

Zombies and COVID-19: An Examination of the Psychological Contagions Through the Pandemic and Zombie Movies

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ASBTRACT

Two and a half years ago, a new infectious disease later named COVID-19 caused a respiratory illness outbreak in Wuhan, China. By now, much research has been done across various fields on its biological effects on the human body for the sake of controlling the virus, while researchers across the world have conducted limited studies regarding its psychological and socio-political impacts on the population. This research focuses on the effect of three types of contagions, consumer behavior contagion, deliberate self-harm contagion, and hysterical contagion, on people's behavior. By comparing the effects of these contagions in COVID-19 and several zombie movies, this research paper concluded that the spread of fear in both COVID-19 and zombie movies is causing the spread of these contagions.

INTRODUCTION

Two and a half years ago, a new infectious disease later named COVID-19 caused a respiratory illness outbreak in Wuhan, China (World Health Organization, 2018). By now, much research has been done across various fields on its biological effects on the human body for the sake of controlling the virus, while researchers across the world have conducted limited studies regarding its psychological and socio-political impacts on population. Along with the prevalence of the virus around the globe, the spreading mechanism led to a similar behavior impact worldwide: people, under the fear of virus, tend to follow the action of a larger group. These groups are all affected by the behavior contagion, a term defined under a more general term as a “spontaneous, unsolicited and uncritical imitation of another’s behavior” that include hysterical contagions, deliberate self-harm contagions, consumer behavior contagions, and so on (Duan et al., *Societal, Public, and [Emotional] Epidemiological Aspects of a Pandemic*, 2019, 47). Following the contagion theory as the pandemic affects a larger group of people, the impact of COVID-19 will likely be magnified upon an individual's behavior. These traits of the spreading mechanism of COVID-19, on the other hand, shows resemblance to zombie movies. Both the so-called “zombie virus” and COVID-19 emerge as unseen new viruses, accompanied with their identity of no recognizable cure initially, which could cause the prevalence of chaos and social panic (Duan et al., 2019, 49). Unlike human beings, the spread of zombie virus in horror films follows only one motive: hunger of the infectants. Upon infection, the host of the virus in literary works looks first for nearby people that possibly satisfies its hunger while expanding the virus’s population through spread (Dendle, 2011). Similarly, COVID-19 virus’s only motive is to occupy the human body for its own survival, and to expand its population as large as possible. This research paper argues that the spreading mechanism of COVID-19 tends to have similar psychological effects, such as fear and panic, to zombie movies because both involve a collective reaction like stockpiling, deliberate but unnecessary competition, and increased violence against each other. These collective reactions exemplify behavior contagion where the fear and its derived actions are magnified in a larger group of people.

CONSUMER BEHAVIOR CONTAGION

During the COVID-19 pandemic, people's shopping behavior follows the way of gaining emergency supplies, such as food and medicinal supplies, in an apocalyptic situation: the survival instinct of fearing the depletion of supply drives people to rush to stores and buy large amounts of necessary goods (Chen et al., *A discussion of irrational stockpiling behaviour during crisis*, 2020). Consumer behavior contagion, in this instance, aggrandizes and transmits the panic from one individual to a larger group of people, causing the depletion of goods and increased competition. In most zombie movies, scenes of people rushing into various different stores trying to find food, medicine, weapons, and other survival materials is very common. For instance, in the film *World War Z*, the family of the protagonists rushes to a convenient store storming for asthma medicines, while the others in the store are fighting against each other for very limited supplies on the empty shelves (Forster et al., *World War Z*, 2013). Contagion effect of a single customer at the store trying to get the last asthma inhaler affects other customers at the store, fearing that if this inhaler were taken, no impending supplies would be available under this doomsday situation.

Moreover, in fear of exposure, people tend to choose different ways of gaining supplies when the traditional store purchase is not available. People in the COVID-19 pandemic shifted to e-commerce and the method of using larger shopping baskets are used so as to reduce shopping frequency and polarizing supply sustainability (Kohli et al., *How COVID-19 is changing consumer behavior-now and forever*, 2020). Similarly, in a zombie apocalypse, hunting and growing one's own food are more common when no nearby supplies are available. A rather cliché scene that appears in most zombie movies would include an Acadia land where people have gotten rid of the zombies and are re-establishing their society with their own supply sustained from growing crops and hunting animals nearby. Similarly, consumer behavior contagion plays a critical role, since people are under the possibility of exposing deadly viruses, as one chooses a safer method of shopping, another would do the same. Such behavior tends to become a cohort action, thus preventing the spread of the virus on one hand, and comforting people's fear on the other.

DELIBERATE SELF-HARM BEHAVIOR CONTAGION

Similarly, fear plays an essential role in spreading other infections, such as deliberate self-harm behavior contagion, which is defined as an intention destruction of body tissue through method such as cutting, burning, self-biting and so on while without conscious suicidal intent (*APA Dictionary of Psychology*, 2022). Having a contagion effect, an individual's self-harm behavior developed under sufferance of mental health issues can spread to people and communities around such a person, inducing widespread negative effects. Self-harm behavior contagion is especially prevalent during the emergence of massive lockdowns. Reported by Cambridge University, the percentage of lifetime experience of self-harming was 6.4% in 2014, while during the start of the UK's lockdown, 9% of the surveyed participants (4,121) experienced psychological or physical abuse, some 18% (7,984) reported thoughts about self-harming and suicide, and 5% of the participants (2,174) actually committed self-harm behaviors (Philip et al., *Respiratory patient experience of measures to reduce risk of COVID-19: Findings from a descriptive cross-sectional UK wide survey*, 2020). The deliberate self-harming behavior of one individual can easily spread to another experiencing the same emotion during isolation, causing significant hazards to people's mental and physical health. Similarly, self-harm behavior contagion is also exhibited in zombie movies. The essential concept of fear from getting infected remained, while longtime isolation inducing mental issues also appears. The film *Train to Busan* is a good case in point. An old lady is isolated in a carriage safely while her friend has turned into a zombie in an adjacent carriage. Feeling empathy and distress, she deliberately opens the doorway connecting the two carriages and lets her zombie-friend emerge (Yeon Sang-ho, *Train to Busan*, 2016). Although the isolation situation is more urgent in the zombie movie, people under isolation that go through emotional trauma are more likely to act with self-harming intention. Such intention, again, is likely to spread from one person to another, further expanding the destruction from one's body to a broader group of people, and propose challenges towards COVID-19 regulations.

HYSTERICAL CONTAGIONS

Other than the deliberate self-harm contagion, the prevalence of massive hysteria also renders hindrance to COVID-19 control. “Hysterical contagion” is commonly known as the sudden and quick spread of fear towards unknown incidents, objects, diseases, etc. that manifests itself by some collective behavior and experience (Bernard Makowsky, *The June Bug: A study of hysterical contagion* 1969). The “June Bug” incident, for instance, is a great example of mass hysteria. The incident took place in an US textile factory in 1962, in which some 62 workers reported being bitten by the June Bug, developing such symptoms as headache, nausea, and numbness (Olkinuora, *Psychogenic Epidemics and Work*, 1984). Yet the bug-biting never happened, and their symptoms were all caused by their anxiety and misbelief (Duan et al., 2019, p.47). The misbelief of the “June Bug” is only one of such instances. During the global spread of COVID-19, hysterical contagions have been widespread and affected people in different ways. One such example was the raiding of toilet paper. Toilet paper, strangely enough, symbolizes comfort and control—it is not only a tool of hygiene, but also a source of emotional support that offers hope and safety, especially during COVID-19 (Kirk & Rifkin, *I'll trade you diamonds for toilet paper: Consumer reacting, coping and adapting behaviors in the COVID-19 pandemic*, 2020). As one individual reported that toilet paper may run out, people around him or her rushed towards the store and hoarded the toilet paper in fear that during lockdown, they would have no access to replenish their storage. Their hoarding behaviors accelerated as retailers, usually with large supplies of toilet paper, gradually ran out and left them no other shopping option (Kirk & Rifkin, 2020). Hysterical contagions, in this case, can lead to people’s trust of false information and hoarding of unnecessary goods, causing economic distress to individuals while publicly shortening access to goods.

A potentially more hazardous effect of hysterical contagion during COVID-19 was its tendency to lead people into exaggerated information. The death rate of COVID-19 during its initial outbreak was rather high, and countries applied rather strict regulations that were hazardous to social and economic functions around the globe. According to the International Labor Organization, an estimated 25 million jobs have been lost due to COVID-19 (*International Labor Organization*, 2020). Yet after almost three years since its outbreak, COVID-19’s total death rate (1,005,633 people before 28 May 2022) indicates that comparatively COVID-19 actually has a low death rate for a highly transmissible disease. Meanwhile, 1, 125, 080 (between 1 February 2020 to 14 May 2022) is also reported (*NVSS - Provisional Death Counts for Covid-19 - Executive Summary* 2022). Hysterical contagions are also observed in zombie movies, as in both scenarios the fear of apocalypse exists. In *Resident Evil: Afterlife*, the protagonist is attracted to a “zombie-freed” land by a broadcast of “survivors,” yet it was an antagonistic trap (Anderson, *Resident evil: Afterlife* 2010). The protagonist’s desperate hope of finding surviving human beings and fear of being left out led her to the trap, and the false information attracted more people with the same mindset to be captured and used in experiments for the zombie virus. In both COVID-19 and zombie doomsday, hysterical contagions’ effects are thus prominent and sometimes deadly.

MISINFORMATION, PANDEMIC, AND HYSTERICAL CONTAGION

Of all the negative effects hysteria can have psychiatrically, misinformation resulting from the prevalence of hysterical contagion plays an important role. COVID-19 and other newly emerging diseases that have no existing cure, rumors and misinformation have profound impacts on disease prevention and control. For instance, the reluctance of people getting vaccinated during COVID-19 is a compelling example. A content analysis regarding misinformation, conspiracy theories, and negative contents about COVID-19 on Twitter shows that among 1,286,659 tweets they studied within a month (19 July 2020 to 19 August 2020), they selected 4,868 tweets relating to the COVID-19 vaccine. A total of 1,306 out of these 4,868 tweets were categorized as negative, in which up to 32.47% were categorized as misinformation regarding the newly developed COVID-19 vaccine. Furthermore, a high percentage of conspiracy theories of vaccines (21.13%) was observed (Nuzhath et al., *COVID-19 vaccination hesitancy, misinformation and*

conspiracy theories on social media: A content analysis of Twitter data, 2020). Hysterical contagions contributed to the spread of misinformation and conspiracy theories, which had a critical impact. In this research example, hysteria was adding to the people on Twitter not willing to receive COVID-19 vaccines and creating hindrance to COVID-19 control.

Hysterical contagion did not only affect people's opinion on COVID-19 preventions and vaccination, but it was also represented in the portrayal of the spread of the zombie virus, like in the movie *I am Legend* (Lawrence et al., *I am legend*, 2007). The movie is about people who survived a re-engineered virus turning people into zombies, and, what's more, the zombie virus was manually designed to cure cancer (Lawrence et al., 2007). Similarly, concerns regarding COVID-19 vaccination safety were also prevalent on the Internet. A popular conspiracy theory on social media proclaimed that receiving the Pfizer vaccine will mutate normal humans into similar cannibal monsters from the movie (Rao, *Yes, 'I am legend,' the 2007 movie about Zombie Vampires, is now a part of the vaccine conversation*, 2021). Both the zombie virus in the *I Am Legend* and the COVID-19 vaccine had the target of disease prevention; the fear of new, untested, technology on people's health induced the development of a hysterical contagion among people simply from watching zombie movies, and with the spread of infection, such fear affected people's views on COVID-19 vaccines.

In contrast to the prevalence of COVID-19 vaccine misinformation, news and Internet media tended to be less trustworthy to the public (Jones, *Why Americans don't trust the media: A preliminary analysis* 2004), leading to a diminishing trust in the words of experts whose words ironically should be respected most highly. According to a study conducted by Alexandra Revenelle, Abigail Newell, and Ken Cai Kowalski from UNC, people's misbelief of the media derived from the entangled, discordant news regarding COVID-19, due to the media's position on the political spectrum. On one hand, COVID-19 was reported to be a disease of decimal impact by rather conservative media, while on the other hand its impacts were exaggerated by more liberal media (Ravenelle et al., "*The looming, crazy stalker coronavirus*": *Fear mongering, fake news, and the diffusion of distrust* 2021). Although both were reporting that a new disease, COVID-19, was emerging, the media's recipients would have different opinions based on the news received. When the vastly different information mingled, with discontent, individual reliability on media perspectives dwindled. Misinformation and conspiracy theories during this vacancy of news satisfied people's need of unbiased, nonpolitical information and gained people's trust, even though it stemmed from unreliable sources. A similar issue of disbelieving words and even warning from experts has been embodied in the recent apocalypse movie *Don't Look Up* (McKay, *Don't Look Up* 2021). In the film, public disbelief in the words of experts eventually led to the Earth's doom. Relating to the current COVID-19 situation, people's trust had been wasted on misinformation and conspiracy due to the spread of hysterical contagion, while the true useful suggestions and warnings were ignored.

CONCLUSION

Through an examination of the spreading mechanism of COVID-19, this research paper has compared and contrasted the psychological effects brought by the recent coronavirus and its byproducts and that of the zombie movies. Both the current pandemic and zombie viruses illustrated in movies have a collective mental impact on people involving psychological contagion that directly leads to hazardous behaviors in disease prevention, such as stockpiling, deliberate self-harming, spread of misinformation and conspiracy theories, and loss of trust in experts and official statements.

This paper has successfully explored three types of contagion: consumer behavior contagion, deliberate self-harm contagion, and hysterical contagion. Due to the fear of the depletion of goods, consumer behavior contagion in both zombie movies and the current pandemic can be characterized by hoarding, stockpiling, competition, and most extremely, by fighting to gain the largest possible amount of goods. Under urgent and extreme circumstances, such as being surrounded by zombies in the movies or under a mandatory isolation during the earlier stages of COVID-19, gave rise to the spread of deliberate self-harm contagion. In both zombie movies and the current pandemic, people act to harm themselves and the group of people to which they belong. In COVID-19 isolation, such behaviors tend to be the harming of oneself under mental pressure of the fear of virus and the loneliness from isolation; while in a zombie

apocalypse, the effects of these contagions aggrandize to harmful behavior to the survival human beings due to mounting fear of zombies and the anguish from the loss of friends and family. Such behaviors can draw a zombie's attention to survivors or simply allow zombie virus infection in a human sanctuary.

As zombie viruses in films and COVID-19 develop around the globe, hysterical contagion spreads from one to another carrying false information, conspiracy theories, and loss of trust. Massive spread of hysteria is directly in response to the addition of infections among human beings in both the current COVID-19 pandemic, and in zombie movies. The contagions mentioned have an enhanced effect in zombie movies. Through comparing the differences and similarities between real life examples and fictional ones in zombie movies, COVID-19 prevention can draw potential lessons from the exaggerated but similar situations in film to avoid mistakes and develop better regulation methods.

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