**Short title: Beth Hurford – “Misinformation in India regarding protection against COVID-19”**

**Is cow excreta an appropriate remedy against SARS-CoV-2 or just another ‘moo-point’? Need for debunking the narrative-based misinformation in India and protection of human rights**

Beth Hurford\*, Abhishek Rana\*\*, Rohan Sachan\*\*\*

**Abstract**

With India’s first confirmed case of SARS-CoV-2 appearing in late January 2020, it didn’t take long for the misinformation surrounding the outbreak and cure for the virus to spread across the whole nation through various platforms. Across the globe, social media applications like WhatsApp and Facebook have played a vital role in the advancement of misinformation; however, in India, the dissemination of inaccurate information has been particularly exacerbated by public figures advancing their conservative ideologies by bringing the ‘sacred’ cow to the center stage, yet again. Several famous Hindu religious ‘gurus’ and nationalist political leaders, were witnessed vehemently supporting their long-held narratives that cow excreta is indeed a ‘proven’ precautionary remedy against most diseases, including coronavirus. Hence, to debunk such claims, the authors in this essay, firstly qualitatively analyze the types of mediums used to circulate unfounded information concerning coronavirus across the world, followed by citing India specific events where customary beliefs of Hindus has now taken the form of practices which can worsen the curve - as such practices lack significant scientific backing. Finally, it discusses the impact of such misinformation on human rights, and how states and social media companies can combat the infodemic.

***Keywords:***Coronavirus, Cow-products, Human Rights, Social-Media, Misinformation

**Introduction - Intermediaries involved in spreading of bogus information**

While scientists, in particular virologists, are trying every possible way to find a vaccine to the potentially life-threatening severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (i.e. from now on also referred to as ‘COVID-19’ and ‘coronavirus’), there are a few practices like regular hand washing, maintaining cleanliness and proper sanitization of one’s surroundings, social distancing, paired with self-quarantine which have helped in flattening the epidemic curve (i.e. by slowing down the spread of the virus and reducing the number of cases that are active at any given time). These methods sequentially provide essential services like health care workers, vaccine-manufacturers, hospitals, and police the time to prepare and respond, without becoming overwhelmed.[[1]](#footnote-1) The World Health Organization (WHO), in February, cautioned of the “massive infodemic” associated with the COVID-19 outbreak[[2]](#footnote-2) making it difficult for people to locate reliable sources and dependable guidance when in need.[[3]](#footnote-3) The WHO has also repeatedly warned that misinformation about COVID-19,[[4]](#footnote-4) which has been a large part of this infodemic, impedes on the effectiveness combatting the pandemic[[5]](#footnote-5) and can give birth to the violation of other human rights.[[6]](#footnote-6) Misinformation can be defined as the unintentional spread of false or inaccurate information without malicious intent, which is indistinct from the concept of 'disinformation'.[[7]](#footnote-7) Disinformation can be described as false, inaccurate, or disingenuous information designed, presented and endorsed to cause public harm deliberately or for-profit,[[8]](#footnote-8) commonly referred to as fake news.

Scholars have found that genuine sources of information about COVID-19, such as the WHO, had dramatically fewer engagements than sources of misinformation.[[9]](#footnote-9) Nevertheless, factually correct information is crucial to safeguarding effective responses to COVID-19, together with the operation of protective measures by the public.[[10]](#footnote-10) Without access to accurate and up-to-date information from authorities about state policies and actions, individuals, doctors, and epidemiologists cannot conclusively protect themselves and others.[[11]](#footnote-11) Thus, inevitably, some people across the globe are still unaware of the seriousness of this disease and accordingly have promoted their remedies to protect themselves from it which deepen rather than mitigate health risks.[[12]](#footnote-12)

Social media, in particular, WhatsApp and Facebook, with their impressive 1 billion WhatsApp users in 180 countries,[[13]](#footnote-13) and 1.73 billion daily active Facebook users,[[14]](#footnote-14) have facilitated in keeping family and friends connected during social distancing. Following the outbreak of coronavirus, Facebook has seen a 70% increase in Messenger group video calls,[[15]](#footnote-15) and WhatsApp, also owned by Facebook, has seen a significant rise in the forwarding of messages during the outbreak[[16]](#footnote-16). Nevertheless, as the world struggles to find a cure for the virus, WhatsApp and Facebook groups have failed to promptly intercept the dispersion of third-party generated disinformation and misinformation.[[17]](#footnote-17) For example, in early March an anti-vaccine Facebook group called 'We Brought Vaxxed to the UK', began to circulate unfounded information about COVID-19, by alleging that China was using the outbreak to cull the elderly.[[18]](#footnote-18) Whilst another post suggested that hand sanitizers were carcinogenic.[[19]](#footnote-19) They also circulated that a "probiotic yogurt suppository" was endorsed as a cure.[[20]](#footnote-20) In India, the misinformation spread on WhatsApp around COVID-19 has included guidance such as the heavy intake of Vitamin C to protect one from the virus, and to avoid ice creams and other cold foods.[[21]](#footnote-21)

Additionally, Indian legislators, members of Indian Parliament and members of Legislative Assemblies (MLAs), mostly from the current Indian Prime Minister Narendra Modi's Hindu nationalist party, i.e. the Bharatiya Janata Party (BJP), are also guilty of further exacerbating the circulation of such erroneous information over various platforms by advocating cow urine on numerous occasions for its "medicinal" properties,[[22]](#footnote-22) despite scientific evidence proving otherwise and without consideration of the immediate negative impact it would have on people’s health and human rights.

# **Cow-excreta as a remedy**

The case study of misinformation surrounding cow-excrement as a remedy to COVID-19 becomes fathomable only after understanding India’s unique history with the veneration of cattle. In India, a predominantly Hindu country, with just under 80% of the country identifying as Hindus in the 2011 census,[[23]](#footnote-23) cows are worshipped as a sacred animal by the majority of citizens,[[24]](#footnote-24) and are symbolic of the Indian nation.[[25]](#footnote-25) These views have been longstanding within India, dating as far back as the earliest civilizations in the 412 CE.[[26]](#footnote-26) The Brahmins, otherwise known as the priestly caste, form part of India's caste system,[[27]](#footnote-27) where they seized the cow's symbolism and declared it sacred, and thereby worthy of worship and protection. Cows continue to be worshipped in India for the alleged therapeutic values of the products derived from it like cow milk, ghee, cow urine, and cow dung.[[28]](#footnote-28) A large portion of the Hindu community continues to believe that cow urine and cow dung hold medicinal properties to prevent and cure mostly all the diseases known to humankind. The basis of these myths, as discussed above, lies primarily in the customary practices of Hinduism, and even by relying on alternative medicines under the ‘Ayurveda’ - a traditional pseudo-scientific system of Indian medicine.[[29]](#footnote-29)

# **Evaluating the properties of cow excreta to determine its effectiveness in fighting SARS-CoV-2**

The World Health Organization (WHO) on January 30, 2020, declared the outbreak of SARS-CoV-2, which is a new strain from the family of coronaviruses, as a public health emergency of international concern (PHEIC), with this PHEIC being sixth in line from the time the International Health Regulations (IHR) were enforced in 2005.[[30]](#footnote-30) COVID-19 is a coronary viral infection that affects the respiratory system and has been included in the SARS (Sub-Acute Respiratory Syndrome) group. The virus has double-stranded ribose nucleic acid (ds RNA) and genome of size 60-140 nm in diameter, which belongs to the beta genera coronavirus like other SARS-CoV (Sub-Acute Respiratory Syndrome-Coronavirus).[[31]](#footnote-31) This viral infection amongst humans is spreading through a human to human transmission via respiratory droplets, fecal-oral route, or coming in direct contact with such nasal or ocular secretion on an object that may contain a virus.[[32]](#footnote-32) This virus has been found to have a mean incubation period of 4-7 days before the signs tend to appear[[33]](#footnote-33), that includes fever, dry cough, shortness of breath, muscle ache, sore throat, and nausea as the most commonly experienced symptoms amongst the infected individuals.[[34]](#footnote-34)

Before the authors could analyze the secondary studies already carried out on cattle excreta as to whether such precautionary remedy can be used for coronavirus, it is crucial to understand what cow urine principally contains. Cow urine usually comprises of 95% water, 2.5% urea, and the rest consists of minerals, enzymes, and some aspects of iron, calcium, phosphorus, potash, ammonia, manganese, iron, sulfur, phosphates, potassium, cytokine and lactose.[[35]](#footnote-35) While the presence ofproline amino acid in cow urine is proven to possess antibacterial properties, analyzed using the well-agar diffusion method to combat various non-pathogenic and pathogenic bacteria such as *Pseudomonas aeruginosa*, *Escherichia coli*, *Salmonella typhimurium*, there might lie an argument that cow urine can be beneficial against some bacterial infections.[[36]](#footnote-36)

Cows are a reservoir of numerous pathogenic microorganisms that can cause infections and zoonotic diseases in humans[[37]](#footnote-37) through the transmission of zoonotic pathogens like *Salmonella* spp., *Listeria monocytogenes*, *Yersinia enterocolitica*, *Escherichia coli*, and protozoa such as *Giardia lamblia*, *Cryptosporidium parvum*,[[38]](#footnote-38) which are usually present in the dung or urine of a bovine animal. For instance, *Enterohemorrhagic Escherichia coli* which is commonly found in the gastrointestinal tract and duct of ruminant animals, contains certain strains which might lead to zoonotic diseases in humans.[[39]](#footnote-39) These individual E. coli strains are categorized based on their virulence properties, with strains containing Shiga toxins, which studies have found can result in human diseases comprising of bloody diarrhea and hemolytic uremic syndrome (a life-threatening condition having clinical manifestation such as non-immune hemolytic anemia wherein the red blood corpuscles are destroyed at a high rate couple with platelet count gradually decreasing and kidney failure due to damage of small blood vessels).[[40]](#footnote-40) Moreover, rotavirus infections,[[41]](#footnote-41) which can be transmitted zoonotically, is also one of the prominent threats to the life of children less than five-years of age, especially, if they encounter such cattle dung or urine. Therefore, any person opting to consume cow urine as a remedy for coronavirus might end up having these deadly microbes in their system, doing them more harm than good. Likewise, the application of cow dung on one’s body can also lead to numerous infections as it can accidentally slip in the human body through the many pores. Accordingly, the use of even cow dung as a precautionary remedy against the coronavirus is also to be avoided.

Furthermore, another negative health effect of consuming cow excreta is that cattle feces have been experimentally tested to possess a gene pool for antibiotic-resistant bacteria and enzymes that are zoonotic in nature.[[42]](#footnote-42) Within the suggested antibiotic-resistant molecules, β-lactamase is one of the enzymes found to be existing in cattle excreta,[[43]](#footnote-43) which can inhibit the actions of antibiotics like penicillin, cephalosporin, and monobactams having β-lactam structure. The β-lactam antibiotics are used to obstruct the pathogenic bacterial cell wall from elongation or cross-linking inside the body, which is necessary for the multiplication of the concerned bacterial cell for pathogenesis.[[44]](#footnote-44) Still, the presence of β-lactamase inside the body might hinder the functions of such useful antibiotics.

# **Endorsement of cow excreta as a cure for the coronavirus**

In spite of the presence of scientific studies suggesting the ill-effects of the consumption or application of cow-excreta, the fundamental beliefs of Indian society have yet again taken the shape of practices in many regions across India to mitigate and tackle the COVID-19.

One of the first instances of such zealotry during a public health emergency was witnessed when the chief of the Akhil Bharat Hindu Mahasabha (All India Hindu Union) held a cow urine-drinking event on March 14, 2020 in New Delhi, which was coupled with prayers directed to both the cow and the virus, with a hope that this practice would stave off the further spreading of COVID-19.[[45]](#footnote-45) Cow urine was poured on an image of the coronavirus that was portrayed as evil,[[46]](#footnote-46) implying that the urine will cleanse the virus of its evil nature. Two hundred people reportedly attended the event, and the group hoped to host similar events elsewhere in India.[[47]](#footnote-47) Since the event, a video from the party has gone viral, which was posted by VOA News.[[48]](#footnote-48) This madness was replicated in Kolkata by a BJP activist, who asserted that the urine would shield individuals from catching the coronavirus disease. The concerned activist has since been arrested under the Indian Penal Code, 1860, attracting sections 269[[49]](#footnote-49)278[[50]](#footnote-50), and 114[[51]](#footnote-51),[[52]](#footnote-52) after a civic volunteer had fallen ill following the encouragement of the consumption of cow urine passed off as a ‘miracle elixir’, acting as preventive medicine for COVID-19.

Meanwhile, in the state of Assam, MLA Suman Harpriya misinformed state lawmakers and citizens during an assembly session early March, by advocating that cow urine and cow dung could be used to avert COVID-19.[[53]](#footnote-53) She contended that cow urine, when sprayed, helps in purification of that area.[[54]](#footnote-54) Though the spread of such imprecise information from Harpriya appears to be an innocent mistake , as she sincerely believed in the truthfulness of her message and was propagating it without any desire to cause harm,[[55]](#footnote-55) it is crucial to note that such statements derived from state actors can have an impact on the health and fundamental human rights of other individuals.

Even Vallabhbhai Kathiria, chairman of the Rashtriya Kamdhenu Aayog and a BJP MP from the state of Gujarat, who happens to be an oncology surgeon and Gujarat’s former Union Minister of State for Health and Family Welfare, expressed that cow urine would “definitely be helpful in fighting the coronavirus”.[[56]](#footnote-56) These beliefs are so profoundly innate within the society, that even medical professionals continue to place a questionably high value on the efficacy of cow urine as a legitimate way of protecting people against a fatal virus. Consequently to this, it was covered in the local newspapers of Gujarat that clinical trials in their state have already begun to test whether cow derived products can be used to treat COVID-19 with the anticipation to establish the credibility of Ayurveda medicine in a modern scientific context.[[57]](#footnote-57) With the citizens’ predisposition towards the ostensible benefits of Ayurvedic medicines, they are put at a higher risk as they are more likely to partake in such absurd trials.

It is evident that since the right-wing nationalist party has come to power, there has been a consequent rise in the pseudo-scientific studies being conducted within the Department of Science and Technology (i.e. a branch of the Ministry of Science and Technology under the Government of India), which has encouraged research proposals from academic institutions and non-government organizations for research and development work into prime products of indigenous cows,[[58]](#footnote-58) and are being offered to receive up to 60% of their initial investment as government funding.[[59]](#footnote-59) It is also not the first occasion that the Modi government has promoted research on the cow. In 2017, a committee was assembled to vet research proposals to scientifically validate “panchgavya,” an Ayurvedic mixture of cow milk, curd, ghee, dung, and urine believed to hold curative properties to legitimize faith-based pseudoscience.[[60]](#footnote-60)

Furthermore, there are around 81,5538 active cases and 67,376 COVID-19 related deaths in India, as of September 3, 2020, which continues to increase.[[61]](#footnote-61) Scientists are still uncovering details of the coronavirus. Still, the events as mentioned earlier and statements misrepresent current medical knowledge and demonstrate counterfactual information, causing substantial harm to the most vulnerable during a time of global emergency.

# **Dissemination of misinformation and its relationship and impact on human rights and health**

Misinformation can come from a variety of sources including state actors, organized non-state actors, and even individuals acting spontaneously or organically. Such false information can be spread by sincerely believing in its truthfulness, knowing that it is not genuine, or merely being indifferent to its truth value.[[62]](#footnote-62) Misinformation shares a unique bond with COVID-19 as they both possess the potential to cause significant social harm, that may even lead to loss of human life.[[63]](#footnote-63) Some of the immediate consequences of misinformation surrounding cow-excreta as a cure to COVID-19 were witnessed with the sales of cow urine significantly increasing in the state of Gujarat to about 6,000 liters a day, as it is was claimed to contain immunity-boosting properties.[[64]](#footnote-64) Gujarat has been one of the states hit the hardest by the virus, with a total of 14,241 cases as of August 16, 2020. Similar reports came from West Bengal where a roadside shop was found to be selling cow urine and cow dung in jars, attracting naïve, innocent and frightened people.[[65]](#footnote-65)

While it is understood that the state authorities cannot expansively monitor the spread of coronavirus and the rise of new hotspots instantaneously, there are certain approaches which both the state actors and business enterprises can undertake to ensure that the dispersion of misinformation is stopped, whilst also protecting, promoting, and respecting human rights of the people.[[66]](#footnote-66) International law presents a comprehensive legal framework obliging states to limit their harmful consequences, adequately respond to ensuing health emergencies, and support in achieving those aims.[[67]](#footnote-67)

## Responsibility of state-actors

International law necessitates that for the protection of human rights to life and health, the nation-state and state actors should take all viable measures, with proper due diligence, as reasonably available to them.[[68]](#footnote-68) However, the obligations of due diligence are intrinsically flexible as they rely on states’ capacity to adopt the necessary and appropriate measures considering their available technical, human and economic resources.[[69]](#footnote-69) This makes them especially relevant in a world marked by inequality and even more so in a polarized country like India. Countries such as India maintain a wide margin of discretion when choosing appropriate measures considering the extent of mandated measures depends on determinants, such as imminence and type of harm, available scientific knowledge, which, concerning COVID-19 is continuously evolving, and compliance with other international obligations.[[70]](#footnote-70) Nevertheless, at the very least, these measures must include the communication of accurate information on public health,[[71]](#footnote-71) especially as state actors are often in a position of trust and influence. It is also comprehensible that misinformation by state actors would inherently entice more attention as the media inevitably amplifies its impact, which subsequently may lead to public distrust in combatting the pandemic[[72]](#footnote-72) if individuals were to be informed that this information is incorrect. Therefore, in essence, the state actors wield power to effectively construct and promote entire false narratives by spreading misinformation and suppressing accurate information.

If one examines Article 19 of the Universal Declaration of Human Rights, which provides that “*everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers*”,[[73]](#footnote-73) an argument can be made that sources can disseminate misinformation with a bona fide (even if misguided) intention of contributing to the public debate.[[74]](#footnote-74) It’s free speech. This was illustrated in the Assam Assembly instance, and there is nothing patently wrong in that. Nevertheless, this argument only remains relevant if there is no corresponding impairment of the rights of other citizens in society through such false information.[[75]](#footnote-75) There must be a balance between freedom of speech and protecting human rights. There is a more significant threat when misinformation about an international crisis comes from the state actors, as it both deteriorates the trust in the state authorities and endorses misguided responses by the public and health officials.[[76]](#footnote-76) This kind of misinformation can be detrimental to any society, as it diminishes the threat posed by the virus,[[77]](#footnote-77) which can propel the pandemic curve and result in mass deaths, just like in India, which has been one of the worst countries in the world hit by COVID-19. As of August 10, 2020, India had recorded 44,386 deaths by coronavirus.[[78]](#footnote-78)

## Suppression of accurate information

The promotion of alternative medicines and treatments during a pandemic can be particularly harmful, notably when partnered with the suppression of accurate information[[79]](#footnote-79). Since the first televised address to the nation by Prime Minister Modi concerning the pandemic on March 19, 2020, he has requested citizens to perform their duties but had neglected to clarify what his government was precisely doing to combat the virus.[[80]](#footnote-80) India had subsequently failed to address the deluge of false information being spread by its state actors, that instead puts the responsibility of deciphering what is accurate information onto its citizens. Even prior to the pandemic, the majority of Indians were concerned about misinformation spreading via mobile phones.[[81]](#footnote-81) The suppression of information by the current central government is nothing new. Modi’s administration has been alleged numerous times to have suppressed key figures since their election victory in 2014.[[82]](#footnote-82) However, it is noted that any clampdown on accurate facts and information during the current crisis would amount to a severe breach of human rights as it can cause direct harms to health or expose individuals to significantly increased risks, as was demonstrated in the instance of the civic volunteer who had fallen ill following the encouragement of the consumption of cow urine.[[83]](#footnote-83) Modi has recognized that misinformation is being spread but places the onus on social media companies, urging them to act more responsibly when it comes to misinformation.[[84]](#footnote-84)

## Responses of the States to misinformation

Presently, several countries like India (under the Epidemic Diseases Act, the Indian Penal Code, and Disaster Management Act) are applying the already established laws to tackle the misinformation during a pandemic.[[85]](#footnote-85) However, with such laws, there is the risk of misuse. Free speech activists in India have already started protesting against the implementation of such acts as the legislations have been varyingly used to control criticism against the public authorities in the name of the pandemic and has predominantly resulted into serving the government’s political objective.[[86]](#footnote-86) For example, in the state of Uttar Pradesh, the police are assembling a charge sheet against an opposition party leader and a former member of Parliament (MP) for reportedly sharing misinformation about the epidemic after a video surfaced allegedly displaying him criticizing the Yogi Adityanath-led state government’s social distancing advisory.[[87]](#footnote-87) The same government has yet taken no action when it comes to addressing misinformation around cow excreta and its supposed miracle properties when it comes to COVID-19 as this would betray the beliefs of their supporters.

Laws consisting of blanket bans on misinformation fail the necessity test under human rights law, as they disproportionately infringe on a person’s freedom of expression,[[88]](#footnote-88) which is one of the most crucial fundamental rights during an emergency. The unwarranted suppression of speech, just like the unlimited distribution of viral misinformation, is injurious to the general public in the longer run.[[89]](#footnote-89) The United Nations Joint Declaration on Freedom of Expression and “Fake News”, Disinformation and Propaganda on the issues of restrictions on freedom of expression states that:

*“General prohibitions on the dissemination of information based on vague and ambiguous ideas, including “false news” or “non-objective information”, are incompatible with international standards for restrictions on freedom of expression … and should be abolished”*.[[90]](#footnote-90)

Thus, for freedom of speech to be restricted it shouldn’t be enough that the content of such expression is untruthful. It must also cause significant social harm, which in the context of COVID-19 would primarily be harming to human health.[[91]](#footnote-91)

So, as a system of defense against the ill-effects of misinformation, firstly, the states must address misinformation and disinformation by themselves providing trustworthy information and not endorsing misleading information, whether it be via “robust public messaging, support for public service announcements, and emergency support for public broadcasting and local journalism (for instance, through government health advertisements)”.[[92]](#footnote-92) This is particularly important in India’s case, as citizens will be particularly susceptible to accepting misinformation to be true that is based on their cultural beliefs due to what psychologists call motivated reasoning, - how people process political information.[[93]](#footnote-93) Modi has enforced this through the deployment of traditional mainstream media, including television, radio and press, to convey the government’s major state decisions on the virus to the public.[[94]](#footnote-94)

Secondly, the impact of misinformation would vary with each society, and consequently, so should the responses by the state as there cannot be a one-size-fits-all response. For instance, some communities may require stringent speech-restrictive measures, like Germany, where it is permitted to punish the denial of the Holocaust criminally. However, most states do not require such stern laws.[[95]](#footnote-95) States should strictly avoid responding to misinformation through harsh criminal penalties on speech where there is not enough evidence, and less restrictive measures have not been already tried, such as penalties for example.[[96]](#footnote-96) For example, in India, the Mumbai Police Commissionerate issued a fresh gag order in continuation of previous prohibitory orders (under Section 144 of the Criminal Procedure Code) on individuals who spoke against the state government’s functioning concerning COVID-19, which has now authorized legal action that can be taken against citizens who criticize the state’s operational activity during the pandemic.[[97]](#footnote-97) It becomes evident through Mumbai’s case study that the States’ purpose herein was not to combat the virus but to ebb the voices of any opposition. Such measures are argued to violate the human rights of the dissenter as the intended restriction on freedom of expression is used for a political benefit,[[98]](#footnote-98) which is what numerous in the opposition parties claimed.[[99]](#footnote-99) That is to say, the dissemination of viral misinformation has now become simply a pretext for fortifying authoritarianism and state control over the information space.[[100]](#footnote-100) It seems clear that several authoritarian and hybrid regimes across the globe would implement speech-restrictive measures as one of the solutions, with suggested or expressed threats of criminal prosecution under the grab of tackling the false information.[[101]](#footnote-101)

Internet shutdowns is another measure which the state could use to combat the spreading of COVID-19 misinformation.[[102]](#footnote-102) In fact, India makes use internet shutdowns more than any other democracy,[[103]](#footnote-103) despite the United Nations in July 2016 declaring access to the internet to be a human right.[[104]](#footnote-104) It was observed that in 2019 itself, there were over 100 shutdowns of the internet in different parts of India.[[105]](#footnote-105) However, it is difficult to rationalize a measure that aims to avert the spread of misinformation around COVID-19. I. In reality, the internet can be a matter of life and death during a pandemic, as access to health-related information on the internet can reduce the spread of the virus and save lives[[106]](#footnote-106) and the motive of the right to freedom of information is to counter the power imbalance between the State and its citizens.[[107]](#footnote-107) Access to information during a pandemic, including methods of preventing and controlling the virus[[108]](#footnote-108) lie at the center of the right to health.[[109]](#footnote-109)

Moreover, long-term policies addressing structural causes behind citizen’s susceptibility to misinformation need to be established by the states and steadily advance resistance to misinformation within the population[[110]](#footnote-110) to prevent such chaos from occurring again if another pandemic were to occur Since most of the examples of the sources of misinformation outlined in this note appear to be acting in a bonafide manner - unknowing of the harms such inaccurate information causes by sincerely believing in its truthfulness,[[111]](#footnote-111) they end up merely reinforcing existing biases like that cows possess miracle healing properties, whether real or not. However, any welfare state must protect its citizens from such information which can severely impact their health and safety. If states fail to adopt such policies, similar to the State's failure to endorse correct information diligently, it casts doubt on the necessity and proportionality of any speech-restrictive measures.[[112]](#footnote-112)

Lastly, it is essential for states to actively work in partnership with social media companies and provide them with appropriately clear guidance and criteria on content moderation.[[113]](#footnote-113)

## Response of social media companies to combat misinformation

Misinformation has become so prevalent in social media that the World Economic Forum has listed it as one of the main threats to human society.[[114]](#footnote-114) However, even though social media companies are not directly subject to state control, and accordingly, can legally suppress more speech than a state possibly can they have chosen to assist with combatting misinformation surrounding the virus. The United Nations Guiding Principles on Business and Human Rights advocates that “*business enterprises should respect human rights*”, and so “*they should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved*”.[[115]](#footnote-115) Numerous social media companies in pursuance of these principles have also responded to the spread of misinformation,[[116]](#footnote-116) arguably in a significantly better manner than States have.

WhatsApp identified the increased forwarding of messages as a contributor to the spread of misinformation.[[117]](#footnote-117) Consequently, they introduced new measures to combat the escalation of such flawed information by identifying certain messages as “highly forwarded”, meaning that they can only be forwarded to a single person rather than the original limit of five.[[118]](#footnote-118) In India, where the forwarding of messages is highly prevalent, WhatsApp decided in January 2020 to remove the quick forward button next to media messages[[119]](#footnote-119) to limit any spread of false information even prior to the pandemic hitting the country, as the dissemination of misinformation was already a cause for concern.

Furthermore, Facebook highlighted that misinformation could appear in various forms, including modified images with only a limited number of pixels cropped or altered with a filter.[[120]](#footnote-120) Nevertheless, through multiple initiatives and artificial intelligence (AI), Facebook is trying to combat the misinformation and disinformation around COVID-19.[[121]](#footnote-121) AI has been a vital tool to confront the dissemination of misinformation, as it allows Facebook to control and gage the work of the independent fact-checkers who review content on Facebook’s services.[[122]](#footnote-122) Since the pandemic commenced, Facebook has used their AI systems and installed new ones to use the misinformation around COVID-19 identified by their fact-checking partners and detect copies when people try to share them.[[123]](#footnote-123)

Although, while it is difficult for social media companies to reduce the spread of misinformation around COVID-19 single-handedly, which is evident as a report from the Center for Countering Digital Hate found hundreds of posts spreading misinformation about COVID-19 are being left online,[[124]](#footnote-124) it is crucial for them and to collaborate with the State on this fight. They may not be able to mitigate it completely,[[125]](#footnote-125) but if they fail to act, misinformation could surpass the amount of accurate information in the public sphere, leading to the intensification in the number of active cases, of an already highly contagious virus - eventually leading to increased pressure on the healthcare system and an unfathomable loss of human life. Therefore, as a society, it must attempt to build resistance to misinformation, which will take an assortment of measures that will be time-consuming, requiring resources, leadership, and public trust.[[126]](#footnote-126) States, social media companies, and civil society must work together to promote practices of good information hygiene, much like they are currently promoting handwashing.[[127]](#footnote-127) Educational curricula must not only focus on conveying facts, but on constructing a curious, critical mindset, and should expressly cover the effect of reliance on misinformation.[[128]](#footnote-128)

In order to develop resilience against misinformation, states must ensure fighting misinformation is a mass movement, just like it did with the Swachh Bharat Mission for sanitation[[129]](#footnote-129).[[130]](#footnote-130) Additionally, the government should create a non-biased national task force that serves as a “rapid response mechanism” to synchronize public and private agencies.[[131]](#footnote-131) Lastly, the state can investigate creating forums for citizens to access accurate information. The Indian government has already launched a chatbot to provide accurate information on the virus, but it could develop a fact-checking unit that provides accurate information to the public via a website.[[132]](#footnote-132) If the government employs these suggestions as well as social media companies enforcing their powers to combat misinformation, there is likely to be more success in building citizen’s resilience towards misinformation.

# **Conclusion**

Some Indian scholars have tried proving that cow by-products have anti-cancer and hepatoprotective potential by altering the enzymatic activities. Scholars have also tried to establish cow urine being used as an insecticide and as a regulator for various ailments like intestinal gas, acidity, and cough,[[133]](#footnote-133) however, the experts have repeatedly declared that cow urine does not cure illnesses like cancer. More importantly, there is no evidence that it can prevent or cure COVID-19.[[134]](#footnote-134)

Therefore, the consumption of cow urine or application of cow dung on one’s body might lead to more harm than good, with the possible zoonotic transmission of such gut and intestinal microbiota from cows that can spread severe gastrointestinal infections and adversely affecting the human health. No scientific studies qualify the claims of numerous Indian MPs, MLAs, and Hindu religious gurus that there are microbes in the cow excreta which may contain specific anti-viral properties to curb the spreading or elimination of SARS-CoV-2. Hence, under the current circumstances, with an outbreak of a pandemic, it is imperative to make sure than no counterfactual data or information is being spread by people, especially by state actors, regarding possible cures to this virus without prior extensive testing of such claims. Inaccurate information would only culminate into worsening the current health crisis, leading to a spike in the epidemic curve and states breaching human rights laws. States must employ justified methods to prevent the spread of misinformation and provide its citizens with accurate information, as without it, the effects of the pandemic will worsen. Furthermore, states and social media companies should work in partnership to fight the infodemic and simultaneously take measures to protect the human rights and health of people that can be affected due to misinformation and build resilience against misinformation.

# **Acknowledgement**

The authors don’t have acknowledgements to be made.

# **Funding**

The authors received no financial support for the research, authorship, and/or publication of this article.

# **Conflict of Interest**

There is no conflict of interest for this article.

1. \*Hurford is an Independent Consultant and a sociology graduate from the Royal Holloway, University of London. \*\*Rana is a Lecturer and an International Law Attorney, with an LL.M. from the Queen Mary University of London, UK.

   \*\*\*Sachan is a PhD scholar and researcher in the Biosciences Department of the Lovely Professional University, India.

   Siobhan Roberts, *Flattening the Coronavirus Curve*, NY TIMES (Mar. 17, 2020, 9:34 PM), https://www.nytimes.com/article/flatten-curve-coronavirus.html. [↑](#footnote-ref-1)
2. Article 19, *Coronavirus: ARTICLE 19 briefing on tackling misinformation*, ARTICLE 19 ORG (Apr. 29, 2020, 11:00 AM), https://www.article19.org/wp-content/uploads/2020/03/Coronavirus-final.pdf. [↑](#footnote-ref-2)
3. World Health Organization, *Novel Coronavirus (2019-nCoV) Situation Report – 13,* WORLD HEALTH ORGANIZATION (Apr. 12, 2020, 11:37 AM), https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf. [↑](#footnote-ref-3)
4. Article 19, *supra* note 2, at 4. [↑](#footnote-ref-4)
5. Marko Milanovic, *Viral Misinformation and the Freedom of Expression: Part I*, EJIL: TALK! (Jun. 2, 2020, 8:18 AM), https://www.ejiltalk.org/viral-misinformation-and-the-freedom-of-expression-part-i/. [↑](#footnote-ref-5)
6. Article 19, *supra* note 2, at 14. [↑](#footnote-ref-6)
7. Richard Wingfield, *A Human Rights-Based Approach to Misinformation*, GLOBAL PARTNERS DIGITAL (Apr. 9, 2020, 9:01 PM), https://www.gp-digital.org/a-human-rights-based-approach-to-disinformation/. [↑](#footnote-ref-7)
8. *Id.* [↑](#footnote-ref-8)
9. John Gregory, *The coronavirus ‘infodemic’ is real, We rated the websites responsible for it*, STAT (Mar. 3, 2020, 09:21 AM), https://www.statnews.com/2020/02/28/websites-spreading-coronavirus-misinformation-infodemic/. [↑](#footnote-ref-9)
10. Article 19, *supra* note 2, at 8. [↑](#footnote-ref-10)
11. *Id.* at 8. [↑](#footnote-ref-11)
12. *Id.* at 9. [↑](#footnote-ref-12)
13. WhatsApp, *About WhatsApp*, WHATSAPP (Apr. 1, 2020, 10:04 AM) https://www.whatsapp.com/about/. [↑](#footnote-ref-13)
14. Facebook Investor Relations, *Facebook Reports First Quarter 2020 Results*, FACEBOOK INVESTOR RELATIONS (May. 1, 2020, 10:20 AM), https://investor.fb.com/investor-news/press-release-details/2020/Facebook-Reports-First-Quarter-2020-Results/default.aspx. [↑](#footnote-ref-14)
15. Katie Collins, *Facebook sees 70% increase in Messenger group video calls following coronavirus outbreak*, CNET (Mar. 29, 2020, 02:44 PM), https://www.cnet.com/news/facebook-sees-surge-of-engagement-worldwide-following-coronavirus-outbreak/. [↑](#footnote-ref-15)
16. Technology Review, *WhatsApp is limiting message forwarding to combat coronavirus misinformation,* TECHNOLOGY REVIEW (Apr. 8, 2020, 12:54 PM), https://www.technologyreview.com/2020/04/07/998517/whatsapp-limits-message-forwarding-combat-coronavirus-misinformation/. [↑](#footnote-ref-16)
17. Dallas Flick, Combatting Fake News: Alternatives to Limiting Social Media Misinformation and Rehabilitating Quality Journalism, 20 SMU SCI. & TECH. L. REV. 375 (2017). [↑](#footnote-ref-17)
18. Paul Nuki, *Covid Deniers: How shadowy social media groups are spreading myths and conspiracy about coronavirus,* TELEGRAPH (Mar. 30, 2020, 9:27 AM), https://www.telegraph.co.uk/global-health/science-and-disease/covid-deniers-shadowy-social-media-groups-spreading-myths-conspiracy1/. [↑](#footnote-ref-18)
19. *Id*. [↑](#footnote-ref-19)
20. *Id*. [↑](#footnote-ref-20)
21. Kunal Purohit, *Misinformation, fake news spark India coronavirus* fears, AL JAZEERA (May. 5, 2020, 5:32 PM), https://www.aljazeera.com/news/2020/03/misinformation-fake-news-spark-india-coronavirus-fears-200309051731540.html. [↑](#footnote-ref-21)
22. Deutsche Welle, *Hindu group hosts cow urine drinking party to ward off coronavirus*. DEUTSCHE WELLE (Mar. 29, 2020, 10:04 AM), https://p.dw.com/p/3ZQje. [↑](#footnote-ref-22)
23. Indian Census, *Religion Census 2011*. INDIAN CENSUS (Mar. 15, 2020, 3:54 PM), https://www.census2011.co.in/religion.php. [↑](#footnote-ref-23)
24. Rahul Kaushik, Jain Jainendra & Rai Pallavi, Therapeutic Potentials of Cow Derived Products – A Review, 7 INT. J. PHARM. SCI 1383 (2016). [↑](#footnote-ref-24)
25. Aparna Parikh & Clara Miller, *Holy Cow! Beef Ban, Political Technologies, and Brahmanical Supremacy in Modi's India*, 18 *ACME* 837 (2019). [↑](#footnote-ref-25)
26. Renny Thomas, *Brahmins as scientists and science as Brahmins' calling: Caste in an Indian scientific research institute*, 29 PUBLIC UNDERST SCI 306 (2020). [↑](#footnote-ref-26)
27. *Id*. [↑](#footnote-ref-27)
28. Rahul Kaushik, Jain Jainendra & Rai Pallavi, *supra* note 24, at 1383. [↑](#footnote-ref-28)
29. Pulok K.Mukherjeea, Ranjit K.Harwansha, Shiv Bahadura, Subhadip Banerjeea, Amit Kara, Joydeb Chandaa, Sayan Biswasa, Sk. Milan Ahmmeda & C.K.Katiyarb, *Development of Ayurveda – Tradition to trend*, 197 *J ETHNOPHARMACOLOGY* 10-24 (2016). [↑](#footnote-ref-29)
30. Lai Chih-Cheng, Shihb Tzu-Ping, Koc Wen-Chien, Tangd Hung-Jen, Hsuehef Po-Ren, *Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and corona virus disease-2019 (COVID-19): the epidemic and the challenges,* 55 *Int. J. ANTIMICROB. AGENTS*, 1-9. (2020). [↑](#footnote-ref-30)
31. Zhiguo Zhao & Dan Gao, *Precaution of 2019 novel coronavirus infection in department of oral and maxillofacial surgery*, 5 *BRIT J ORAL MAX SURG*, 250-253 (2020). [↑](#footnote-ref-31)
32. Jasper Fuk-Woo Chan, Shuofeng Yuan, Kin-Hang Kok, Kelvin Kai-Wang To, Hin Chu, Jin Yang, Fanfan Xing, Jieling Liu, Cyril Chik-Yan Yip, Rosana Wing-Shan Poon, Hoi-Wah Tsoi, Simon Kam-Fai Lo, Kwok-Hung Chan, Vincent Kwok-Man Poon, Wan-Mui Chan, Jonathan Daniel Ip, Jian-Piao Cai, Vincent Chi-Chung Cheng, Honglin Chen, Christopher Kim-Ming Hui, Kwok-Yung Yuen, *A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster*, 295 LANCET 514-523, (2020). [↑](#footnote-ref-32)
33. Qingmei Han, Qingqing Lin, Shenhe Jin, & Liangshun You, *Recent insights into 2019-nCoV: a brief but comprehensive review*. 80 J INFECTION 373-377 (2020). [↑](#footnote-ref-33)
34. Nanshan Chen, Min Zhou, Xuan Dong, Jieming Qu, Fengyun Gong, Yang Han, Yang Qiu, Jingli Wang, Ying Liu, Yuan Wei, Jia’an Xia, Ting Yu, Xinxin Zhang & Li Zhang, *Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study*, 395 LANCET 507-513 (2020). [↑](#footnote-ref-34)
35. H. Bhadauria, *Cow urine-a magical therapy* 1 *Int J Cow Sci*, 32-36 (2020). [↑](#footnote-ref-35)
36. S. P. Vinay, G. Nagaraju, C. P. Chandrappa & N. Chandrasekhar, *Novel Gomutra (cow urine) mediated synthesis of silver oxide nanoparticles and their enhanced photocatalytic, photoluminescence and antibacterial studies*, 4 J OF SCI*: ADVANCED MATERIALS AND DEVICES*, 4(3), 392-399 (2019).: S. Raad, D. V. Deshmukh, S. N. Harke & S. M. Kachole, *Antibacterial activity of cow urine against some pathogenic and non-pathogenic bacteria,* 4 *INT. J. PHARM. SCI.*, 1534 (2013). [↑](#footnote-ref-36)
37. Alfredo Caprioli, Stefano Morabito, Hubert Brugère & Eric Oswald, *Enterohaemorrhagic Escherichia coli: emerging issues on virulence and modes of transmission* 36 VET. RES. 289-311, (2005). [↑](#footnote-ref-37)
38. Yakov Pachepsky, Ali Sadeghi, Scott A. Bradford, Daniel R. Shelton, Andrey Guber & Thanh Dao, *Transport and fate of manure-borne pathogens: Modeling perspective*, 86 AGRIC. WATER MANAG*.* 81-92 (2006). [↑](#footnote-ref-38)
39. Alfredo Caprioli, Stefano Morabito, Hubert Brugère & Eric Oswald, *supra* note 37. [↑](#footnote-ref-39)
40. Monika Marejková, Květa Bláhová, Jan Janda, Angelika Fruth & Petr Petráš, *Enterohemorrhagic Escherichia coli as causes of hemolytic uremic syndrome in the Czech Republi*, 8 PLoS One 1-10 (2013). [↑](#footnote-ref-40)
41. Sue E. Crawford, Ssirekha Ramani, Jacqueline E. Tate, Umesh D. Parashar, Lennart Svensson, Marie Hagbom, Manuel A. Franco, Harry B. Greenberg, Miguel O’Ryan, Gagandeep Kang, Ulrich Desselberger & Mary K. Estes, *Rotavirus infection*, 3 NAT. REV. 1-16 (2007): Karen L. Kotloff, James P. Nataro, William C. Blackwelder, Dilruba Nasrin, Tamer H. Farag, Sandra Panchalingam, Yukun Wu, Samba O. Sow, Dipika Sur, Robert F. Breiman, Abu SG Faruque, Anira KM Zaidi, Debasish Saha, Pedro L. Alonso, Boubou Tamboura, Doh Sanogo, Uma Onwuchekwa, Byomkesh Manna, Thandavarayan Ramamurthy, Suman Kanungo, John B. Ochieng, Richard Omore, Joseph O. Oundo, Anowar Hossain, Sumon K. Das, Shahnawaz Ahmed, Shahida Quereshi, Farheen Quadri, Richard A. Adegbola, Martin Antonio, M Jahangir Hossain, Adebayo Akinsola, Inacio Mandomando, Tacilta Nhampossa, Sozinho Acácio, Kousick Biswas, Ciara E. O’Reilly, Eric D. Mintz, Lynette Y. Berkeley, Khitam Muhsen, Halvor Sommerfelt, Roy M. Robins-Browne, Myron M. Levine, *Burden and aetiology of diarrhoeal disease in infants and young children in developing countries* *(the Global Enteric Multicenter Study, GEMS): a prospective, case-control study*, 382 *LANCET* 209-222 (2013). [↑](#footnote-ref-41)
42. Lisa M. Durso, Gregory P. Harhay, James L. Bono & Timothy P. L. Smith, *Virulence-associated and antibiotic resistance genes of microbial populations in cattle feces analyzed using a metagenomic approach*, 84 J. MICROBIOL. METHODS278-282 (2011). [↑](#footnote-ref-42)
43. Nikolina Udikovic-Kolic, Fabienne Wichmann, Nichole A. Broderick & Jo Handelsman, *Bloom of resident antibiotic-resistant bacteria in soil following manure fertilization*,111 PNAS 15202-15207 (2014). [↑](#footnote-ref-43)
44. DAVID J. WAXMAN & JACK L. STROMINGER, β-LACTAM ANTIBIOTICS: BIOCHEMICAL MODES OF ACTION 209-285 (R. B. Morin & M. Gorman 1982). [↑](#footnote-ref-44)
45. Deutsche Welle, *supra* note 22. [↑](#footnote-ref-45)
46. Danish Siddiqui, *Hindu group offers cow urine in a bid to ward off coronavirus*, REUTERS (Mar. 15, 2020, 7:07 AM), https://uk.reuters.com/article/uk-health-coronavirus-india-cow-urine-pa/hindu-group-offers-cow-urine-in-a-bid-to-ward-off-coronavirus-idUKKBN2110CH?fbclid=IwAR0uE5iRpKdKF4JtSHi3qy00mMBYyqTJZzBPh1QXZlLUftCiwzVPFINBeqQ. [↑](#footnote-ref-46)
47. *Id*. [↑](#footnote-ref-47)
48. VOA News, *Hindu Activists Drink Cow Urine Amid Coronavirus Outbreak,* YOUTUBE (Apr. 9, 2020, 8:52 PM), https://www.youtube.com/watch?v=RuM6aXcNdyQ. [↑](#footnote-ref-48)
49. S. 269 in the Indian Penal Code- Negligent act likely to spread infection of disease dangerous to life [↑](#footnote-ref-49)
50. S. 278 in the Indian Penal Code- Making atmosphere noxious to health [↑](#footnote-ref-50)
51. S. 114 in the Indian Penal Code- Abettor present when offence is committed [↑](#footnote-ref-51)
52. Scroll Staff, *COVID-19: Kolkata man falls ill after drinking cow urine, BJP leader who organised event arrested*, SCROLL STAFF (Mar. 18, 2020, 9:05 PM), https://scroll.in/latest/956567/covid-19-kolkata-man-falls-ill-after-drinking-cow-urine-bjp-leader-who-organised-event-arrested. [↑](#footnote-ref-52)
53. Reality Check team, *Coronavirus: Does drinking tea help?* BBC NEWS (Apr. 19, 2020, 7:12 PM), https://www.bbc.co.uk/news/world-asia-india-51910099. [↑](#footnote-ref-53)
54. The Economic Times, India Time, *'Gaumutra', 'gobar' may cure coronavirus: BJP MLA tells Assam assembly*, ECONOMIC TIMES (Apr. 15, 2020, 11:24 AM), https://economictimes.indiatimes.com/news/politics-and-nation/gaumutra-gobar-may-cure-coronavirus-bjp-mla-tells-assam-assembly/articleshow/74444488.cms?utm\_source=contentofinterestandutm\_medium=textandutm\_campaign=cppst. [↑](#footnote-ref-54)
55. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-55)
56. D. P. Bhattacharya, T*housands of litres of cow urine consumed in Gujarat daily.* ECONOMIC TIMES (Apr. 2, 2020, 01:02 AM), https://economictimes.indiatimes.com/news/politics-and-nation/thousands-of-litres-of-cow-urine-consumed-in-gujarat-daily/articleshow/74922747.cms?utm\_source=contentofinterestandutm\_medium=textandutm\_campaign=cppsthttps://economictimes.indiatimes.com/news/politics-and-nation/thousands-of-litres-of-cow-urine-consumed-in-gujarat-daily/articleshow/74922747.cms?from=mdr. [↑](#footnote-ref-56)
57. Ahmedabad Mirror, *Gujarat plans to give world a wonder drug to battle corona.* AHMEDABAD MIRROR (May. 30, 2020, 09:54 AM), https://ahmedabadmirror.indiatimes.com/ahmedabad/cover-story/gujarat-plans-to-give-world-a-wonder-drug-to-battle-corona/articleshow/76017951.cms.

    daily/articleshow/74922747.cms?utm\_source=contentofinterestandutm\_medium=textandutm\_campaign=cppsthttps://economictimes.indiatimes.com/news/politics-and-nation/thousands-of-litres-of-cow-urine-consumed-in-gujarat-daily/articleshow/74922747.cms?from=mdr. [↑](#footnote-ref-57)
58. Manu Balachandran & Sushma U N, *More funds, less cow dung: Angry Indian scientists’ message to the Modi government*, QUARTS INDIA (Mar. 13, 2020, 08:32 AM). https://qz.com/india/1050040/more-funds-less-cow-dung-angry-indian-scientists-message-to-the-modi-government/. [↑](#footnote-ref-58)
59. Ashish Chauhan, *60% funding for cow dung, urine startups*. TIMES OF INDIA (Mar. 12, 2020, 10:04 AM), https://timesofindia.indiatimes.com/trend-tracking/cow-based-startups-to-get-60-government-funding/articleshow/71041052.cms. [↑](#footnote-ref-59)
60. Vaishnavi Chandrashekhar, *Indian scientists decry ‘infuriating’ scheme to study benefits of cow dung, urine, and milk*. SCIENCE, (Mar. 12, 2020, 10:30 AM), https://www.sciencemag.org/news/2020/02/indian-scientists-decry-infuriating-scheme-study-benefits-cow-dung-urine-and-milk. [↑](#footnote-ref-60)
61. Ministry of Health and Family Welfare, *COVID-19 India*, MINISTRY OF HEALTH AND FAMILY WELFARE (Jul. 1, 2020, 7:18 PM), https://www.mohfw.gov.in/. [↑](#footnote-ref-61)
62. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-62)
63. *Id*. [↑](#footnote-ref-63)
64. D. P. Bhattacharya, *supra* note 56. [↑](#footnote-ref-64)
65. The Economic Times, India Times, *Coronavirus dubious claims: Cow dung, urine sell for Rs 500*., ECONOMIC TIMES (Mar. 19, 2020, 1:44 PM), https://economictimes.indiatimes.com/news/politics-and-nation/coronavirus-effect-cow-dung-urine-sell-for-rs-500/articleshow/74669478.cms?from=mdr. [↑](#footnote-ref-65)
66. Article 19, *supra* note 2, at 5; United Nations, *Guiding Principles on Business and Human Rights*. UNITED NATIONS (May. 1, 2020, 10:04 AM), https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr\_en.pdf. [↑](#footnote-ref-66)
67. Antonio Coco & Talita de Souza Dias, *Prevent, Respond, Cooperate: States’ Due Diligence Duties vis-àvis the Covid-19 Pandemic,* 1 IHLS 1-13 (2020). [↑](#footnote-ref-67)
68. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-68)
69. Antonio Coco & Talita de Souza Dias, *supra* note 67. [↑](#footnote-ref-69)
70. *Id*. [↑](#footnote-ref-70)
71. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-71)
72. Marko Milanovic, *Viral Misinformation and the Freedom of Expression: Part II*. EJIL: TALK! (Jun. 2, 2020, 8:44 AM), https://www.ejiltalk.org/viral-misinformation-and-the-freedom-of-expression-part-ii/. [↑](#footnote-ref-72)
73. United Nations, *Universal Declaration of Human Rights*, UNITED NATIONS (May. 2, 2020, 9:06 AM) https://www.un.org/en/universal-declaration-human-rights/index.html. [↑](#footnote-ref-73)
74. Marko Milanovic, *supra* note 67. [↑](#footnote-ref-74)
75. Eliška Pírková, *Fighting Misinformation and Defending Free Expression During COVID-19: Recommendations for States,* ACCESS NOW (May. 12, 2020, 8:27 AM), https://www.accessnow.org/cms/assets/uploads/2020/04/Fighting-misinformation-and-defending-free-expression-during-COVID-19-recommendations-for-states-1.pdf. [↑](#footnote-ref-75)
76. Article 19, *supra* note 2, at 10. [↑](#footnote-ref-76)
77. Marko Milanovic, *supra* note 67. [↑](#footnote-ref-77)
78. Statista, *Number and change of coronavirus (COVID-19) cases and deaths among the most impacted countries worldwide as of August 10, 2020*, STATISTA (Aug. 13, 2020, 11:52 AM), https://www.statista.com/statistics/1105264/coronavirus-covid-19-cases-most-affected-countries-worldwide/ [↑](#footnote-ref-78)
79. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-79)
80. Vidya Krishnan, *The Callousness of India’s COVID-19 Response*, THE ATLANTIC (Jun. 2, 2020, 7:55 AM), https://www.theatlantic.com/international/archive/2020/03/india-coronavirus-covid19-narendra-modi/608896/. [↑](#footnote-ref-80)
81. Kat Devlin & Courtney Johnson, *Indian elections nearing amid frustration with politics, concerns about misinformation*, PEW RESEARCH CENTER (Aug. 13, 2020, 12:03 PM), https://www.pewresearch.org/fact-tank/2019/03/25/indian-elections-nearing-amid-frustration-with-politics-concerns-about-misinformation/. [↑](#footnote-ref-81)
82. The Guardian, *The Guardian view on India’s Mr Modi: suppressing inconvenient facts*, THE GUARDIAN (Apr. 8, 2020, 1:12 PM), https://www.theguardian.com/commentisfree/2019/feb/01/the-guardian-view-on-indias-mr-modi-suppressing-inconvenient-facts. [↑](#footnote-ref-82)
83. Scroll Staff, *supra* note 49. [↑](#footnote-ref-83)
84. Parama Sinha Palit, *India & COVID-19: Misinformation and the Downside of Social Media*, THE ASIA DIALOGUE (Aug. 13, 2020, 11:52 AM), https://theasiadialogue.com/2020/04/06/india-covid-19-misinformation-and-the-downside-of-social-media/ [↑](#footnote-ref-84)
85. Marko Milanovic, *Viral Misinformation and the Freedom of Expression: Part III*. EJIL: TALK! (Jun. 2, 2020, 9:12 AM), https://www.ejiltalk.org/viral-misinformation-and-the-freedom-of-expression-part-iii/. [↑](#footnote-ref-85)
86. Subhashish Bhadra & Varad Pande, *Fighting the misinformation pandemic in the age of Covid-*19, HINDUSTAN TIMES (Aug. 13, 2020, 1:10 PM), https://www.hindustantimes.com/analysis/fighting-the-misinformation-pandemic-in-the-age-of-covid-19/story-GBftzTGps8PR2759zBcKVI.html [↑](#footnote-ref-86)
87. *Id*. [↑](#footnote-ref-87)
88. Marko Milanovic, *supra* note 85. [↑](#footnote-ref-88)
89. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-89)
90. United Nations, *Joint Declaration on Freedom of Expression and “Fake News”, Disinformation and Propaganda*, UNITED NATIONS (May. 1, 2020, 9:57 AM) https://www.osce.org/fom/302796?download=true. [↑](#footnote-ref-90)
91. Marko Milanovic, *supra* note 85. [↑](#footnote-ref-91)
92. United Nations, *COVID-19: Governments must promote and protect access to and free flow of information during pandemic – International experts*, UNITED NATIONS (May. 3, 2020, 15:34 AM) https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25729&LangID=Eccess. [↑](#footnote-ref-92)
93. Rune Slothuus & Claes H. de Vreese, *Political Parties, Motivated Reasoning, and Issue*

    *Framing Effects,* 72 J. POLITICS 631 (2010). [↑](#footnote-ref-93)
94. Subhashish Bhadra & Varad Pande, *supra* note 86. [↑](#footnote-ref-94)
95. Marko Milanovic, *supra* note 85. [↑](#footnote-ref-95)
96. *Id*. [↑](#footnote-ref-96)
97. Sukanya Shantha, *Mumbai Police Issues Gag Order, Declares Criticising Government a Crime*, THE WIRE (Jun. 1, 2020, 9:05 AM), https://thewire.in/rights/mumbai-police-gag-order-section-144. [↑](#footnote-ref-97)
98. Marko Milanovic, *supra* note 77. [↑](#footnote-ref-98)
99. Sukanya Shantha, *supra* note 97. [↑](#footnote-ref-99)
100. Marko Milanovic, *supra* note 77. [↑](#footnote-ref-100)
101. *Id*. [↑](#footnote-ref-101)
102. Shadab Nazmi, *Why India shuts down the Internet more than any other democracy*, BBC NEWS (Mar. 3, 2020, 11:27 AM), https://www.bbc.co.uk/news/world-asia-india-50819905 [↑](#footnote-ref-102)
103. *Id*. [↑](#footnote-ref-103)
104. Article 19, *Coronavirus: Access to the Internet can be a matter of life and death during a pandemic*, ARTICLE 19 ORG (May. 2, 2020, 9:44 AM), https://www.article19.org/resources/access-to-the-Internet-can-be-a-matter-of-life-and-death-during-the-coronavirus-pandemic/. [↑](#footnote-ref-104)
105. Jeremy Hsu, *How India, the World's Largest Democracy, Shuts Down the Internet,* IEEE SPECTRUM (Feb. 27, 2020, 4:21 PM), https://spectrum.ieee.org/tech-talk/telecom/Internet/how-the-worlds-largest-democracy-shuts-down-the-Internet. [↑](#footnote-ref-105)
106. Article 19, supra note 104 [↑](#footnote-ref-106)
107. Eliška Pírková, *Fighting Misinformation and Defending Free Expression During COVID-19: Recommendations for States*, ACCESS NOW (Jun. 1, 2020, 9:34 AM), https://www.accessnow.org/cms/assets/uploads/2020/04/Fighting-misinformation-and-defending-free-expression-during-COVID-19-recommendations-for-states-1.pdf [↑](#footnote-ref-107)
108. UN Committee on Economic, Social and Cultural Rights, *UN Committee on Economic, Social and Cultural Rights,* *General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12 of the Covenant)*, REFWORLD (Aug. 13, 2020, 4:30 PM), https://www.refworld.org/pdfid/4538838d0.pdf [↑](#footnote-ref-108)
109. Eliška Pírková, supra note 107. [↑](#footnote-ref-109)
110. Marko Milanovic, *supra* note 77. [↑](#footnote-ref-110)
111. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-111)
112. Marko Milanovic, *supra* note 77. [↑](#footnote-ref-112)
113. *Id*. [↑](#footnote-ref-113)
114. Michela Del Vicario, Alessandro Bessi, Fabiana Zollo, Fabio Petroni, View ORCID ProfileAntonio Scala, Guido Caldarelli, H. Eugene Stanley, and Walter Quattrociocchi, *The spreading of misinformation online*, 113 PNAS 554. [↑](#footnote-ref-114)
115. United Nations, *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*. UNITED NATIONS HUMAN RIGHTS OFFICE OF THE HIGH COMMISSIONER (May. 12, 2020, 2:42 PM), https://www.ohchr.org/Documents/publications/hr.puB.12.2\_en.pdf [↑](#footnote-ref-115)
116. Marko Milanovic, *supra* note 5. [↑](#footnote-ref-116)
117. WhatsApp, *Keeping WhatsApp Personal and Private*, WHATSAPP (Apr. 29, 2020, 2:22 PM) https://blog.whatsapp.com/Keeping-WhatsApp-Personal-and-Private. [↑](#footnote-ref-117)
118. Technology Review, *supra* note 16. [↑](#footnote-ref-118)
119. WhatsApp, *More changes to forwarding*, WHATSAPP (Apr. 22, 2020, 3:04 PM), https://blog.whatsapp.com/more-changes-to-forwarding. [↑](#footnote-ref-119)
120. Facebook, *Using AI to detect COVID-19 misinformation and exploitative content*. FACEBOOK (May. 1, 2020, 10:04 AM), https://ai.facebook.com/blog/using-ai-to-detect-covid-19-misinformation-and-exploitative-content. [↑](#footnote-ref-120)
121. *Id*. [↑](#footnote-ref-121)
122. *Id*. [↑](#footnote-ref-122)
123. *Id*. [↑](#footnote-ref-123)
124. BBC News, *Social media firms fail to act on Covid-19 fake news*, BBC NEWS (Aug. 22, 2020, 3:04 PM), https://www.bbc.co.uk/news/technology-52903680 [↑](#footnote-ref-124)
125. Marko Milanovic, *supra* note 77. [↑](#footnote-ref-125)
126. *Id*. [↑](#footnote-ref-126)
127. *Id*. [↑](#footnote-ref-127)
128. *Id*. [↑](#footnote-ref-128)
129. The Government launched Swachh Bharat Mission in 2014 to with the aim to achieve universal sanitation coverage, improve cleanliness and eliminate open defecation in India by October 2019.The program is considered India’s biggest drive to improve sanitation, hygiene and cleanliness in the country. [↑](#footnote-ref-129)
130. Subhashish Bhadra & Varad Pande, *supra* note 86. [↑](#footnote-ref-130)
131. *Id*. [↑](#footnote-ref-131)
132. *Id*. [↑](#footnote-ref-132)
133. Rahul Kaushik, Jain Jainendra & Rai Pallavi, *supra* note 24 at 1384. [↑](#footnote-ref-133)
134. Danish Siddiqui, *supra* note 46. [↑](#footnote-ref-134)