

**Fake News and its Impact on the Spread of COVID-19**

**Accepted for publication on the Scholarly Review Online, December 2021**

Haley Chan

Supervisor: Dr. Gulnar Kendirbai

2021

### **Abstract**

Misinformation has severe consequences, sometimes determining the difference between life or death. During the COVID-19 pandemic, fake news caused an increase in mass hysteria and inhibited the dissemination of public health policies, ultimately contributing to the spread of disease. Consumers of the news tend to place an emphasis on negative news due to its possibility of representing a potential threat. However, highlighting negativity and lack of control can lead to psychological stress that may develop into hysteria, which eventually infiltrates societies. This mass hysteria is contagious, amplifying the consequences of epidemics as fear develops into physical sickness, a phenomenon referred to as “psychogenic illness.” In the media, journalists, who may rely on conventional journalistic values like novelty and conflict, sometimes echo unreliable hypotheses and confuse the public. Belief in conspiracies, which often emerge through online social platforms, increase skepticism and are linked to a tendency to reject information from authority figures, preventing communities from adopting health-protective behaviors. Amidst COVID-19, political leaders such as former President Donald Trump communicated inaccurate information about the disease to the public, resulting in the public’s growing distrust of government authorities. Educating the public, monitoring the release of new information, and ensuring the accurate relay of information may serve as potential solutions to the rapid spread of fake news.

*Keywords:* fake news, COVID-19, mass hysteria, public health, social media, psychogenic illness, contagion theory, infodemic, conspiracy, epidemic, misinformation, inoculation

## Introduction

Misinformation and deception have existed and penetrated our world for centuries. But the rapid advancement of technology, and subsequently, an increased reliance on digital media in recent years, have amplified the detrimental effects of misleading information. With digital encyclopedias of knowledge now at our fingertips, fake news is more easily able to occupy the internet.

Fake news, as defined by the University of Michigan, are false stories “with no facts, sources or quotes” (Desai et al., 2021). BuzzFeed media editor Craig Silverman first coined the term in 2016 after discovering a thread of fabricated stories originating from Veles, a small European town located in Macedonia. These stories quickly accumulated revenue from readers who were drawn to their dramatic and false titles, for example, “Pope Francis Shocks World, Endorses Donald Trump for President.” Their popularity motivated the authors to continue publishing these fictional headlines, and since then, the term “fake news” has gained traction amongst journalists, politicians, and news reporters. However, fake news may not always reveal itself in the most obvious forms like the article from Veles did. Claims about the new COVID-19 vaccine changing DNA, though entirely false, can prove to be more believable, especially to ignorant and anxious individuals amidst a pandemic.

While the idea of fake news and its exaggerated headlines may humor us at first, misinformation has severe consequences, sometimes even determining the difference between life or death. Within the first three months of 2020, “nearly 6,000 people around the globe were hospitalized because of coronavirus misinformation” (World Health Organization 2021). The infectious spread of fake news during disease outbreaks has caused global agencies like the

World Health Organization (WHO) to refer to it as an “infodemic.” Streams of false information hindered nations such as the United States from efficiently overcoming the COVID-19 pandemic, and instead, contributed to the virus’ spread. Fake news caused an increase in mass hysteria and also inhibited the widespread reception of public health policies, ultimately increasing the spread of COVID-19.

### **Fake News and The Consequences of Mass Hysteria**

Insanity is contagious. During outbreaks, media and communication channels echo our individual doubts, which ultimately develop into mass panic (Khan & Huremović, 2019). As humans, we tend to place an emphasis on negative news due to its possibility of representing a potential threat, but highlighting negativity and lacking control can lead to psychological stress that may develop into hysteria, which eventually infiltrates societies (Bagus et al., 2021). Once individuals begin to perceive a threat, the threat induces fear that later spreads throughout communities via word of mouth. This is referred to as “contagion theory,” where crowd behavior impacts individual behaviors and emotions (Duan et al., 2019). When anxiety first spreads and causes a group to behave in similar ways, individuals begin to give in to the social pressure and conform to the norms of the group, ultimately contributing to the rapid spread of negative emotions.

After fear infectiously spreads to develop into mass hysteria, mass hysteria similarly spreads to weaken immune systems. Humans are products of their own feelings, and these feelings may subconsciously weaken people’s protective abilities, leading to an increased likelihood of contracting viruses. Psychogenic illness, or epidemic hysteria, occurs when individuals begin to suffer physical symptoms, including the disease itself, from hysteria (Bagus

et al., 2021). These symptoms are results of panic and stress experienced when people recognize a threat. Mass hysteria is contagious, amplifying the consequences of epidemics as fear develops into physical sickness.

Mass psychogenic illness derived from distrust in vaccinations have been reported in countries such as Iran, Italy, Vietnam, Australia, the United States, and Brazil since 1992, detrimentally affecting public confidence regarding vaccine safety and ultimately preventing countries from achieving herd immunity through vaccinations (Bartholomew & MacKrill, 2020). Amidst the COVID-19 pandemic, psychogenic illness derived from skepticism about vaccinations may have had a similar effect on the United States and its ability to return to a state of normalcy. False articles about vaccine side effects misinform readers, exaggerating the frequency of harsh reactions and, therefore, increasing anxiety about vaccination. This increase in anxiety may have potentially led to the physical spread of the virus, increasing the number of COVID-19 hospitalizations and preventing the nation from returning to normalcy.

### **Fake News and its Role in the Reception of Public Health Policies**

Mainstream media has fueled the dissemination of fake news. As the internet evolved to become the world's most accessible information source, reporters and journalists were reassigned to cover the unfolding pandemic through online platforms. However, lacking in medical expertise, they scrambled to keep up with advanced scientific terminology, ideologies, and research, and struggled to identify and vet credible sources (Pazzanese 2020). Since many journalists do not have the knowledge necessary to critically evaluate the science of epidemics and their vaccines, they may rely on conventional journalistic values, such as novelty and

conflict, echoing unreliable hypotheses and confusing the public. This prevents communities from adopting health-protective behaviors as skepticism increases.

Reliance on the internet, especially social media, as a news and information source can lead to beliefs in COVID-19 falsehoods, such as conspiracy theories, which increases resistance to public health policies, and in turn, increases the spread of COVID-19 (Klepper 2021).

Conspiracies are a form of fake news and provide an artificial sense of empowerment through hidden explanations, helping individuals gain a sense of control under frightening circumstances. However, recent research indicates that beliefs in COVID-19 conspiracies are linked to a tendency to reject information from authority figures (Uscinski et al., 2020). A similar study identified a correlation between beliefs in conspiracies about COVID-19 and a decrease in compliance with government guidelines (Freeman et al., 2020). For instance, those who promoted a conspiracy that the virus was bioengineered were less likely to comply with health-protective guidelines, such as self-quarantine, and were less likely to receive the COVID-19 vaccine. Other common misconceptions include the perception that the vaccine research was rushed and that the COVID-19 vaccine has dangerous side effects, causes infertility in women, or changes DNA (Johns Hopkins Medicine 2021). Misconceptions are incongruent with public health policies, contributing to the spread of epidemics as policies like self-isolation and vaccination are critical to overcoming respiratory diseases as a community. In the case of COVID-19, those who chose not to comply with health guidelines due to misinformation increased the virus' spread, undermining the potential for herd immunity.

In addition to misinformation present in mainstream and social media, fake news about COVID-19 has even been promoted by political leaders like former United States President

Trump, who erroneously claimed that hydroxychloroquine, an anti-malaria drug, worked as a treatment against the virus (Linden et al., 2020). His repeated downplaying of the virus and undermining of his administration's own experts have eroded trust in American health-related institutions (Klepper 2021). As a result, people struggled to determine who to trust for accurate information, inhibiting the reception of public health policies including widespread vaccination. During July 2021, the United States experienced a spike in the number of COVID-19 cases after flattening the curve from May to June 2021. Most of these breakthrough cases were among the unvaccinated, a population that largely emerged from beliefs in the false claims of government authorities regarding COVID-19 (Lopez 2021).

### **Solutions to the Infodemic**

Educating the public about identifying the difference between reliable and unreliable information is essential to overcoming the infodemic, or rapid spread of inaccurate information. With the internet serving as our main source of information, schools should implement lessons on media literacy and critical thinking. Part of educating individuals about misinformation involves "inoculation," a theory in which attitudes can be protected from persuasive attacks in the same way that one's immune system can be protected from viral attacks (Compton et al., 2016). Vaccines work by injecting weakened forms of viruses into the body, protecting the body from the virus' later stronger attacks. Similarly, for psychological inoculation, a belief, such as a conspiracy theory, is weakened so that it will not change the individual's position but will trigger protective responses like enhanced critical thinking (van der Linden et al., 2020). For example, in a study regarding climate misinformation, participants were forewarned that political actors may attempt to mislead people on the issue, and then they were provided with counter-arguments to

refute the climate misinformation, weakening the validity of the political actors' statements (van der Linden et al., 2017). The study concluded that inoculation partially immunized people against misinformation about climate change. Similarly, educating against fake news, through inoculation, amidst disease outbreaks may prevent the spread of misinformation about the disease, and may subsequently prevent the spread of the disease itself.

Public health organizations should also monitor the release of new information on mainstream and social media more closely and ultimately declare the information to be true or false. Government officials must relay information accurately, taking more discretion in the news they share with the public in order to regain the people's trust. In a study from Cornell University, researchers concluded that Trump was likely the largest driver of the COVID-19 misinformation infodemic (Evanega 2020). The public will look to government authorities, such as leaders of the nation, for the accurate dissemination of information. Therefore, officials must ensure the reliability of information, especially during disease outbreaks, when lives are at risk.

Social media platforms could take more responsibility in patrolling the spread of fake news on their platforms. Although Facebook, Twitter, and Youtube have ramped up efforts to review content and keep COVID-19 misinformation off of their sites, social media platforms continue to fall short of curbing its flow (Pazzanese 2020). When the United States made their shift to remote work during the height of the COVID-19 lockdown, several social media platforms began to utilize artificial intelligence to monitor the spread of misinformation on their platforms, which tended to be less effective in determining the difference between fact and myth compared to human moderators (BBC 2020). With social media evolving to become one of the world's primary sources of information, social media firms must establish stronger surveillance



systems in order to control the spread of misinformation and slow the growth of epidemic diseases.

### **Conclusion**

Fake news spread mass hysteria and increased resistance to public health policies during past disease outbreaks. As misinformation continues to flood our information systems, it will likely result in similarly devastating consequences for future disease outbreaks. Regarding the COVID-19 pandemic, the dissemination of fake news in the United States played a critical role in the development of psychogenic illness and public resistance to health-protective behaviors, which in turn, increased the spread of COVID-19. Individuals began to doubt the advice and claims of government authorities and health-related institutions. With fake news and its subsequent conspiracies dissuading citizens from complying with public health guidelines, including vaccination and self-isolation policies, a substantial proportion of the American population continues to be diagnosed with COVID-19 every day at the time of writing. In order to reduce the repercussions of fake news during epidemics, schools, public health organizations, government officials, and social media companies must collaborate and actively perform their duties to regulate the far-reach of fake news. Countries who learn to control the spread of misinformation during the earlier stages of an epidemic may ultimately save the lives of millions.

### References

- Bagus, P., Peña-Ramos, J. A., & Sánchez-Bayón, A. (2021). COVID-19 and the Political Economy of Mass Hysteria. *International Journal of Environmental Research and Public Health*, 18(4), 1376. doi:10.3390/ijerph18041376.
- Bartholomew, R., & MacKrill, K. (2020, December 10). *Don't let psychogenic illness undermine the Covid vaccine: An open letter to journalists*. University of Auckland. <https://www.auckland.ac.nz/en/news/2020/12/10/dont-let-psychogenic-illness-undermine-the-covid-vaccine.html>.
- BBC. (2020, March 17). *Coronavirus: Social giants police web with AI as staff sent home*. BBC News. <https://www.bbc.com/news/technology-51926564>.
- Compton, J., Jackson, B., & Dimmock, J. A. (2016). Persuading Others to Avoid Persuasion: Inoculation Theory and Resistant Health Attitudes. *Frontiers in psychology*, 7, 122. <https://doi.org/10.3389/fpsyg.2016.00122>.
- Freeman, D., Waite, F., Rosebrock, L., Petit, A., Causier, C., East, A., . . . Lambe, S. (2020). Coronavirus conspiracy beliefs, mistrust, and compliance with government guidelines in England. *Psychological Medicine*, 1-13. doi:10.1017/S0033291720001890.
- Huremović Damir. (2019). *Psychiatry of pandemics: A mental health response to infection outbreak*. Springer.
- Johns Hopkins Medicine. (2021, September 23). *COVID-19 Vaccines: Myth Versus Fact*. Johns Hopkins Medicine. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/covid-19-vaccines-myth-versus-fact>.

Klepper, D. (2021, April 6). *Viral thoughts: Why COVID-19 conspiracy theories persist*. AP NEWS.

<https://apnews.com/article/why-covid-19-conspiracy-theories-persist-2586c1bc28259f7e224885b609c8f131>.

Lopez, G. (2021, August 3). *Breakthrough cases aren't the cause of the US covid-19 surge*. Vox.

<https://www.vox.com/22602039/breakthrough-cases-covid-19-delta-variant-masks-vaccines>.

Pazzanese, C. (2020, May 8). *Battling the 'pandemic of misinformation'*. Harvard Gazette.

<https://news.harvard.edu/gazette/story/2020/05/social-media-used-to-spread-create-covid-19-falsehoods/>.

University of Michigan. (2021, September 29). *"Fake News," Lies and Propaganda: How to Sort Fact from Fiction*. University of Michigan Library.

<https://guides.lib.umich.edu/c.php?g=637508&p=4462356>.

Uscinski, J. E., Enders, A. M., Klofstad, C., Seelig, M., Funchion, J., Everett, C., Wuchty, S., Premaratne, K., & Murthi, M. (2020, April 28). *Why do people believe covid-19 conspiracy theories?* Misinformation Review.

<https://misinfreview.hks.harvard.edu/article/why-do-people-believe-covid-19-conspiracy-theories/>.

van der Linden, S., Leiserowitz, A., Rosenthal, S., & Maibach, E. (2017). Inoculating the Public against Misinformation about Climate Change. *Global challenges* (Hoboken, NJ), 1(2), 1600008. <https://doi.org/10.1002/gch2.201600008>.

van der Linden, S., Roozenbeek, J., & Compton, J. (2020, October 23). *Inoculating against*

*fake news about COVID-19*. *Frontiers in Psychology*.

<https://www.frontiersin.org/articles/10.3389/fpsyg.2020.566790/full>.

World Health Organization. (2021). *Infodemic*. World Health Organization.

[https://www.who.int/health-topics/infodemic#tab=tab\\_1](https://www.who.int/health-topics/infodemic#tab=tab_1).

### **Author Biography**

Haley Chan was born in San José, California. Growing up as part of Generation Z, she has observed the unfolding impact, both negative and positive, of social media on her peers' lives firsthand. Later, Chan developed a passion for studying the agents of socialization and is now a curious high school student eager to delve into the intersectionality between her two passions in sociology and public health. In *Fake News and its Impact on the Spread of COVID-19*, she explores the connection between misinformation in the media and the spread of disease. *Fake News and its Impact on the Spread of COVID-19* is Chan's first title.