and narrative analysis as the research method to examine the cinematic representation of the Bhopal Gas tragedy, which left an extremely destructive impact on the city of Bhopal (India). It explores how cinema builds narratives around health communication and establishes how a real-world disaster was explored from different angles. The research paper positions the critical need to engage in deeper conversations on health ecosystems through films and locates how other dramatic elements overshadowed the serious engagement with the narrative of health communication.

**Keywords**- Health Communication, Bhopal Gas Tragedy, Environment, Cinematic Representation, Indian Cinema

## Introduction

Communication is central to our everyday functioning and can be the very essence of the human condition (Berry, 2006).Communication "not only fulfils the social need but also fulfils various physiological and survival needs of society."(Verma & Verma, 2017)Mass-mediated communication is one of the key dimensions of the meta-narratives that explain the scholarly and practical expanse of communication. Multiple directional, disciplinary and domain-specific paradigms further create more focal points to understand the impact of mass-mediated communication on individuals, society, culture and processes related to them. Health Communication is one such domain that has strongly integrated itself to the mediated context both structurally and functionally. "The objective of health communication is to disseminate health information and knowledge among individuals as well as society by improving health literacy." (Sharma, Nahak, & Kanojia, 2019)The Centers for Disease Control and Prevention (CDC) define Health Communication as "the study and use of communication strategies to inform and influence individual and community decisions that enhance health" (Schiavo, 2011; Thomas, 2006).It is also one of the most vibrant, complex, and significant areas of research and practice in contemporary society. It influences persons throughout their lives, whether through interpersonal conversations about health, exposure to health images and information through the media, or involvement in the healthcare system. As health issues have become more pressing in society, the interest in health communication and the roles for health communication scholars and practitioners are certain to increase(Harrington, 2014).

With this increase in interest, health communication campaigns have been developed to address a wide variety of needs defined by policymakers, constituent groups, activists, and stakeholders, among others. Good communication is the key and is also pervasive in creating, gathering and sharing health information. It is a central human process that enables individuals and collective

adaptation to health risks at many different levels (Berry, 2006).

**Exploring the interrelationship between Media and Health Communication**

"The media is an important ally in any public health situation. It serves the role of being a source of correct information as well as an advocate for correct health behaviours" (Module 5: The Role of Media in Health Promotion, n. d.). Mass media helps health workers to expand their reach and spread messages on health to all corners of the world. With the help of radio and television,overly critical information can be shared to the local audience, while making them aware. A study done in Swaziland shows us how radio broadcasts were used to train health professionals and the mothers of the ailing children about how to make the medicine for diarrhoea. It prevented the deaths of many infants. "Given a similar level of staff effort but the far greater coverage achieved by radio, it was found that more than twice the number of mothers learned the correct procedure for mixing SSS (the medication) from the radio than did those who learned it from face-to-face communication" (n. d.).

Mass media not only helps the message to reach the local audience but also plays an important role in gaining the attention of opinion makers, politicians, government regulators and community leaders. Mass media also recognized as a gatekeeper plays its role in, "alerting the public to what is important with a focus on accuracy and relevancy. This is done through media framing, by which mass media sets the tone through which the public will view the message." (Villar & Marsh, 2020)For example, between 1982 and 1987, several members of the U.S. Congress placed AIDS on the political agenda by holding hearings on the growing numbers of people afflicted by it and research into its causes and prevention. Celebrity activists and spokespersons covered by the media also increased the visibility of AIDS on the political agenda. However, it was not until 1987 that President Ronald Reagan gave his first public speech about AIDS. During that year,Congress also passed legislation that considered the larger societal implications of the epidemic and that went beyond funding for AIDS prevention, research, and treatment

efforts. The AIDS Federal Policy Act of 1987 prevented discrimination against individuals with disabilities—including those with HIV/AIDS (Century, 2003).

With expansion and reach made possible by the Internet, people can now access health-related information on their devices, regardless of the location. Social media and its widespread users are the target audience for many health campaigns. However, with access to resources, the concern is also towards the consumption of right and accurate information. "For health communication programs, the Internet may become a countervailing factor and an obstacle as a source of misinformation and myth, particularly in the areas of infectious diseases and HIV/AIDS" (n. d.).According to a study conducted on the implications of social media useon health communication in the United States, "Recent growth of social media is not uniformly distributed across age groups; therefore, health communication programs utilizing social media must first consider the age of the targeted population to help ensure that messages reach the intended audience. While racial/ethnic and health status-related disparities exist in Internet access, among those with Internet access, these characteristics do not affect social media use. This finding suggests that the new technologies, represented by social media, maybe changing the communication pattern throughout the United States"(Chou, Hunt, Hesse, Beckjord, & Moser, 2009).

**Contextualizing Health Communication Messages in Cinematic Texts and Contexts**

Cinema is one of the most fundamental and effective forms of media, which presents as well as represents society and culture. In the process, it also constructs and reconstructs discourses on society and culture. Negotiation, appropriation and re-appropriation of ideologies are central to how cinema creates these representations. The cinematic texts, i.e., films, draw from as well contribute back to the discourse of society and culture.Films, also as a medium, have been adopted by individuals, companies, and independent groups for the purposes of entertaining, informing and educating others in an entirely unique form(Nwokedi, 2018).A study done by Yonsei University, Seoul, Republic of Korea, discusses how "films can be more effective than text in

eliciting consumer responses such as emotions and a positive attitude to an identified disabled personality as well as to the employer brand."(Chang, 2020)

As a strong medium that weaves the discourse on important subjects, films have also been instrumental in mainstreaming the discussion on various taboos and stigmas related to health issues. Center for Disease Control (CDC) established the 'Sentinel for Health Award for Daytime Drama' (CDC, 2002b) for dramas that inform, educate, and motivate viewers to make choices for healthier and safer lives. Similarly, the Sexual Health IN Entertainment Awards (SHINE) honour those who do an exemplary job of incorporating accurate and honest portrayals of sexuality into their television, film, and music video programming (The Media Project, 2002). The Entertainment Industries Council, Inc., in partnership with the Robert Wood Johnson Foundation and the National Institute on Drug Abuse of the National Institutes of Health, sponsors the PRISM Awards which honour the correct depiction of drug, alcohol, and tobacco use in television and feature films, music, and comic books.

In the words of Dana March, Columbia University Mailman School of Public Health, "Television and film are powerful tools to disseminate health information, promote health, and construct health-related narratives" (Communicating to Advance the Public's Health: Workshop Summary, 2015). Indian cinema has addressedhealth issues in its storylines for long.However, in terms of the quantum of work in this space, the output is meagre. While numbers do not present a very favourable relationship between films and issues related to health; there has been a paradigm shift in the representations. Protagonists in contemporary, commercial Indian cinema now play characters with health problems. The discussion on the health issue and a consequent message, therefore, has amplified significant conversations about the potential of films to influence effective health communication.

The first Indian film which can be discussed in this category is *Dushman* (1939). *Dushman* (Hindi for 'enemy'), is a love story where Tuberculosis is portrayed as the enemy. This film clearly carried a social message of

spreading awareness about the disease.(Kumbhar, 2019). *Doctor* (1941) was another film which discussed cholera, infant and maternal death, poor public hygiene and absent public healthcare infrastructure.(Kumbhar, 2019). Few recent films that have focused on subjects related to health are-*Black* (2005)by. Sanjay Leela Bhansali, which dwelled on a rarely discussed health condition of 'Alzheimer's' in geriatric patients; *TaareZameen Par* (2007) produced and directed by Aamir Khan which discussed dyslexia and effectively campaigned for holistically empowering patients, caregivers, parents, teachers and the society at large. Another recent film, *Udta Punjab* (2016), systematically handled a controversial subject of drug abuse in Punjab's youth and gave direct references to its severe impact on physical and mental. Some contemporary films like *Vicky donor*(2012) have successfully addressed the stigma attached to subjects like sperm donation and further mainstreamed the acknowledgement of these health issues. *Munna Bhai MBBS*(2003) spoke about the humanitarian element in the doctor-patient relationship and stressedupon an empathetic healthcare system, albeit cinematically. There have been other films like *My Brother Nikhil*(2005) which addressed AIDS, and more recently, *Margarita with a Straw* (2014) that addressed and cerebral palsy. While a longitudinal and rigorous investigation is required to measure and understand the impact of these films, the aforementioned examples are indicative of the integrated framework of films and health communication. Desk (2018) argues that positive and human portrayals in cinema provide strength to patients and caregivers to not tire in their pursuits.

**Disasters, Health Crisis and Cinematic Intervention**
The film, as an art form, is often critical of the reality that surrounds the social system.It discusses, compares, contrasts and brings forward the reflection of thesociety. Hence as one of the most influential medium, films also bear the responsibility to represent reality.Films "can shed light on political and spiritual matters too and can provide catharsis and perspective and may open our eyes to new ways of thinking, feeling and pursuing our lives. It is not only a visual treat to its audience but is also an account of societal,

economic and political set up in which a person is living" (Mahmood, 2013). Films also create debate, they create conversation, they create an atmosphere… made by film-makers who want to take a position on a topic" (Shah, 2011).

With the advancements in digital technology and the plethora of information available, films related to health disasterstake on gigantic proportions (Treloar, 2005). However, as films address real-world catastrophes by inserting cinematic elements of genre, technique and aesthetics, they do not only shed light on a situation and its ramifications; but also humanize sensitive subjects thus creating more a more humanized discourse on even issues related to health. There are many films which represent disasters caused by human error which lead to health hazards. Some aspects of such films "do not mirror the reality of disasters. By terrifying and establishing blame, disaster films create a sense of moral order. This supports the belief that disasters are avoidable rather than an expectable outcome of the failure of complex systems over which human control is very imperfect" (Ursano, McCaughey, & Ful, 1995). Films intervene by building narratives and content around hazardous disasters created by human error, thus creating awareness as well as offering critical reflection.

**The Bhopal Gas Tragedy – A Factual Overview**
This study discusses the cinematic representation ofthe Bhopal Gas tragedy. The Bhopal gas tragedy is one of the biggest industrial disasters which left an extremely destructive impact on the city of Bhopal (India) and its citizens. The disastrous event has marked its thirty-five years in December 2019, and even now people are suffering from the adverse effects of the poisonous gas which resulted in the death of innumerable people living in Bhopal on the night of 2-3rd December 1984. The massive tragedy and disaster shook the entire country and lead to a huge health hazard.

"A government affidavit in 2006 stated that the leak caused 558,125 injuries, including 38,478 temporary partial injuries and approximately 3,900 severely and permanently disabling injuries" (Dubey, 2010). "Others estimate that 8,000 died within two weeks, and another 8,000 or more have since died from gas-related diseases" (Eckerman, 2004). The cause of the disaster remains under debate. The Indian government and local activists argue that slack management and deferred maintenance created a situation where routine pipe maintenance caused a backflow of water into a MIC tank, triggering the disaster. The Union Carbide Corporation (UCC) argues water entered the tank through an act of sabotage. About 500,000 more people suffered from agonizing injuries with disastrous effects of the massive poisoning. The hospitals were full of the dying victims and doctors did not know how to treat them because they did not know which gas or gases had leaked, and Union Carbide would not release the information, claiming it was a "trade secret"(Swamy, 2014).

After the night of the incident, the factory was locked up. Thousands of tons of pesticides and waste remained inside and was never cleaned. The chemicals were abandoned in warehouses exposed to wind and rain. Thirty-four monsoons have rusted and rotted the factory and washed the poison deep into the soil. The poison has entered the groundwater and seeped into wells and bore pipes, gushed from taps and entered people's bodies and burned stomachs, corroded skin, damaged organs and flowed into wombs.

According to a January 2013 report of the Indian Institute of Toxicology Research, Lucknow, the soil and groundwater within 3.5 kilometres from the UCC factory site is contaminated with cancer- and birth defect-causing chemicals. From 1969 to 1977, the Union Carbide used to dump its toxic wastes at 21 spots, most of them unlined pits, inside the 68-acre factory premises. Despite 17 agencies, including government and non-governmental organizations, carrying out studies over the past two decades, a comprehensive plan for remediation of the soil and groundwater has not been prepared(The Hindu, 2014).

The death of Warren Anderson, Chairman and CEO of the Union Carbide Corporation, five years back had marked anuproar in the city due to the anger for the judicial system which failed to deliver justice for millions of people who lost their family and are still suffering from the harmful and

poisonous gas leak effects. Survivors are unhappy with the court proceedings and compensation. The primary reasons for such disasters: "The indifferent attitude of the management towards safety, the lax enforcement of the existing regulations by the regulatory bodies as well as unusual delays in the judicial systems." (J.P.Gupta, 2002) Out of 25000 casualties, the government has paid compensation for only 5,295. Rashida Bee, President of Bhopal Gas PeeditMahila Stationery Karmachari Sangh complains,"three generations of gas leak victims have suffered from their children being born with disabilities but little was done by the government to help victims and to give medical assistance to their families"(The Hindu, 2014).

Films act as mirrors of our society and health communication is now one of the major themes of film narratives in India and the rest of the world. "Among public health researchers, there is growing interest in film methods due to their ability to highlight subtleties in practices, capture emotions, engage hard-to-reach populations, and advocate for social change."(Baumann, Merante, Folb, & Burke, 2020) They help in bringing out all different facets of the health issue and communicate with the audience at a deeper level. In a study where films were used as drug-resistant strategies, the results show that "films were effective in decreasing self-reported use of drugs other than alcohol over 1 month." (Hecht, Corman, & Miller, 2009) Even so, it can be said that the effectiveness is not same with all health issues and this study will further focus on the other stronger aspects of the society which play their role in defining the wide reach and acceptance of this medium.

**Needfor the Study and Research Objective/Questions:**
Considering the impact of Indian media and Indian cinema onour society, the representation of health communication in the countrypoints us towards the gap which gets established from the review of literature, focusing on the lack of efficient and competent representation of real-life health disaster. This study aims to examine the representation of the Bhopal Gas Tragedy in the cinematic medium.This study instigates the social construction of Health Communication and attempts to answer the following question: To

what extent does the cinematic medium helps to develop an effective narrative on health communication through the cinematic representation of health hazards?

**Data and Sample**
The study examines two of the only films made on the disastrous event of Bhopal Gas Tragedy in India:
1. *Bhopal Express-*a 1999 Hindi film directed by Mahesh Mathai
2. *Bhopal – a Prayer for Rain -*a 2013 film directed by Ravi Kumar

A tragedy of this magnitude which caused a massive health hazard has not been adequately addressed in mainstream Indian cinema. There are many humanized narratives of the event with survivors' testimonies, but only two films till date have addressed this issue. It is said that films "depicting disasters and catastrophes have been much talked about, but little-studied" (Quarantelli, 2009). While talking about films depicting catastrophes, Gershenson questions, "Why we don't know these films? Of course, they exist- on archival shelves, on illegal websites, and in the memory of those who saw them years ago. And yet they don't exist- they have no physical presence, either as widely distributed DVD's or web-streams today, or at festivals and movie theatres at the time of their release" (Gershenson, 2013).This study looks for answers to the same question.

**Theoretical and Epistemological Underpinnings**
This work is based in the interpretative paradigm. Understanding the power of the media in the social construction of reality is important, particularly when we have such a wealth of evidence describing how films, television and other media sources continue to somewhat rigidly define roles and expectations for less powerful groups in society (Eschholz, Bufkin, & Long, 2002). Peter Berger and Thomas Luckmann, in their publication, *The Social Construction of Reality*, coined the notion of "social construction". They used this term to refer to what they consider as the process of actively constructing one's social world rather than having such meaning imposed. It relates to the meaning that humans give to their world from a social context (Beeton, 2006). Quoting Berger and Luckmann (1967), Adoni and Mane (1984,

p.325) discuss the concept of sociology of knowledge. They state that everything in society, and not just intellectual articulations, constructs social knowledge and therefore media play a significant role in the social construction of knowledge. To explain the concept of media and social construction of reality, the authors discuss three kinds of social reality – objective, symbolic and subjective. Objective reality refers to information accessed by people and even though they can doubt it, they suspend these doubts to be able to think routine thoughts and perform routine actions (p.Adoni& Mane, pp. 325-326). Media content, art, literature among other things constitute symbolic reality (p.326). The objective and symbolic reality fuse to provide inputs to individuals to form theirnotions of subjective reality, which may further be based on two factors – 'zones of relevance' and 'here & now' (p.326). Media content is constructed based on objective and symbolic reality while its consumption constructs subjective reality for the audience. Hence,the media's role in the social construction of reality is inherent and critical. This perspective can help for the systematic examination of the contribution of the media to the social construction of reality.

This research paper focuses on an issue which has proximity to Indian cinema, with the zone of the relevance of the present situation where children are born deformed even today in the affected areas of Bhopal.

The reality gets constructed through a medium like cinema, with its narrative and perspective around the event. The impact of this reality on people is disastrous. For generations diseases caused due to the gas leak, have been passed on in families. It is very unfortunate even after thirty-five years, people have not received compensation from the government organizations.In his book *The Cinema of the Precariat: The Exploited, Underemployed, and Temp Workers of the World*, Thomas Zaneillo discusses how the story of a precariat is lost under the heavy and big names of the industrialist. The ironic use of the term "accident" during such industrial hazardous reflects the entire event to be "unexpected, genuinely surprising, the unknown quantity in a discovered planetary habitat… The death and injury toll of the precariat and other workers in the surrounding neighbourhoods in all these

"accidents" is always staggering." (Zaniello, 2020)Hence, it is critical to reflect on the fact a disaster of such extreme magnitude has hardly received any cinematic attention. In terms of popular cinema, the attention given to this subjecthas not achieved any success as the audience isnot even aware of the existence of these films because of poor production values and no commercial success.Another significant critique that emerges is the absence of any attempt to create consistent discourse around the disaster. The narrative is lost and so is the reality that these two films tried to create around the subject.

**Exploring the Representation of Bhopal Gas Tragedy - Narrative Analysis of *Bhopal Express* and *Bhopal – a Prayer for Rain***

The study of cinematic storytelling focuses on the story structure and how the film affects our perception, cognition, and emotions. Narrative analysis is hence the effective methodology to be used. Narrative analysis (Gee, 1991; Kirkman, 1997; Riessman, 1993,&2001) focuses on the way individuals present their accounts of themselves and views self-narrations both as to constructions and claims of identity(Burck, 2005). Narrative analysis is a strategy that recognizes the extent to which the stories we tell provide insights about our lived experiences (Sandelowski, 1994). Also, narrative methods can be considered "real world measures" that are appropriate when "real-life problems" are investigated.

By applying narrative analysis on two films – *Bhopal Express* (1999) *and Bhopal – a Prayer for Rain* (2013),one can endeavour to understand the portrayal of the same issue from different perspectives. Also, narrative analysis helps us to interpret and conclude by focusing on different elements. These elements include, but are not limited to, how the story is structured, what functions the story serves, what is the substance of the story, and how the story is performed.

**Discussion**

***Bhopal Express* - 1999 film directed by Mahesh Mathai**

*Bhopal Express*narrates the entire incident from the eyes of a newlywedcouple, Verma and Tara. The very first scene shows a man running on the railway tracks trying to stop the trains to enter the city. Later, we get to

know the reason why he is trying to do so. With the progress of the plot, we understand that Tara is observing *KarvaChauth*which is undertaken by Hindu women for their husband's good health. Hindu tradition also dictates that the wife should spend some time with her mother during certain months of the year to avoid giving birth to a child at inauspicious times; hence she leaves for her mother's home.(Nadar, n.d.) That very night there is a leak in the factory which leads to a major disaster.

The use of music is highly effective as it invokes the sensation of the tragedy and supports the visuals. The visuals are very emotionally arousing as people drop dead like flies. The amount of loss of life and the rise of the death toll by the next morning leaves you in shock.

### *Bhopal: a prayer for rain*- 2013 film directed by Ravi Kumar

In *Bhopal: a prayer for rain*, the plot revolves around the same incident. Dilip (Rajpal Yadav), a rickshaw driver, loses his pay source and gets a job in the plant as a labourer, and is happy since his daily wage is restored. The plant witnesses a drop in its revenue due to lower sales of pesticides, and to reduce the loss the officials neglect safety and maintenance. Questioning the chemicals used in the plant, Motwani (Kal Penn) a tabloid reporter publishes reports in his makeshift printing press which are disregarded by most of the officials and workers. Roy, the in-charge for the safety of the plant expresses his concerns. The officials, however, ignore his warnings, and a worker is killed when methyl isocyanate leaking from a pipeline drips off on his hand. The officials deem the worker's irresponsibility as the cause of the accident and the plant continues to function. Dilip is given a better-paying vacant job in the plant despite lacking the skill to operate machinery. A gas leak is prevented by Roy when water is mixed with methyl isocyanate, and to stop people from panicking, the official in the plant sabotages the warning siren.

Warren Anderson, the CEO of the Union Carbide, visits the plant to inspect its functionality, where he is briefed about a plan to connect two additional tanks for storage of methyl isocyanate to increase the output of the plant, ignoring the deteriorated condition of the tanks.To overcome the increasing revenue loss, the officials shut down the plant, firing most of the workers, including Dilip.

One night the safety measures fail, and a runaway reaction follows. The faulty tanks cause the gas to start leaking. The gas is exposed to the surroundings and is carried east by the wind. Motwani rushes to alert the people in the vicinity of the plant to vacate and head west since the warning sirens were previously sabotaged. As the gas shows its effects, a nearby hospital is filled with hundreds of patients reporting cyanide poisoning, and the lack of antidote results in most of the patients' death. Dilip, in the last of his energy, throws away his Union Carbide identity badge, rests his son on the ground and succumbs to the toxic gas. The story jumps to the present day, where a blind boy is holding Dilip's identity badge, and the film ends with Dilip narrating the words "Whatever may be the cause of the disaster, Carbide never left Bhopal. A photo montage depicts the aftermath of the disaster(Kumar, 2014)

Both the films depict the tragedy and sensitize the viewers about this human-made tragedy three decades ago which lead to the death of over ten thousand people. They also portray the huge insensitivity on the part the political fraternity and the corporate breed that led to the entire tragedy. *Bhopal Express* focuses on the event and the day after, whereas *Bhopal-A prayer for rain* discusses various other issues like the ethical dimension of the political and industrial sectors. It also shows the warnings which the Union Carbide was given about the safety measures that were not undertaken and hence led to the disaster.

### Conclusion and Recommendations

The narrative analysis of both films establishes that a real-world disaster was explored from different angles. While the health hazard discourse was central to the storylines, other more dramatic elements overshadowed the attention and engagement with the narrative of health communication.

However, a critical insight that emerges from the study is that health communication is understood in an interpretative ecosystem which includes several social, political, cultural, ideological and even economic codes. Hence, when films focus on health disasters,

they cannot represent monolithic narratives which will only create awareness about a health problem. This study demonstrates that a more nuanced and complex investigation of cinematic representations of health communication should be taken up as a long-term study.

It will only then be possible to make recommendations that can impact not just the responsibility of cinema to address societal issues, but also influence policymakers in certain ways. An audience impact study as the next step can shape a holistic understanding of this subject.

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