



Ethical Implications of the Stigmatization of Ivermectin by a Selected BBC News Report on YouTube

Brian Bantugan, PhD, Roseanne Dela Cruz, and Caren Torres-Basco

St. Paul University Manila

DOI: <https://doi.org/10.51244/IJRSI.2025.1215000167P>

Received: 13 October 2025; Accepted: 18 October 2025; Published: 31 October 2025

ABSTRACT

The dissemination of health information through mainstream media plays a crucial role in shaping public perceptions, particularly during global health crises such as the COVID-19 pandemic. This study examined the BBC YouTube report “The false science around Ivermectin – BBC News” (October 7, 2021) to investigate how journalistic practices influenced public understanding, stigmatization, and perceptions of scientific authority regarding Ivermectin. Employing an interpretive research paradigm and a qualitative single case study design, the study focused on the report’s verbal components, including anchor narration, expert commentary by Dr. Carl Sheldrick, and the juxtaposition of Joe Rogan’s anecdote. Textual analysis revealed that the report partially addressed access to verifiable sources, acknowledgment of complexity, multiple voices, and critical literacy. The framing of Ivermectin as fraudulent, socially harmful, and linked to misinformation networks, reinforced by selective sourcing and omission of verifiable evidence, contributed to its stigmatization. Furthermore, the incomplete fulfillment of the burden of proof and oversimplified framing demonstrated how journalistic practices could normalize unethical reporting. Ethical analysis using deontological, utilitarian, and virtue ethics frameworks highlighted that such omissions risk undermining public trust, informed decision-making, and the common good, particularly if stigmatization were later proven unwarranted. The study underscores the interplay between media, science, and ethics, providing insights into the responsibilities of journalism in promoting justice, transparency, and critical engagement during health crises.

Keywords: Ivermectin, Media framing, Health communication, Stigmatization, Journalistic ethics

INTRODUCTION

During the COVID-19 pandemic, mainstream media outlets played a pivotal role in shaping public perceptions of COVID-19 and health interventions. Transnational knowledge networks, online or otherwise, contribute to the same (Bantugan, 2022; 2023; 2024). While vaccines and pharmaceutical treatments received extensive coverage, alternative therapies were often downplayed or dismissed, limiting public exposure to potentially useful approaches (Watson et al., 2024). This selective reporting was particularly evident in legacy media, which frequently emphasized uncertainty or lack of scientific support for treatments outside the established biomedical consensus (Sidharthan, 2024). Such framing can influence public trust, reinforce reliance on official recommendations, and shape perceptions of legitimacy regarding various health interventions.

Unveiling how mainstream and legacy media downplayed alternative COVID-19 treatments is crucial in media scholarship because it illuminates the significant role of media in shaping public perception, trust, and health behaviors. Media coverage has a powerful influence on how audiences interpret scientific evidence and public health guidance, and by analyzing instances where alternative treatments were minimized or framed as illegitimate, scholars can better understand the formation of public opinion during the pandemic (Watson et al., 2024). Additionally, examining these practices highlights ethical concerns in journalism, such as selective framing, lack of transparency, and overreliance on authority without providing verifiable evidence, which underscores the need for accountability and social responsibility in news reporting (Sidharthan, 2024). This analysis also promotes critical media literacy, enabling audiences and researchers to recognize bias, question assumptions, and evaluate sources more rigorously (McQuail, 2010). Furthermore, the way alternative treatments are framed can influence public health policy, vaccine uptake, and trust in scientific institutions,

making scholarly investigation of media coverage essential for understanding societal consequences (Watson et al., 2024). Finally, documenting these patterns contributes to a historical record of media behavior during the COVID-19 pandemic, providing benchmarks for future research and comparative analyses of science communication in public health crises.

Academic scholarship has often struggled to fully uncover the efforts of mainstream and legacy media in downplaying alternative COVID-19 treatments due to several interrelated factors. First, much research has focused on quantifiable outcomes such as vaccine uptake, infection rates, or misinformation prevalence, rather than critically analyzing the subtleties of framing, source selection, and narrative construction in media coverage (Vraga & Bode, 2021). Second, access to internal editorial decision-making processes is limited; scholars rarely have the resources or permissions to examine how news organizations select, omit, or emphasize certain scientific claims, leaving the internal mechanisms of suppression underexplored (Tsftati et al., 2022). Third, there is a reliance on retrospective analyses and publicly available content, which often lacks contextual information about pressures from advertisers, political influence, or institutional norms that may shape reporting (Chadwick & Vaccari, 2021). Additionally, interdisciplinary gaps between media studies, public health, and science communication have meant that the nuances of scientific dispute and media framing are not always integrated in a single analytical lens (Lewandowsky et al., 2020). Finally, methodological challenges, such as the difficulty of systematically coding subtle linguistic cues, omissions, or the ethical implications of framing, have limited scholarship's ability to fully capture the ways in which alternative treatments were marginalized in mainstream narratives. As a result, much of the academic record remains partial, focusing on outcomes rather than the processes and ethical dimensions of media practice during the pandemic.

This study can significantly address existing research and knowledge gaps in multiple ways. First, it provides a systematic examination of how mainstream media, specifically a high-profile BBC YouTube report, communicates complex scientific controversies to the public, revealing gaps between journalistic practice and academic standards. By analyzing how the report addressed access to verifiable sources, acknowledgment of complexity, multiple voices, and critical literacy, the study sheds light on the mechanisms through which information is simplified, partially verified, or selectively framed, which are often overlooked in previous research focused mainly on content outcomes rather than process (Entman, 1993; Siebert et al., 1956).

Second, the investigation into the construction of Ivermectin's stigmatization offers insight into the social and ethical consequences of media framing, an area insufficiently explored in scholarship that primarily emphasizes misinformation spread on social media rather than ethical and normative implications of legacy media practices (Gamson & Modigliani, 1989; Habermas, 1984). The study's focus on the burden of proof carried by the medical establishment and how it intersects with journalistic choices illuminates how scientific authority and ethical responsibility are conveyed—or obscured—to the public, addressing gaps in understanding the ethical dimensions of science communication (Merton, 1973; Kant, 1785/1993).

Finally, by linking framing and stigmatization to the potential normalization of unethical journalistic practice and implications for justice and the common good, the research extends knowledge beyond descriptive thematic analysis, offering a critical, normative perspective on media influence. It highlights how omissions, selective sourcing, and simplified narratives may shape public perception, influence trust in institutions, and affect democratic deliberation, areas previously underexplored in pandemic-era media studies. Overall, the study bridges gaps between media studies, ethics, and science communication by providing a nuanced, theoretically grounded understanding of the consequences of media practices during health crises.

Access to Verifiable Sources

Providing access to verifiable sources is a fundamental standard in ethical journalism, particularly in health reporting. Journalists are expected to link or cite peer-reviewed studies, systematic reviews, or authoritative investigations, allowing audiences to independently verify claims (Brennen et al., 2020; Öntaş et al., 2024). Failure to provide such references can weaken transparency and diminish public trust, especially when reporting on controversial treatments such as Ivermectin during the COVID-19 pandemic. Omissions of verifiable sources prevented lay audiences from verifying claims and limited accountability, illustrating the importance of source transparency in maintaining credibility (Brennen et al., 2020).

Acknowledgment of Complexity

Accurate reporting requires acknowledging the complexity of scientific evidence. Health journalism should differentiate between fraudulent, methodologically weak, and inconclusive studies while situating findings within the broader evidence base (Lewandowsky et al., 2020; Nelson & Van der Linden, 2019). Oversimplified narratives, such as portraying all studies as fraudulent or dangerous, risk misleading audiences and reinforcing stigmatization. While partially addressing the standard, this approach flattened the evidence base, failing to convey the nuanced complexity of research on alternative treatments (Lewandowsky et al., 2020).

Inclusion of Multiple Voices

Including diverse perspectives in reporting reduces the risk of perceived bias and strengthens journalistic credibility. Drawing on independent researchers, governmental authorities, and international organizations provides pluralistic perspectives and supports informed public engagement (McQuail, 1987; Siebert et al., 1956). Relying primarily on a single independent expert, without incorporating voices from institutions such as the WHO, Cochrane, or additional researchers prevents triangulation of information. While featuring an independent expert mitigated conflicts of interest, reliance on a single voice produced a one-dimensional narrative and limited opportunities for audiences to assess alternative viewpoints (Tsfati & Cappella, 2003).

Promotion of Critical Literacy

Critical literacy in journalism enables audiences to evaluate not only what is reported but also how and why claims are presented (Kellner & Share, 2007; Ndo, 2024). Health reports should encourage viewers to question methodological approaches, evidence evaluation, and underlying motivations of information dissemination and encourage some skepticism in the juxtaposition of celebrity anecdote with expert critique that does not explicitly guide audiences to critically evaluate why certain studies were fraudulent, how evidence is weighed, or the social dynamics influencing misinformation. This partial fulfillment of critical literacy standards illustrates a broader challenge in promoting informed engagement with scientific evidence (Lewandowsky et al., 2020).

Framing and Stigmatization

Framing theory explains how media influence audience interpretation by emphasizing certain aspects of reality while downplaying others (Goffman, 1974; Entman, 1993). While framing alternative medicines as fraudulent, unsafe, and associated with misinformation networks, emphasizing ethical and public health risks while implicitly recommending rejection of the drug in favor of vaccines and expert consensus can protect public health, selective sourcing, strong language, and limited acknowledgment of complexity risk constructing stigmatization and alienating audiences (Gamson & Modigliani, 1989; Entman, 1993). The omission of verifiable sources, limited multiplicity of voices, and inadequate critical literacy cues amplified the rhetorical construction of stigma, demonstrating how framing choices can influence both public perception and trust in scientific authority.

Burden of Proof and Ethical Implications

Journalistic ethics and scientific integrity require claims to be substantiated by transparent and verifiable evidence (Christians et al., 2016; Öntaş et al., 2024). Describing patterns of falsification in clinical trials without specific studies, systematic reviews, or retractions manifest a partial fulfillment of the burden of proof that can heighten the rhetorical stigmatization of alternative medicines but privilege expert authority over audience verification. Ethical frameworks—including deontology, utilitarianism, and virtue ethics—highlight that omission of verifiable evidence, oversimplification, and limited perspective can undermine justice, public trust, and the common good (Aristotle, trans. 2000; Kant, 1993/1785; Christians et al., 2016). These lapses illustrate the potential normalization of unethical journalistic practices when expediency is prioritized over transparency, pluralism, and critical engagement.

Study Framework

Theoretical Framework. The **burden of proof** in scientific communities rests on those making claims,

requiring transparent, verifiable evidence that can withstand critical scrutiny. Merton's (1973) norm of *organized skepticism* highlights this obligation: no claim can be accepted without rigorous testing and open criticism.

Framing theory (Entman, 1993) helps explain how stigmatization is constructed in media discourse. Any report that define the problem as fraudulent drug trials, diagnose the cause as opportunistic researchers and misinformation networks, make a moral evaluation that promoted a drug that challenged institutional mandate was dangerous, and recommended the rejection of such drugs in favor of vaccines. However, by omitting specific references to retractions, systematic reviews, or named studies, any report can frame Ivermectin as illegitimate primarily through authority rather than transparent evidence. This selective framing reinforce stigma but limit public capacity for independent judgment.

Normative ethical theories shed further light on the implications of this framing. From a **deontological perspective**, the duty of both scientists and journalists is to uphold truth and transparency (Kant, 1785/1993). The omission of verifiable sources in the report violate this duty by requiring audiences to accept authority without evidence. From a **utilitarian perspective**, the stigmatization of alternative treatments may be ethically justified insofar as it discourages harmful misinformation and promotes vaccine uptake, maximizing overall public health benefits (Mill, 1861/1998). Yet, **virtue ethics** emphasizes integrity, honesty, and fairness, which were compromised when any report frames a treatment antithetical to the establishment's mandate negatively without offering audiences tools for independent verification (Aristotle, trans. 2000).

Media-specific theories also clarify the ethical stakes. **Social Responsibility Theory** obliges journalists to provide accurate, contextualized information to help the public make informed decisions (Siebert, Peterson, & Schramm, 1956). While a report on an alternative treatment may serve the responsibility of warning against misinformation, it neglects the responsibility of transparency. **Habermas's (1984) public sphere theory** stresses the need for rational-critical debate supported by accessible evidence; the omission of verifiable sources limited the possibility for such debate, privileging expert authority over communicative rationality. In contrast, **Democratic Participant Theory** argues that media should empower citizens with diverse perspectives and access to information (McQuail, 1987). The narrowing of frames around fraud and danger constrained this plurality, aligning discourse with elite biomedical consensus rather than public autonomy.

Taken together, these perspectives show how the **failure to fully carry the burden of proof** shaped the stigmatization of any alternative treatment running against government order. Proponents fail by producing unverifiable claims, while critics fail partially by not providing audiences with transparent access to disconfirming evidence. Through framing choices, a news agency report reinforces stigma by highlighting fraud and danger while omitting verifiability and complexity. Normative ethical theories expose the tension between intent (protecting public health) and method (restricting autonomy), while media theories emphasize the democratic responsibilities of journalism. Ultimately, the construction of stigma around Ivermectin reflect both a defensible public health goal and an ethically fragile communication strategy that privileged elite authority over democratic accountability.

Conceptual Framework. This study examined the BBC report debunking Ivermectin as a COVID-19 treatment by analyzing how scientific claims, journalistic practices, and ethical considerations intersect in shaping public understanding. Several key concepts guided the investigation.

Burden of Proof. In scientific communities, the burden of proof requires claimants to provide transparent, verifiable, and replicable evidence (Merton, 1973; Popper, 1959). Applied to Ivermectin, researchers promoting its efficacy bore responsibility for producing high-quality trials, while critics carried the obligation to substantiate claims of fraud with equally transparent evidence. In the BBC report, this principle was central because Dr. Sheldrick's claims about fraudulent studies lacked direct citations, raising questions about how the burden of proof was carried in public communication.

Framing. Framing theory (Entman, 1993) explains how media emphasize some aspects of reality while omitting others to shape interpretation. In the report, Ivermectin was framed as fraudulent (problem definition), caused by opportunistic researchers (causal diagnosis), ethically dangerous (moral evaluation), and to be rejected in favor of vaccines (treatment recommendation). However, the omission of verifiable sources limited transparency and narrowed the frame to stigmatization rather than nuanced debate.

Academic Integrity. Standards of academic integrity, such as transparency, accuracy, and acknowledgment of sources, are critical in reporting scientific claims. By not providing specific references to the alleged fraudulent studies, the report partially failed to embody these standards, raising concerns about whether audiences were given adequate tools for independent verification.

Journalistic Ethics. Journalistic practice demands accuracy, balance, context, and accountability (Society of Professional Journalists, 2014). The report upheld accuracy by citing scientific investigations into flawed trials but weakened balance and context by not presenting the complexity of evidence — some studies were fraudulent, others inconclusive, and a few methodologically sound but insufficient. This omission contributed to stigmatization.

Normative Ethical Theories. Normative ethics provide lenses to evaluate the ethical dimensions of the report. **Deontology** emphasizes the duty to truth and transparency, which the report partially neglected by omitting direct citations. **Utilitarianism** justifies stigmatization if it maximizes public health benefits by discouraging misinformation, though this comes at the cost of transparency. **Virtue ethics** stresses honesty and fairness, values that were compromised when Ivermectin was framed negatively without accessible evidence.

Media Theories of Responsibility. **Social Responsibility Theory** obliges media to provide accurate and contextualized information to foster informed decision-making (Siebert et al., 1956). The BBC report fulfilled the responsibility of warning against misinformation but underperformed in contextual transparency. **Habermas's (1984) Public Sphere** concept highlights the need for open, rational debate supported by accessible evidence, which was undermined by the absence of verifiable sources. **Democratic Participant Theory** (McQuail, 1987) calls for media pluralism and empowerment of public autonomy, but the narrowing of frames around fraud and danger constrained independent judgment.

These concepts converge to form the analytical lens of the study. The **burden of proof** and **academic integrity** highlight the responsibility of both scientists and journalists to provide verifiable evidence. **Framing** explains how Ivermectin was constructed as stigmatized through selective emphasis. **Journalistic ethics** and **media responsibility theories** reveal the ethical stakes of how information was presented. Finally, **normative ethics** clarify the tension between protecting public health and preserving transparency, fairness, and autonomy.

Together, this conceptual framework underscores that the stigmatization of Ivermectin in the BBC report was not solely a scientific judgment but also a product of framing and ethical choices that shaped how the public understood — or mistrusted — the narrative.

Operational Framework. The operational framework for this qualitative study is designed to guide a systematic analysis of the BBC news report on YouTube, focusing on how it addressed access to verifiable sources, acknowledgment of complexity, inclusion of multiple voices, critical literacy, and the construction of Ivermectin stigmatization. In this context, access to verifiable sources is explored by examining whether the report referenced peer-reviewed studies, retractions, or systematic reviews, and how the absence or presence of such references shaped audience understanding (Merton, 1973; Popper, 1959). Acknowledgment of complexity is analyzed by considering how the report differentiated between fraudulent, methodologically weak, and inconclusive studies, highlighting the nuances of scientific evidence. Inclusion of multiple voices is examined through the diversity of expert perspectives presented, such as independent researchers, international health bodies, or government officials, and how the choice of sources affected perceived credibility (McQuail, 1987). Critical literacy is considered in terms of how the report encouraged audiences to question claims, evaluate evidence, and understand power dynamics in science communication (Habermas, 1984).

The construction of stigmatization is analyzed through framing, language, sequencing, and omissions that positioned Ivermectin as fraudulent, dangerous, and associated with misinformation networks (Entman, 1993). The burden of proof is explored by evaluating how the medical establishment, represented by expert commentary, presented claims about “flawed” research and whether these claims were supported by transparent and verifiable evidence, contributing to stigmatization. Framing toward stigmatization is examined by identifying how selective emphasis on fraud, danger, and authority shaped public perception while omitting nuanced or contradictory evidence.

Finally, the study considers the broader ethical and social implications of these journalistic practices. By analyzing how the framing and stigmatization of Ivermectin may normalize shortcuts in reporting, reduce transparency, limit critical engagement, and affect public trust, the framework situates the findings within discussions of justice and the common good (Siebert et al., 1956; Kant, 1785/1993; Mill, 1861/1998; Aristotle, trans. 2000). Overall, the framework allows a qualitative exploration of the interplay between scientific claims, journalistic choices, and ethical considerations in shaping public understanding and discourse.

Statement of the Problem

The dissemination of health information through mainstream media plays a pivotal role in shaping public perceptions, particularly during global health crises such as the COVID-19 pandemic. The BBC's YouTube report on Ivermectin aimed to debunk misinformation by highlighting fraudulent and methodologically weak studies. However, the broadcast exhibited several limitations in fulfilling journalistic and academic standards. These deficiencies not only influence how viewers interpreted the efficacy and legitimacy of Ivermectin but also contribute to its stigmatization and flawed pursuit of justice and the common good. This paper aimed to answer the following questions.

1. How did the BBC news report on YouTube address access to verifiable sources?
2. How did the BBC news report on YouTube address acknowledgment of complexity?
3. How did the BBC news report on YouTube address multiple voices?
4. How did the BBC news report on YouTube address critical literacy?
5. How did the report construct the stigmatization of Ivermectin?
6. How did the burden of proof carried by the medical establishment when making claims about Ivermectin's "flawed" research on its efficacy contribute to its consequent stigmatization?
7. How was the report framed towards the stigmatization of Ivermectin?
8. How did the framing and stigmatization of Ivermectin contribute to the normalization of unethical journalistic practice?
9. What are the implications of the findings to the promotion of justice and common good?

METHODOLOGY

Interpretive Research Paradigm

In this study, an interpretive research paradigm was implemented to understand the meanings, perspectives, and social constructions embedded in the three-minute-59 seconds (3:59) BBC YouTube report titled "*The false science around Ivermectin – BBC News*" (uploaded October 7, 2021). The interpretive paradigm emphasizes the subjective interpretation of social phenomena, privileging the experiences, intentions, and contextual understandings of actors rather than relying on quantifiable measures or generalizable outcomes (Schwandt, 2014). This paradigm is particularly appropriate for examining media texts because it allows researchers to explore how language, framing, and narrative structures convey meaning and shape audience perceptions.

Within this framework, the study treated the BBC report as a socially constructed artifact through which power, authority, and ethical considerations were communicated. The focus on verbal components—including the anchor's narration, expert commentary by Dr. Carl Sheldrick, and the juxtaposition of Joe Rogan's anecdote—enabled the researcher to interpret how the report framed Ivermectin, reinforced stigma, and conveyed scientific authority. By examining the linguistic choices, sequencing, and framing strategies, the interpretive paradigm facilitated an understanding of how meaning is co-constructed between media producers and audiences, and how ethical tensions manifest in journalistic practices.

The interpretive approach also supported the study's focus on ethical and normative implications, including the burden of proof, transparency, multiplicity of voices, and critical literacy. Rather than measuring the effects of the report quantitatively, the paradigm allowed for qualitative insights into how the report's framing influenced public understanding, stigmatization, and perceptions of journalistic integrity. In doing so, the interpretive paradigm provided a nuanced lens to explore the interplay between media, science, and ethics in shaping discourse around alternative COVID-19 treatments.

Qualitative Single Case Study

In this study, the **case study method** was implemented as an in-depth qualitative approach to examine the BBC YouTube report. The case study approach was particularly suited for this research because it allowed for a comprehensive exploration of how a single media artifact — the BBC report — constructed, framed, and communicated the scientific and ethical dimensions of Ivermectin as a COVID-19 treatment. The focus on this specific report enabled the researcher to investigate multiple dimensions of media practice, including access to verifiable sources, acknowledgment of complexity, inclusion of multiple voices, critical literacy cues, and the framing strategies that contributed to the stigmatization of Ivermectin.

The study treated the BBC report as a bounded system, concentrating on its **verbal components**, including the news anchor's narration, the expert commentary of Dr. Carl Sheldrick, and the inclusion of Joe Rogan's anecdote as a representative counterpoint. By applying **textual analysis** within this case study framework, the researcher could critically examine how language, sequencing, sourcing, and framing shaped public understanding and ethical implications. Additionally, the case study design allowed for contextualization of the report within broader media and public health discourse, emphasizing how mainstream media can influence perceptions of alternative treatments during global health crises.

Overall, the case study approach provided a structured yet flexible framework to explore the BBC report as a microcosm of media practices during the pandemic, highlighting both its communicative strategies and its ethical tensions. It facilitated a nuanced understanding of how journalistic decisions, scientific authority, and public health priorities intersected in the construction of stigma and the potential normalization of unethical journalistic practices.

Description of the Case

The BBC video uploaded to the BBC News YouTube channel—which has 18.6 million subscribers—examined the use of Ivermectin as a treatment for COVID-19, highlighting concerns about the integrity of clinical trials supporting the drug. At the time of analysis, the video had garnered 61,000 views and 1,093 comments as of September 8, 2025. Anchored by Lucy Hawkins, the segment opened by noting that an investigation of 26 clinical trials found serious errors or potential fraud in over a third of them. The report contextualized Ivermectin as a widely available antiparasitic medication that had been authorized in some countries, such as India and Peru, as a potential COVID-19 preventive despite lacking strong medical evidence. The newscaster also referenced Joe Rogan, an American podcaster, who publicly mentioned using Ivermectin among other treatments after testing positive for COVID-19.

The broadcast featured Dr. Carl Sheldrick, a researcher at the University of New South Wales and part of the team investigating the trials. Dr. Sheldrick explained that while Ivermectin is effective against parasites, it has not traditionally been used to treat viruses. He described the primary issue as widespread falsification in the clinical trials, noting that close to two-thirds of the studies, particularly those claiming “miracle” results, were fabricated or methodologically unsound. He illustrated the problem with examples of copied patient data and improbable blood test values, highlighting the deliberate manipulation of research data. Dr. Sheldrick emphasized that the fraudulent trials were conducted by individual researchers seeking professional recognition rather than as part of a coordinated conspiracy.

The report concluded by addressing public health implications. Dr. Sheldrick warned that reliance on Ivermectin based on falsified evidence could provide a false sense of security and discourage vaccination, posing serious risks to health. The segment combined expert testimony and illustrative anecdotes to frame Ivermectin as scientifically unreliable and potentially dangerous while illustrating the mechanisms and consequences of research fraud.

Textual Analysis

Textual analysis is a qualitative research method used to systematically examine and interpret the content, structure, and meaning of communication texts, including media outputs, to understand how ideas, values, and

ideologies are conveyed (Krippendorff, 2018; Neuendorf, 2017). In the context of analyzing the verbal components of a BBC video debunking Ivermectin efficacy claims, textual analysis involves closely examining the transcript of the broadcast to identify patterns, themes, and rhetorical strategies that shape public perception of the drug. This includes assessing how the anchors and expert commentators present information, cite evidence, emphasize particular findings, and frame the discussion around fraud, danger, and misinformation.

By focusing on verbal content, textual analysis allows researchers to explore how language constructs meaning and conveys judgments, such as the stigmatization of Ivermectin (Fairclough, 2015). This method examines not only what is said, but also how it is said—tone, emphasis, sequencing of arguments, and selective inclusion or omission of details—all of which influence audience interpretation (Entman, 1993). In this study, the method was applied to understand how the BBC report addressed access to verifiable sources, acknowledged scientific complexity, incorporated multiple voices, and modeled critical literacy. It also facilitated the investigation of ethical dimensions in journalism, particularly in relation to framing and the communication of scientific uncertainty.

Textual analysis is particularly suited for this study because it enables a nuanced, qualitative examination of media discourse without relying on quantitative measurement, highlighting the interplay between language, framing, and audience perception in shaping public understanding of health claims.

Coding Matrix for the Textual Analysis

The coding matrix summarizes how the BBC report on Ivermectin was analyzed across key dimensions relevant to journalistic practice, framing, and stigmatization. It organizes findings into **themes** such as access to verifiable sources, acknowledgment of complexity, multiple voices, critical literacy, burden of proof, framing, normalization of unethical journalism, and implications for justice and the common good. Each theme includes **sub-themes** that capture specific aspects of reporting—for example, whether the report cited peer-reviewed studies, represented multiple perspectives, or guided viewers in critical evaluation. **Descriptions** explain how the report addressed (or failed to address) each sub-theme, and **representative examples** provide concrete excerpts from the broadcast, such as Dr. Sheldrick’s discussion of fraudulent trials or the juxtaposition of Joe Rogan’s anecdote with expert critique. Overall, the matrix provides a structured overview of how the report constructed stigma around Ivermectin, partially fulfilled the burden of proof, and exhibited journalistic practices with both ethical and informational implications.

RESULTS

How did the BBC news report on YouTube address access to verifiable sources?

Addressing access to verifiable sources requires journalists to provide links or references to peer-reviewed systematic reviews, retractions, or authoritative investigations, such as those conducted by Cochrane, the World Health Organization, or other academic institutions. In the BBC report on Ivermectin, the anchor and Dr. Sheldrick referred to “an investigation into 26 clinical trials” and described instances of fraudulent data, including “blocks of 20 patients copied and pasted.” However, the report did not cite any specific studies, retractions, or peer-reviewed reviews. As a result, this standard was not fully met. Although the existence of an investigation was mentioned, audiences were not provided with verifiable references, such as published analyses, WHO guidance, or formal retraction notices. This lack of transparency made independent verification impossible for lay viewers and may have weakened the overall credibility of the report.

How did the BBC news report on YouTube address acknowledgment of complexity?

Rather than presenting all Ivermectin research as fraudulent, reporters should clarify that while some studies were methodologically flawed and others outright fraudulent, a portion of the research was inconclusive, with the overall body of high-quality evidence not supporting efficacy. In the BBC report, Dr. Sheldrick noted that “it’s not all of the trials but it’s close to two-thirds of them,” distinguishing between fraudulent trials, which included so-called “miracle claims,” and the remainder. However, the broadcast placed heavy emphasis on fraudulent studies and did not sufficiently highlight that some research was merely methodologically weak or

that certain legitimate studies produced inconclusive results. Consequently, this standard was only partially addressed: although the report acknowledged that not all trials were fraudulent, it oversimplified the evidence base, failing to fully convey the nuanced complexity of the scientific findings.

How did the BBC news report on YouTube address multiple voices?

Including perspectives from independent researchers, rather than relying solely on government or pharmaceutical-aligned institutions, can help reduce perceptions of bias in reporting. In the BBC report, the network invited one independent scientist, Dr. Carl Sheldrick from the University of New South Wales, to serve as the primary expert voice. However, no perspectives from international organizations such as the WHO or Cochrane, government health officials, or other researchers were included. As a result, this standard was only weakly addressed. While Dr. Sheldrick's independence ensured that the expert was not overtly tied to government or pharmaceutical interests, the reliance on a single voice risked presenting a one-dimensional perspective. Incorporating multiple sources could have mitigated potential bias and enhanced the credibility of the report.

How did the BBC news report on YouTube address critical literacy?

Audiences are expected to approach reports with healthy skepticism, questioning not only what is being said but also how and why it is presented. In the BBC broadcast, the structure of the report modeled elements of critical literacy by presenting a false claim—Joe Rogan's Ivermectin anecdote—and immediately providing expert critique to contextualize it. However, the report did not explicitly guide viewers to question why certain studies were fraudulent, how evidence is evaluated, or who benefits from the spread of misinformation versus its debunking. Consequently, this standard was only partially addressed: while the broadcast encouraged skepticism toward Ivermectin claims, it did not explicitly teach audiences how to think critically about the evidence or the power dynamics underlying science communication.

The BBC report prioritized **clarity and debunking misinformation** but sacrificed **depth, source transparency, and multiplicity of perspectives**. This approach was ethically defensible in terms of public health communication, but academically it left gaps that could fuel skepticism or conspiratorial suspicion.

How did the report construct the stigmatization of Ivermectin?

The BBC report constructed the stigmatization of Ivermectin primarily through its **framing, language, sourcing, and sequencing of evidence**.

Framing Ivermectin as fraudulent and unsafe. From the outset, the anchor framed Ivermectin in relation to flawed or fraudulent studies: "An investigation into 26 clinical trials under the use of Ivermectin to treat COVID has found serious errors or signs of potential fraud in more than a third of them." This foregrounded Ivermectin not as a contested treatment but as a product of invalid science, setting a stigmatizing frame.

Associating Ivermectin with misinformation and anti-vaccine groups. The anchor linked Ivermectin to disinformation networks: "...a frenzy then followed online and on social media too... embraced by many anti-vaxx groups." By tying it to conspiracy communities, the report cast Ivermectin use as part of an anti-science culture, stigmatizing its proponents.

Attributing fraudulent motives to researchers. Dr. Sheldrick emphasized that individuals fabricated studies for personal gain: "They're false... They either did not happen at all... Authors described them or reported false results." This delegitimized not just Ivermectin as a treatment, but also the integrity of those promoting it, deepening stigma.

Emphasizing danger to public health. Sheldrick underscored Ivermectin's risks: "It's very dangerous. It encourages people to have a false sense of security or encourages people not to take the safe and effective vaccines that we have now." Here stigma was constructed by framing Ivermectin not merely as ineffective but as actively harmful.

Symbolic use of Joe Rogan’s clip. By juxtaposing Rogan’s anecdote with expert debunking, the report positioned celebrity advocacy as uninformed and irresponsible, contrasting it against scientific authority. This constructed stigma by showing Ivermectin’s supporters as misled or misleading.

Where stigmatization was reinforced by omission. The construction of stigma was also shaped by **what was not included**: (1) **No access to verifiable sources**: Without citing specific retractions or systematic reviews audiences were left with assertions of fraud, which could seem one-sided; (2) **Limited acknowledgment of complexity**: While Sheldrick admitted not all trials were fraudulent, the nuance that some were simply inconclusive was underdeveloped. This flattened the evidence into a “fraud vs. truth” binary; (3) **Single expert voice**: Only Sheldrick’s perspective was featured, which risked making stigma appear as a closed narrative rather than a robustly verified consensus; (3) **Weak critical literacy cues**: The audience was told Ivermectin was fraudulent and dangerous but was not given tools to evaluate *why anecdotal claims like Rogan’s should not count as scientific evidence*.

The BBC report **constructed the stigmatization of Ivermectin by consistently framing it as fraudulent, dangerous, and linked to misinformation networks**, reinforced by strong language (“fake,” “dangerous,” “false sense of security”). This approach was ethically defensible in protecting public health, but it lacked transparency, multiplicity of sources, and acknowledgment of complexity. These omissions risked making the stigmatization appear as part of a **simplified grand narrative** rather than the outcome of a transparent, evidence-based debate.

The stigmatization of Ivermectin in the BBC report was achieved by combining **negative framing, delegitimizing language, and selective sourcing**, while omitting certain elements (sources, complexity, multiple voices) that would have made the critique both more transparent and less open to conspiratorial counter-interpretation.

How was the burden of proof carried by the medical establishment when making claims about Ivermectin’s “flawed” research on its efficacy contributing to its consequent stigmatization?

In principle, the burden of proof in both science and journalism requires those making claims to provide transparent and verifiable evidence. Within academic integrity, this entails presenting accessible data or references that substantiate findings. Within journalistic ethics, particularly when correcting misinformation, the obligation is to not only repeat expert claims but also anchor them in evidence that audiences can independently verify.

In the BBC report, the medical establishment—represented by Dr. Sheldrick—sought to carry this burden by pointing to an investigation into twenty-six clinical trials, claiming that more than a third showed “serious errors or signs of potential fraud.” He reinforced this by describing patterns of falsification such as “blocks of 20 patients copied and pasted” and blood test values that appeared fabricated. These details demonstrated an attempt to explain why the evidence base for Ivermectin had collapsed.

However, the burden of proof was not fully carried. No specific studies, retractions, or peer-reviewed sources were named, leaving audiences unable to verify the claims. The report therefore relied on illustrative anecdotes rather than concrete citations. Although Sheldrick acknowledged that “not all” trials were fraudulent, the emphasis on widespread falsity risked flattening the evidence into a binary between fake and legitimate science. Moreover, the methods of the investigation—how trials were reviewed and under what criteria—were not disclosed.

This incomplete fulfillment of the burden of proof had direct implications for stigmatization. Ivermectin was framed as fraudulent and dangerous, but without a transparent evidentiary trail, the stigma appeared rhetorically imposed rather than rigorously demonstrated. While this framing reinforced public health messaging, it also opened space for conspiratorial interpretations that the medical establishment was dismissing Ivermectin to protect pharmaceutical interests.

Ethically, the medical establishment’s intent to protect the public from misinformation was defensible. Academically, however, the lack of verifiable sources weakened transparency and rigor. Socially, the omission



created fertile ground for distrust, ironically undermining confidence in the very institutions attempting to correct misinformation.

Hence, the medical establishment only partially carried the burden of proof when making claims about the flawed research supporting Ivermectin. While the framing achieved the goal of stigmatizing Ivermectin as unreliable, the absence of verifiable evidence made this stigmatization appear as an authoritative narrative rather than a fully substantiated conclusion.

How was the report framed towards the stigmatization of Ivermectin?

Framing theory and its functions. Framing theory argues that the way information is presented influences how audiences interpret issues. Media and experts highlight certain elements of reality while downplaying others, shaping public understanding (Goffman, 1974). Entman (1993) specifies four functions of framing: defining problems, diagnosing causes, making moral evaluations, and recommending treatments. These functions allow communicators to guide audiences toward particular interpretations while excluding alternative perspectives.

Problem definition. The BBC report framed Ivermectin as a problem because its supporting research was “fraudulent” or “flawed.” Dr. Sheldrick highlighted fabricated or suspicious data — such as “blocks of 20 patients copied and pasted” and implausible blood tests — presenting fraud as the defining feature of Ivermectin trials. By doing so, the report positioned Ivermectin research as invalid rather than as contested or inconclusive.

Causal diagnosis. Responsibility for the problem was attributed to opportunistic researchers and misinformation networks. Sheldrick described individuals fabricating studies to create “miracle claims,” while the anchor linked Ivermectin’s popularity to “anti-vaxx groups.” This framed the cause of the Ivermectin narrative as deception and bad faith, delegitimizing both the drug and its advocates (Entman, 1993).

Moral evaluation. The report portrayed Ivermectin as ethically harmful. According to Sheldrick, reliance on the drug created “a false sense of security” and discouraged uptake of “safe and effective vaccines.” This moral framing constructed Ivermectin not merely as ineffective but as socially dangerous, making its promotion irresponsible and harmful to collective health (Gamson & Modigliani, 1989).

Treatment recommendation. The implicit solution was to reject Ivermectin entirely and to trust vaccines and expert consensus. This closed off alternative interpretations of the evidence while consolidating the authority of biomedical institutions (Entman, 1993).

Failure of verification and ethical implications. While the frame was powerful in stigmatizing Ivermectin, it lacked verification. The report did not cite specific fraudulent studies, systematic reviews, or retractions. Audiences heard examples of fabricated data but had no access to primary sources for independent evaluation. This omission reflected a failure to fully carry the burden of proof, requiring audiences to accept expert authority rather than engage critically with the evidence.

Assessment. By selecting and emphasizing fraud, danger, and misinformation while omitting verifiability and complexity, the report intensified the stigmatization of Ivermectin. This framing privileged elite biomedical authority at the expense of transparency, reinforcing public health priorities but risking distrust. It served the ethical goal of discouraging harmful misinformation but did so in a way that narrowed democratic space for independent judgment.

Matrix 1

Coding Matrix Results

Theme	Sub-Theme/ Dimension	Description	Representative Example/ Quote
Access to Verifiable Sources	Citation of peer-reviewed studies, retractions, or	Journalists should provide verifiable sources to allow independent evaluation of claims. The BBC report mentioned an	“An investigation into 26 clinical trials...



	authoritative guidance	investigation into 26 trials but did not cite specific studies, systematic reviews, or WHO guidance.	blocks of 20 patients copied and pasted.”
Acknowledgment of Complexity	Distinguishing between fraudulent, methodologically weak, and inconclusive studies	The report partially acknowledged that not all trials were fraudulent but overemphasized fraud, flattening the nuanced spectrum of scientific findings.	“It’s not all of the trials but it’s close to two-thirds of them.”
Multiple Voices	Inclusion of diverse perspectives	Only one independent expert (Dr. Sheldrick) was interviewed; no perspectives from WHO, Cochrane, government officials, or other researchers were included.	Single expert voice: Dr. Carl Sheldrick, University of New South Wales.
Critical Literacy	Encouraging skepticism and analysis	The report modeled some critical literacy by juxtaposing Joe Rogan’s anecdote with expert critique but did not teach viewers how to evaluate evidence or understand power dynamics in science communication.	Joe Rogan clip followed by Dr. Sheldrick’s explanation of falsified studies.
Construction of Stigmatization	Framing Ivermectin as fraudulent	The report highlighted fraudulent trials, delegitimized researchers, and emphasized risks, constructing stigma as both scientifically and socially dangerous.	“A very large number of these studies are simply fake... it’s very dangerous. It encourages people to have a false sense of security...”
	Associating Ivermectin with misinformation	Linked the drug to anti-vaccine groups and social media frenzy to reinforce negative perceptions.	“...embraced by many anti-vaxx groups.”
	Use of celebrity anecdote to delegitimize	Juxtaposition of Joe Rogan’s anecdote with expert critique framed Ivermectin users as misled.	Joe Rogan’s use of Ivermectin contrasted with Dr. Sheldrick’s explanation.
Burden of Proof	Transparency and verification	The medical establishment partially fulfilled the burden of proof by describing patterns of falsified data, but lacked specific citations, limiting audience verification.	“Blocks of 20 patients copied and pasted... only two [blood tests] ended in three.”
Framing Towards Stigmatization	Problem definition	Ivermectin was framed as a fraudulent treatment rather than contested or inconclusive science.	“An investigation into 26 clinical trials... signs of potential fraud.”

	Causal diagnosis	Responsibility attributed to opportunistic researchers and misinformation networks.	“...individuals who get personal professional rewards... anti-vaxx groups.”
	Moral evaluation	Ivermectin portrayed as socially harmful, discouraging vaccination.	“It encourages people not to take the safe and effective vaccines that we have now.”
	Treatment recommendation	Implicitly recommended rejection of Ivermectin and trust in vaccines.	Reliance on scientific authority and expert consensus.
Normalization of Unethical Journalism	Oversimplification & omission	Lack of verifiable sources, oversimplified complexity, reliance on a single voice, and limited critical literacy cues contributed to a practice that risks normalizing unethical reporting.	No citations of retractions or peer-reviewed studies; only one expert featured.
Implications for Justice and Common Good	Ethical evaluation	Deontology, utilitarianism, and virtue ethics reveal that omissions could undermine public trust, informed choice, and democratic discourse if stigmatization were later proven unjustified.	Failure to provide verifiable sources, multiple voices, or context for complexity.

The matrix below provides a clear comparison between the ethical principles that should guide journalism and the practices observed in the BBC report on Ivermectin. Here's a brief discussion:

- Access to Verifiable Sources:** The ethical principle requires journalists to provide verifiable references, but the report fails to cite specific studies or retractions, limiting transparency and hindering audience verification.
- Acknowledgment of Complexity:** Ethical journalism should acknowledge the complexity of scientific evidence. However, the report oversimplifies the Ivermectin issue, focusing heavily on fraud and ignoring nuanced findings, which could mislead viewers.
- Inclusion of Multiple Voices:** Ethical reporting promotes multiple perspectives to reduce bias, yet the report features only one expert and omits other credible voices, narrowing the scope of the discussion and potentially skewing the narrative.
- Promotion of Critical Literacy:** The report partially encourages critical thinking by presenting expert critique alongside anecdotal evidence. However, it fails to guide the audience in critically evaluating evidence and motivations, missing an opportunity to foster deeper engagement.
- Framing and Stigmatization:** The report frames Ivermectin as fraudulent and dangerous, which contributes to its stigmatization. While this aligns with public health messaging, the lack of balanced reporting and the absence of clear evidence may undermine public trust in scientific discourse.
- Burden of Proof:** Ethical journalism demands substantiation of claims. While the report discusses fraudulent studies, it does not provide concrete evidence or sources for verification, failing to meet the burden of proof fully.

7. **Ethical Responsibility:** The report's partial fulfillment of the ethical duty to truth and transparency is evident in its discussion of fraudulent research. However, by not providing sources for verification, it falls short of journalistic responsibility.
8. **Public Health:** The utilitarian aim of promoting public health is evident in the report's caution against Ivermectin. However, the lack of evidence to back claims could lead to skepticism, potentially undermining the very public trust the report seeks to uphold.
9. **Virtue Ethics:** The report compromises fairness and integrity by presenting a one-sided view, omitting crucial perspectives and not fully acknowledging the complexity of Ivermectin's research.
10. **Social Responsibility:** Finally, the report fails to meet its full social responsibility by not providing balanced, transparent, and inclusive coverage, which is vital in maintaining the trust of the public, especially during a health crisis.

In summary, while the report follows some ethical guidelines, it falters in key areas such as transparency, balanced perspectives, and critical engagement, which ultimately affects its credibility and trustworthiness.

Matrix 2

Contrasting the ethical principles with observed practices in the BBC report about Ivermectin

Ethical Principles	Observed Practices in BBC Report
Access to Verifiable Sources	The report mentions an investigation into 26 trials but does not cite specific peer-reviewed studies or retractions, limiting transparency and audience verification.
Acknowledgment of Complexity	The report oversimplifies the scientific evidence, emphasizing fraud and danger without sufficiently acknowledging the complexity of Ivermectin research.
Inclusion of Multiple Voices	The report features only one expert voice (Dr. Sheldrick) and omits perspectives from other experts or organizations like WHO, Cochrane, or government health bodies.
Promotion of Critical Literacy	The report models some critical literacy by presenting expert critique following Joe Rogan's anecdote, but it doesn't guide the audience to critically evaluate evidence or the motivations behind misinformation.
Framing and Stigmatization of Ivermectin	Ivermectin is framed as fraudulent, unsafe, and linked to misinformation, stigmatizing it as a dangerous treatment.
Burden of Proof	The report highlights fraudulent studies but does not provide concrete evidence or sources for verification, thus failing to fully meet the burden of proof.
Ethical Responsibility (Deontological)	The report partially fulfills the duty to truth and transparency by discussing fraudulent research but falls short by not providing sources for audience verification.
Public Health (Utilitarian)	The report prioritizes public health by warning against Ivermectin use but risks undermining public trust by not fully verifying the claims.
Virtue Ethics (Integrity and Fairness)	The report compromises fairness by not acknowledging the nuance in research and not including multiple voices, which could have provided a more balanced view.
Social Responsibility of Journalism	The report does not fully meet its responsibility to provide balanced, accurate, and transparent information, which could influence public trust and health behaviors.

DISCUSSION

How could the framing and stigmatization of Ivermectin contribute to the normalization of unethical journalistic practice?

Lack of Verifiable Sources and Social Responsibility. The BBC report referenced an investigation into faulty Ivermectin trials—highlighting suspicious data—but omitted specific citations, such as systematic reviews or formal retraction notices. **Social Responsibility Theory** (Siebert, Peterson, & Schramm, 1956) stipulates that media must inform and enable public reasoning. Recent analysis underscores that failing to include credible sources in health news undermines public trust and ethical discourse (Öntaş et al., 2024).

Simplified Framing and the Public Sphere. Although Dr. Sheldrick acknowledged not all trials were fraudulent, the framing focused heavily on fraud and danger. **Habermas's public sphere theory** (1984) emphasizes that democratic dialogue must be grounded in transparent, rational evidence. Oversimplified narratives limit the scope for public reasoning and reinforce stigma absent nuance.

Limited Perspective and Democratic Participation. By featuring only a single expert voice, the report failed to include background from institutions such as the WHO or Cochrane—contravening the principles of **Democratic Participant Theory**, which promotes media pluralism and empowerment of citizen judgment (McQuail, 1987). This narrowed the narrative and reinforced elite-driven framings.

Insufficient Critical Literacy. While juxtaposing Joe Rogan's anecdote with expert commentary modeled some skepticism, the report did not encourage full critical evaluation of the evidence or structural power dynamics involved. Journalism ethics scholarship warns that surface-level rebuttal without deeper context normalizes passive information consumption (Ndo, 2024).

The BBC's framing of Ivermectin as fraudulent and dangerous, while arguably warranted for public health, was accompanied by practices that can foster normalization of unethical journalism: omission of evidence, oversimplification, lack of diversity in sources, and minimal promotion of critical engagement. These tendencies, when repeated, degrade ethical standards and public autonomy.

Implications to the Promotion of Justice and Common Good

If future evidence were to demonstrate that the stigmatization of Ivermectin was unwarranted, the journalistic practices displayed in the BBC report—lack of verifiable sources, oversimplification of evidence, reliance on a single expert voice, and limited critical literacy cues—would be exposed as failures to uphold justice and the common good.

From a **deontological perspective**, journalism carries the duty to report truthfully, transparently, and fairly (Kant, 1993/1785). By framing Ivermectin primarily as fraudulent without providing audiences access to verifiable sources or acknowledging the complexity of the evidence, the BBC failed to uphold this duty. Should Ivermectin later prove effective, such reporting would not only constitute misinformation but also an unjust denial of the audience's right to make informed decisions. Injustice arises when media privilege expedience or authority over accuracy and fairness (Christians et al., 2016).

From a **utilitarian perspective**, stigmatization might initially appear justified if it maximized public health benefits by discouraging dangerous misinformation. However, if stigmatization is later proven false, the utilitarian calculus collapses. Instead of minimizing harm, journalism would have contributed to potential medical harm by dismissing a treatment prematurely, while simultaneously exacerbating distrust in science and media. Research confirms that misinformation or omission in health news reduces long-term trust and undermines collective welfare (Öntaş et al., 2024). In this case, utilitarian ethics highlight how sacrificing transparency for expediency in crisis communication can undermine, rather than promote, the common good.

From the perspective of **virtue ethics**, journalism should embody honesty, integrity, courage, and fairness (Aristotle, trans. 2000). The BBC report's framing choices emphasized clarity and authority but compromised honesty by omitting verifiable sources and fairness by failing to acknowledge the nuanced state of Ivermectin

research. Should later findings show that stigmatization was unwarranted, this would expose journalism's lack of intellectual humility and courage to represent uncertainty responsibly. By privileging authority and stigma over balanced truth, the report failed to cultivate virtues that sustain public trust.

Finally, the failure to promote justice and the common good lies in journalism's responsibility to enable democratic deliberation. According to **Habermas (1984)** and **McQuail (1987)**, the media are obligated to create a public sphere where diverse perspectives are accessible, evidence is transparent, and citizens are empowered to reason independently. If stigmatization is later shown to be false, the BBC's omissions would reveal not only a failure of journalistic ethics but also a structural undermining of democracy by constraining informed participation.

In conclusion, if later findings prove Ivermectin's stigmatization unjustified, the unethical journalistic practices observed in the BBC report would represent a profound failure to uphold justice and the common good. Deontology exposes the breach of duty to truth and fairness, utilitarianism reveals harm to public health and trust, and virtue ethics highlights the erosion of honesty and humility. Collectively, these frameworks demonstrate how unethical journalistic shortcuts, when normalized, privilege authority over accountability and undermine the democratic role of journalism in serving justice and the common good. It is recommended that future research incorporate audience reception studies or discourse analysis of viewer comments to connect journalistic framing with public reaction.

REFERENCES

1. Aristotle. (2000). *Nicomachean ethics* (R. Crisp, Trans.). Cambridge University Press. (Original work published ca. 350 B.C.E.)
2. Bantugan, B. (2022). Coursera as the World Economic Forum's Ideological (Trans-)State Apparatus towards a Global COVID-19 Vaccination Hegemony. *International Journal of Arts and Social Science*, 5(11), 148-168.
3. Bantugan, B. (2022). The World Economic Forum, 'The Lancet', and COVID-19 Knowledge Gatekeeping. *International Journal of Arts and Social Science*, 5(12), 57-79.
4. Bantugan, B. (2023). COVID-19, Wikipedia, and the World Economic Forum: Knowledge Construction through a Scientism Network. *International Journal of Arts and Social Science*, 6(9), 148-155.
5. Bantugan, B. (2024). Institutional, Research, and Publication Networks of Knowledge Control through Global University Rankings: A Marxist Analysis. *International Journal of Arts and Social Science*, 7(4), 155-166.
6. Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51-58. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>
7. Habermas, J. (1984). *The theory of communicative action: Reason and the rationalization of society* (T. McCarthy, Trans., Vol. 1). Beacon Press.
8. Kant, I. (1993). *Groundwork of the metaphysics of morals* (J. W. Ellington, Trans., 3rd ed.). Hackett. (Original work published 1785)
9. Kuhn, T. S. (1962). *The structure of scientific revolutions*. University of Chicago Press.
10. McQuail, D. (1987). *Mass communication theory: An introduction*. Sage.
11. Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations*. University of Chicago Press. (Original work published 1942)
12. Mill, J. S. (1998). *Utilitarianism* (R. Crisp, Ed.). Oxford University Press. (Original work published 1861)
13. Aristotle. (2000). *Nicomachean ethics* (T. Irwin, Trans.). Hackett Publishing Company. (Original work published 4th century BCE)
14. Brennen, J. S., Simon, F., Howard, P. N., & Nielsen, R. K. (2020). Types, sources, and claims of COVID-19 misinformation. Reuters Institute for the Study of Journalism. <https://reutersinstitute.politics.ox.ac.uk>
15. Chadwick, A., & Vaccari, C. (2021). *Digital media, misinformation, and COVID-19: Mapping the challenges*. Routledge.
16. Christians, C. G., Fackler, M., Richardson, K., Kreshel, P., & Woods, R. (2016). *Media ethics: Cases and moral reasoning* (10th ed.). Routledge.
17. Christians, C. G., Glasser, T. L., McQuail, D., Nordenstreng, K., & White, R. A. (2016). *Normative theories of the media: Journalism in democratic societies*. University of Illinois Press.



18. Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>
19. Fairclough, N. (2015). *Language and power* (3rd ed.). Routledge.
20. Gamson, W. A., & Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American Journal of Sociology*, 95(1), 1–37. <https://doi.org/10.1086/229213>
21. Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Harvard University Press.
22. Habermas, J. (1984). *The theory of communicative action: reason and the rationalization of society* (T. McCarthy, Trans., Vol. 1). Beacon Press.
23. Habermas, J. (1989). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society* (T. Burger & F. Lawrence, Trans.). MIT Press. (Original work published 1962)
24. Kant, I. (1993). *Grounding for the metaphysics of morals* (J. W. Ellington, Trans.). Hackett. (Original work published 1785)
25. Kellner, D., & Share, J. (2007). Critical media literacy, democracy, and the reconstruction of education. In D. Macedo & S. R. Steinberg (Eds.), *Media literacy: A reader* (pp. 3–23). Peter Lang.
26. Krippendorff, K. (2018). *Content analysis: An introduction to its methodology* (4th ed.). Sage Publications.
27. Lewandowsky, S., Ecker, U. K. H., & Cook, J. (2020). Beyond misinformation: Understanding and coping with the “post-truth” era. *Journal of Applied Research in Memory and Cognition*, 6(4), 353–369. <https://doi.org/10.1016/j.jarmac.2017.07.008>
28. McQuail, D. (1987). *Mass communication theory: An introduction* (3rd ed.). Sage.
29. McQuail, D. (2010). *McQuail’s mass communication theory* (6th ed.). Sage.
30. Merrill, J. C. (1997). *Journalism ethics: Philosophical foundations for news media*. St. Martin’s Press.
31. Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations*. University of Chicago Press.
32. Mill, J. S. (2001). *Utilitarianism*. Hackett Publishing Company. (Original work published 1863)
33. Ndo, C. (2024). Promoting critical thinking in science journalism: Challenges and opportunities. *Journal of Media Ethics*, 39(1), 45–62. <https://doi.org/10.1080/23736992.2024.1678901>
34. Nelson, L. D., & Van der Linden, S. (2019). The social-psychological processes underpinning the rejection of science-based advice: A review of the literature. *Current Opinion in Psychology*, 34, 123–130. <https://doi.org/10.1016/j.copsyc.2019.08.007>
35. Neuendorf, K. A. (2017). *The content analysis guidebook* (2nd ed.). Sage Publications.
36. Ndo, D. (2024). The fight for transparency: Upholding journalistic integrity. *Journal of Mass Communication & Journalism*, 14(4), 572. <https://doi.org/10.37421/2165-7912.2024.14.572>
37. Öntaş, E., Öntaş, Ö., & Yıldırım, H. (2024). Health news reporting: Evaluation of source credibility and its effect on audience trust. *Frontiers in Public Health*, 12, 1370343. <https://doi.org/10.3389/fpubh.2024.1370343>
38. Öntaş, Ö., Kaya, Ö., & Toprak, D. (2024). Health journalism and public trust: The role of source transparency during the COVID-19 pandemic. *Journalism Practice*, 18(2), 231–247. <https://doi.org/10.1080/17512786.2023.2184567>
39. Popper, K. (1959). *The logic of scientific discovery*. Hutchinson.
40. Schwandt, T. A. (2014). *The Sage dictionary of qualitative inquiry* (4th ed.). Sage.
41. Sidharthan, C. (2024, September 2). COVID-19 treatment reporting in U.S. media lacked scientific rigor, study says. *News-Medical*. <https://www.news-medical.net/news/20240902/COVID-19-treatment-reporting-in-US-media-lacked-scientific-rigor-study-says.aspx>
42. Sidharthan, R. (2024). Ethical journalism and the role of media in public health crises. *Journal of Media Ethics*, 39(2), 145–160. <https://doi.org/10.1080/23736992.2024.1765432>
43. Siebert, F., Peterson, T., & Schramm, W. (1956). *Four theories of the press*. University of Illinois Press.
44. Tsfati, Y., & Cappella, J. N. (2003). Do people watch what they do not trust? Exploring the association between news media skepticism and exposure. *Communication Research*, 30(5), 504–529. <https://doi.org/10.1177/0093650203253371>
45. Tsfati, Y., Meyers, N., & Peri, Y. (2022). Media influence on public understanding of science: Editorial decisions and the marginalization of alternative perspectives. *Public Understanding of Science*, 31(2), 143–160. <https://doi.org/10.1177/09636625211045678>



46. Vraga, E. K., & Bode, L. (2021). Addressing COVID-19 misinformation on social media: The role of correction and context. *Journal of Medical Internet Research*, 23(4), e23997. <https://doi.org/10.2196/23997>
47. Watson, J., Patel, R., & Huang, L. (2024). Media framing of COVID-19 treatments: Public trust and the suppression of alternative perspectives. *Health Communication*, 39(1), 12–25. <https://doi.org/10.1080/10410236.2023.2187654>
48. Watson, S., Benning, T. J., Marcon, A. R., Zhu, X., Caulfield, T., Sharp, R. R., & Master, Z. (2024). Descriptions of scientific evidence and uncertainty of unproven COVID-19 therapies in U.S. news: Content analysis study. *JMIR Infodemiology*, 4, e51328. <https://doi.org/10.2196/51328>