<u>Infodemics During Plague and Pandemic: A Comparison Study of Misinformation During the</u> Black Death of 1665 and COVID-19.

The COVID-19 pandemic, while incredibly devastating, is not the first outbreak of a killer disease that has broken out on earth. Starting in 1665 and ending in 1666, London had an episode of the Bubonic plague that left 100,000 Londoners dead. The 1665 Black Death was not the first time England faced a mass outbreak, but it proved to be a swiftly spreading disease that was running rampant in a city that was also rife with misinformation, suspicion, and faulty cures that only increased the death count. Many factors contributed to people's willingness to embrace false and hokey remedies; plagues carry a history of conspiracy, and with every outbreak, more theories come into being. The accompanying surge of fraudulent cures only served to increase the panic Londoners felt. A similar situation has become prevalent in the current COVID-19 outbreak; the internet and social media have allowed for the mass consumption of misinformation that negatively affects public health and safety.

Johannes Dillinger explores the origin of conspiracy and its link to plagues. According to Dillinger, a pre-existing fear of the cause of events originated with the first Bubonic plague breakout in 1347, when witch hunts and the persecutions of Jews became popular. People accused specific communities and strangers of spreading the disease and were suspicious that they were the instigators as well. This suspicion continued in London during the 1665 plague, as people started to avoid each other on the street and placed the blame on different groups. This ability to direct blame and anger onto a group of people "promoted an image of Evil as a conspiracy." The increase in "anxiety and social tensions caused by outbreaks...were the driving

¹ Johannes Dillinger, "Terrorists and Witches: Popular Ideas of Evil in the Early Modern Period," *History of European Ideas* 30, no.2 (2004): 179-180, DOI: 10.1016/j.histeuroideas.2004.03.001.

² Dillinger, "Terrorists and Witches," 180.

forces" for the production and advertisement of pseudo cures around London that caused even more distrust in science and encouraged people to flaunt more health guidelines.³ London's population ignored safety guidelines such as quarantine and gathering restrictions, often resulting in their deaths.

Daniel Defoe's book A Journal of the Plague Year, provides first-hand accounts of events he witnessed while residing in London during the outbreak. Defoe was a middle-class English writer and trader who devoted himself to journaling his perspective of the Black Death. Defoe devotes several pages discussing the spread of misinformation and the dangers it posed to society. Defoe remarks on the practices that sprung up around the city; even when the plague was still a rumour, people were charging money to hear if the Black Death had returned and if it would carry them off. Defoe places a majority of the blame for spreading this false information on the "so many Wizards and cunning People propagating" it and not so much on the "Minds of the common People" who were more susceptible to the lies. 4 The practice and trade revolving around the plague grew bolder and bolder, and it reached the point where even the government, who had attempted to stop any false printed discourse, could not keep up with the sheer volume of it.⁵ As Dillinger discussed in his article, terror and uncertainty ruled people, which "led them into a Thousand weak, foolish, and wicked Things", such as purchasing advertised cures despite there being no proof they were effective.⁶ An example of this is Richard Barker's printed advertisement for a cure he had invented and was selling with the urge that "Families will do well to provide some quantity" owing to it being "so rare and infallible." Advertisements like

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³ Dillinger, "Terrorists and Witches," 181.

⁴ Daniel Defoe, A Journal of the Plague Year, ed. Cynthia Wall (Toronto: Penguin Books, 2003), 21-22.

⁵ Defoe, A Journal, 26.

⁶ Defoe, A Journal, 27.

⁷ Richard Barker, "Consilium Anti-Pestilentiale," cited in Daniel Defoe, *A Journal of the Plague Year*, ed. Cynthia Wall (Toronto: Penguin Books, 2003), 248.

Barker's were scams but still managed to reach a broad enough audience desperate to possess some form of protection.

Another problem contributing to the spreading of false information was the role of oral rumour spreading. A rumour about a plague-related death that "had gotten some Vent in the Discourse of the Neighbourhood" was the beginning of London's panic.⁸ Paula McDowell examines the importance oral and print discourses had on the plague and how they affected one another. The practice of spreading information through conversation proved to be disastrous for London; the "oral street culture" was proven "to have been distressingly influential" on people's social behaviour.9 The people who spread the information were "not merely foolish but villainous" as they encouraged citizens to either believe in fake cures or to believe that aspects of health guidelines were unnecessary. 10 Printed information proved to be no more reliable than talk, though; most printed texts, even official ones, were based on common women's oral retellings. 11 McDowell calls attention to the problems caused by a discourse that was "oral, female, and inevitably subjective to printed, male, and seemingly authoritative"; it would have been affected by multiple biases by the time it reached the public and people became distrustful.¹² Due to most of the world holding a sexist point of view at the time of the 1665 plague, a female's account of current events would have been altered and edited by male publishers to reflect their biased take on the events being relayed to them orally by women. Editing in this fashion effectively audited potentially crucial information. People were also distrustful and wary of the printed advertisements; however, "panicked citizens will inevitably

⁸ Defoe, A Journal, 3.

⁹ Paula McDowell, "Defoe and the Contagion of the Oral: Modeling Media Shift in "A Journal of the Plague Year," *Publications of the Modern Language Association* 121, no.1 (2006): 95.

¹⁰ McDowell, "Defoe and the Contagion," 101.

¹¹ McDowell, "Defoe and the Contagion," 95.

¹² McDowell, "Defoe and the Contagion," 97.

use [the] texts as a guide to action, even when they know that the texts cannot be read at face value as truth"; people were willing to believe any hopeful news as they experienced desperation and fear.¹³

Another piece of printed discourse that caused immense problems for the London population was the printing of daily death toll counts; the numbers were most likely not accurate of the real situation and tended to undercount the dead. When people saw printed confirmation that cases were decreasing they increased their social interaction, resulting in an even larger spike in numbers. McDowell's examination of the dangers printed material held during the plague also reflect the current infodemic accompanying the COVID-19 pandemic.

A similar situation has arisen with the current COVID-19 pandemic as there is an accompanying infodemic facilitated by social media and has provided a platform that maximizes the spread of misinformation. A study conducted in 2020 examined what makes people more susceptible to misinformation and why; the results found by the research team also suggests ways people can avoid being deceived by fake news. The team found that the main contributors to how easily a person would believe pseudoscientific claims were "education, analytical thinking, numeracy skills, [and] 'bullshit receptivity'"; all factors dependent on geographical location and class. When placed into the context of 1665 London, these factors explain why people were so fast to believe false advertisements. The lower class population of London were primarily uneducated and therefore were unable to analyze the information put before them. Social media also proved to be a massive contributor to spreading false information, and due to its broad reach, more people were likely to consume it and believe it. Social media are also echo chambers, meaning because of the algorithm, the media platform becomes an environment where

¹³ McDowell, "Defoe and the Contagion," 92.

¹⁴ Jon Rozenbeck, et all, "Susceptibility to Misinformation About COVID-19 Around the World," *Royal Society Open Science* 7, no.10 (2020): 2, DOI: 10./1098/rsos.201199.

people encounter information that reinforces their own beliefs. This algorithm hinders people from reflecting on differing opinions they come across. The research team found that a "higher susceptibility to misinformation is the only variable...that predicts *lower* compliance with public health guidance"; which implies that misinformation has a direct and negative impact on public health and safety. This finding can be linked back to the success misinformation had during the 1665 Black Death outbreak; London society was more susceptible to believing falsities about what was effective at halting the spread of the disease and would have felt more secure in their decision to ignore public health guidelines intended to protect them.

Doctor Timothy Caulfield has devoted many years to studying misinformation and the best ways to combat it. He comes to many of the same conclusions as Doctor Jon Roozenbeck's team in their study: misinformation has a substantial societal impact and can only cause harm. Caulfield believes "it is inappropriate to deceive people (even for their benefit) with magical thinking"; the actions of the deceivers during the plague demonstrate this inappropriateness when they were promoting their cures and false hope. Caulfield places the majority of the responsibility for fighting an infodemic on health officials and researchers shoulders, as "correcting misrepresentations should be viewed as a professional responsibility." He condemns the "scienceploitation" being used to play on people's fear of COVID-19 for profit and demonstrates how it affects people's trust in all presented information, even official information that contains credible research and peer review. There was very little action on London health officials part to halt the spread of misinformation; simply putting out their own

¹⁵ Roozenbeck, et al, "Susceptibility to Misinformation," 10.

¹⁶ Timothy Caulfield, "Pseudoscience and COVID-19 - We've Had Enough Already," *Nature*, 27 April, 2020, Nature.com/articles/d41586-020-01266-2.

¹⁷ Caulfield, "Pseudoscience and COVID-19."

material without any successful attempts to discredit others definitely contributed to the popularity of the misinformation.

Rachel Clamp, a current PhD student who specializes in the history of health, medicine, and disease of early modern Europe, briefly discusses the similarities between COVID-19 and the 1665 London plague; her article focuses on xenophobia and misinformation. She compares the impact both diseases had on the communities' beliefs and declares, "the most disturbing similarity between the two lies not in the diseases themselves but in their social consequences."18 The Black Plague and COVID-19 share several socially similar themes; the theme of misinformation and fear had a significant impact on people's compliance with health guidelines and their willingness to buy into conspiracy theories. Along with the already prevalent fear of the actual sickness, the wariness caused by the ever-widening scope of misinformation only contributed more problems to officials attempting to control the sickness. In London, oral discourse, gossiping, and biased retellings were enough to cause people to panic, but with the addition of printed material, people realized that "inaccurate printed information makes an already terrible situation worse." 19 Now, the addition of digital information has increased that terrible situation tenfold. It has also become easier to spread the information; instead of waiting to share a printed copy of something or tell a neighbour, one tap instantly shares information to an unbelievable amount of people. During the Bubonic plague, officials briefly attempted to stop the publication of misinformation, and similar measures are in place right now. However, "good science and public trust are...the most valuable tools in the fight against misinformation."²⁰ By

¹⁸ Rachel Clamp, "Coronavirus and the Black Death: Spread of Misinformation and Xenophobia Shows We Haven't Learned From Our Past," *The Conversation*, 5 March, 2020,

https://theconversation.com/coronavirus-and-the-black-death-spread-of-misinformation-and-xenophobia-shows-we-havent-learned-from-our-past-132802.

¹⁹ McDowell, "Defoe and the Contagion," 96.

²⁰ Caulfield, "Pseudoscience and COVID-19."

flooding social media and news outlets with good science and real information researchers could flush out misinformation and promote facts that increase the public's willingness to follow public health orders.

The parallels between COVID-19 and the 1665 Bubonic plague's social consequences are unsettlingly similar, as are the mistakes in not preventing misinformation and conspiracy. While COVID-19's death toll might not be as devastating as the Black Plagues, the harm caused by misinformation is exponentially higher. The Bubonic plague demonstrated the effects of printed and oral misinformation on people's willingness to comply with health orders and how it contributes to people's anxiety. With the current COVID-19 pandemic, people face the same issues; social media and the global impact have heightened misinformation. The arrival of a disease inevitably brings an onslaught of dangerous conspiracies that encourage the flaunting of health regulations, a danger for everyone. If the amount of fake news being distributed were decreased, then there would be an increase in people following health mandates. Responsibility for preventing false publication falls to the consumers of them and people who possess the right counter-knowledge to combat the negative impacts of misinformation.

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