The Impact of Social Media on Conspiracy Theories in Times of Public Health Crises

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Abstract

Although conspiracy theories have been part of human history for many centuries, they have been especially prevalent in times of crisis. With the Covid-19 pandemic disrupting societal life in all parts of the world and conspiracy theories being popularised by many people through social media, the question arises whether there have been changes in the essence of conspiracy theories because of that. Thus, this paper aims to investigate the impact modern social media sites have on the nature and narratives of conspiracy theories. To take on this issue, a comparative case study will be conducted consisting of three pandemics from a time before the existence of social media and three pandemics from the last fifteen years. The results show that there is are differences as well as similarities with respect to the actors involved in these theories. While countries' national enemies have been part of conspiracy narratives throughout the two historical periods examined, people accused their own governments of being involved in secret plots more often in modern pandemics. This fact may be partially attributed to the existence of social media, as the control over the dissemination of information was shifted away from the elites with their introduction.

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1 Introduction

“Coronavirus: Bill Gates ‘microchip’ conspiracy theory and other vaccine claims fact-checked“ (Goodman & Carmichael, 2020)

Headlines like these have been prevalent a lot over the last two years of the Coronavirus pandemic and could be seen in all types of media around the world. Conspiracy thinking did not only revolve around Bill Gates, though, but reflected various narratives, from Covid-19 not even being a real disease to it being a bioweapon developed by the United States, China or Israel (Nocum, 2020). Naturally, this kind of conspiracy thinking caused a lot of discourse within the public, as well as political circles, and ultimately also led to a major divide in society (Allen, 2021). Although many pleaded for people to stick together, such a time of uncertainty has rather resulted in the opposite. The question that has often been asked in this context is why this is the case.

While conspiracy theories had been existing for a long time and had had varying degrees of popularity, it seemed as if they became especially prominent in the general public during the last two years. Similarly, the character of the Coronavirus being a global health risk is nothing mankind had not experienced in the past either. Just in the last two decades, there were several disease outbreaks all over the world, often affecting a significant part of the globe (Viswanath, 2021). Thus, the question emerges why conspiracy theories have been significantly more prominent in the media and general public discourse.

As one might expect, the answer to that question is rather complex and several factors have to be considered. One possible explanation is that Covid-19 has had a significantly higher mortality rate than other diseases, such as the common flu or pneumonia, another widespread respiratory disease (*Deaths due to coronavirus*, 2020), which may have made people more scared for their lives and overall wellbeing. A further reason could be that, in contrast to the two diseases mentioned previously, Covid-19 was extremely rapid in its spread around the world. Within a couple of months, it reached almost every country on the globe (Allen et al., 2022) and case numbers climbed fast, which led to most national governments introducing very extensive and, in some cases, extreme countermeasures to try to control the disease (Taylor, 2021). This may have been another factor contributing to people’s insecurities. As stated above, there had been a number of other pandemics in recent history; this pandemic, however, was special in the extent to which it affected everyday and social life, something people had never before experienced in their lives.

Another factor that may not have caused but could have intensified conspiracy thinking is the widespread use of social media. The Covid-19 pandemic is, while not the first pandemic since the introduction of social media, the first major one in decades. As the world has become more complex and considering the uncertain environment the pandemic has created, people tend to look for simple explanations for this phenomenon. Moreover, social media sites allow any person to express their thoughts, ideas, and insecurities to potentially millions of people without a filter and without any hindrance. This landscape may have contributed to an environment where conspiracy theories can thrive, as there is no authority to keep people from posting their theories, as absurd as these may sound. Furthermore, citizens are no longer dependent on traditional media to receive information but can choose their news outlets themselves. This constitutes a major difference to pandemics from the 19th and 20th centuries, as at that time widely available types of media were newspapers and later television, which were controlled by the elites and would only publish information that they wanted the public to know (Herriman, 2010). Thus, they were able to somewhat steer public opinion in a direction favourable to them. This, of course, does not mean that there were no conspiracy theories in that period of time but that they could only become general knowledge if they were spread through the traditional media. Conversely, this would imply that the elites had to approve of these theories.

Returning to the present, one could now pose the hypothesis that social media sites and their availability to the average citizen have shaped the discourse around conspiracy theories in a rather significant way. This question is especially interesting considering that the aspects of global health crises, conspiracy theories and social media have previously often only been investigated separately from one another or in a loose context from a scientific point of view. Moreover, there has been a lot of research concerning the general belief in these theories, while the way they are transmitted and spread has not been covered extensively. Insight into this issue could not only help to understand conspiracy thinking in the current pandemic better but might also indicate how ideological rifts within society can be prevented or at least reduced in future pandemics and health crises. Thus, this thesis paper poses the following question: In how far has the existence of social media impacted the nature and narratives of conspiracy theories in times of public health crises?

2 Theoretical Background: The Three Central Concepts

Before dealing with concrete cases, it is vital to lay the groundwork for the later analysis. Considering the central research question of this thesis paper, the three concepts that are at the centre of the theoretical argument are *conspiracy theories*, *public health crises* and the differentiation between *social* and *traditional media*. Thus, these terms will be discussed in the following by defining them and giving the necessary historical context.

2.1 Nature and Origin of Conspiracy Theories

Starting with conspiracy theories, it is crucial to understand them in a general sense to be able to identify them correctly. Furthermore, one has to examine why such theories are so appealing to humans from a social, political and psychological point of view.

In their paper "Understanding Conspiracy Theories", Douglas et al. (2019) define conspiracy theories as "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors" (p. 4). Even though these "powerful actors" are sometimes part of or the government itself, this is not always the case. Accusations can be directed at any group that has significant power, ranging from international corporations to religious groups, the financial industry or other supranational groups like the United Nations (Douglas et al., 2019).

Furthermore, the authors argue that other terms relating to conspiracy theories must be defined properly before using them, as they may otherwise neutralise valid concerns or delegitimise people if used impetuously. As such, they emphasise that a *conspiracy* is a causal chain of events that happened in reality, *conspiracy theories* on the other hand are merely allegations that may or may not be true. Similarly, the term *conspiracy belief* refers to the conviction of one or a set of conspiracy theories being true, while *conspiracy thinking* and *conspiracy mindset* solely indicate a tendency of some people to prefer conspiratorial explanations over causal ones due to a bias against powerful actors or official accounts (Douglas et al., 2019).

When talking about reasons why people believe in conspiracy theories, there is no definitive answer that applies to all people. The rationale ranges from epistemic motives – i.e. that people turn to such theories in times of uncertainty because they "provide broad, internally consistent explanations that allow people to preserve [their] beliefs" (Douglas et al., 2019, p. 7) – to demographic factors – for example that people with a lower level of education tend to believe in conspiracy theories more often – or political reasons like people losing trust in their government (Douglas et al., 2019).

Some scholars, however, have argued that the expression and spreading of conspiracy theories is rather an attempt to understand the political and social reality by the people and groups who live in it. They emphasise that such beliefs are a sign of discontent with current politics and view the strengthening of these theories as symptoms of social dysfunction. On the other hand, some researchers see reasons for people believing in conspiracy theories as being more internal. They suggest that conspiracy theory beliefs result from people feeling powerless and trying to somehow justify or explain those feelings (Douglas et al., 2019).

Another central aspect that has to be considered in the context of this topic is the history of conspiracy theories, or rather conspiracy theories as part of human history. While some people still believe that conspiracy theories are a phenomenon of our modern age (Stanton, 2020), van Prooijen and Douglas (2017) examined the role of conspiracy theories in times of crisis and concluded that conspiracy beliefs are indeed not an aspect exclusive to the digital age, but have instead been present for a long time, some evidence even suggesting their existence back in the Roman era[1] which indicates that the overall narrative of conspiracy theories may not have changed significantly since then (van Prooijen & Douglas, 2017).

As the two scholars have analysed theories directly relating to times of societal crisis – including, but not limited to, public health crises – the psychological side of their argument is also worth being taken into consideration. They have found out, similarly to Douglas et al. (2019), that people are often unable to process the randomness and uncontrollability of events and thus try to explain them with the help of a scapegoat, either personified in one individual or a whole group of people. Furthermore, such feelings generally rise exponentially in times of crisis, which is why conspiracy theories are usually more prominent in such historical periods. In the end, these narratives may end up shaping the historical process itself. What is meant by that is that while conspiracy theories themselves do not alter historical events, they do shape our understanding of them. While historians usually make sense of what happened using direct sources, "lay historians" (van Prooijen & Douglas, 2017, p. 329), as the average citizen is called by the authors, simplify events and base their representations "on their imperfect memory, as well as on other imperfect sources of information such as folklore, novels, films, and the like" (van Prooijen & Douglas, 2017, p. 329). This may ultimately lead to conspiracy theories becoming part of our shared knowledge and to some extent even replacing actual historical knowledge (van Prooijen & Douglas, 2017).

[1] In AD 64 the people of Rome accused Emperor Nero of having intentionally started the great fire of Rome, in which most of it was destroyed, in order to enable him to have the city rebuilt according to his own vision (van Prooijen & Douglas, 2017).

2.2 Pandemics: An Extreme Case of a Public Health Crisis

In this chapter, the unique qualities of pandemics, specifically how they differ from other types of societal crises, what impact they have on society and how this may lead to the creation and spread of conspiracy theories will be outlined.

In early times, the term *plague* – originating from the Greek word *plaga* – was used to describe a "particular, virulent contagious febrile disease caused by *Yersinia pestis*" (Huremović, 2019, p. 8). In general, it referred to any epidemic disease with a relatively high rate of mortality. Throughout history, such diseases have had a significant impact on human civilisations around the world. As Huremović (2019) states, "pandemic outbreaks have decimated societies, determined outcomes of wars, wiped out entire populations, but also, paradoxically, cleared the way for innovations and advances in sciences […], economy and political systems" (p. 7).

While first references to the existence of epidemics can be found in religious texts such as the Old Testament and the Qur'an, the earliest historical evidence is from the time of the Peloponnesian War[2]. The most devastating pandemic in human existence was the outbreak of the bubonic plague in the 14th century – colloquially known as *The Plague* or *Black Death* – which killed an estimated 150 million people, corresponding to around one third of the world population at that time.

Even back in the Middle Ages, there had been conspiracy theories surrounding the plague, often involving the Jewish population (Huremović, 2019). This is not entirely implausible, as people feel especially uncertain and powerless in crisis situations. As established above, these feelings lead to the attempt to find an explanation for the perceived randomness. A special circumstance of pandemics is that, other than in crises like wars or natural disasters, there is no visible enemy or clear adversary. Thus, people may be more inclined to search for alternate explanations during pandemic times (van Prooijen & Douglas, 2017).

2.3 Traditional Media vs. Social Media

As the third central concept of this thesis paper, the use of social media and in what ways they differ from traditional media will be outlined in the following. It is essential to understand their role in crisis communication, as such insights help to formulate a theoretical

[2] The Athenian Plague took place during this war fought between the two city-states Athens and Sparta. After its four years of reign (430-426 BC), the plague had killed an estimated 25 per cent of Athens' population, including its leader Pericles. Scholars believe that the cause of the Athenian Plague was Ebola virus hemorrhagic fever (Huremović, 2019).

argument why social media may have had a significant impact on the narratives and spread of conspiracy theories and conspiracy thinking.

The most notable difference between traditional media and modern social media is their respective way of communication. As Stano (2020) describes, traditional media[3] are characterised by the broadcasting model while modern media have multidirectional communication. Other terms used by the author are *one-to-many* when referring to traditional media and *many-to many* to define the way of communication used in modern media. This does not only mean that there was no direct feedback option in the conventional media but – more importantly – that content was only sent one way so that the viewer or reader would have had to accept the information they were given. This led to an environment where the control over traditional media, especially newspapers, most often lay with the elites. As Herriman (2010) puts it, "[t]he costs associated with the mass production and distribution of newspapers tend to ensure that control of production is limited to capitalist or state bureaucracies with large amounts of capital" (p. 724).

Because of this power, they were able to assert their authority and control popular narratives to a certain extent. This was especially evident in times of acute public concern over a perceived threat to the social order or society as a whole. As newspapers were often the only source of news for many lower-class people, the ruling class could create so-called "folk-devils" (Herriman, 2010, p. 724) to divert attention away from themselves or create a scapegoat in such times of "moral panic" (Herriman, 2010, p. 724).

Contrastingly, almost anybody can nowadays very easily create and distribute content by themselves through digital media, be it textual, visual or audio-visual posts. Furthermore, there are specific functions for other users to comment and react to said content. One drawback to this freedom is that social media posts are rarely checked for their accuracy, resulting in users being able to unintentionally or deliberately spread false or inaccurate information (Stano, 2020).

The freedom to post anything with almost no restraints is not the only unique factor compared to newspapers and television, however. While this liberty may encourage and, in the end, even increase diversity of opinion in reality, a negative by-product is the so-called "information overload" (Stano, 2020, p. 8). This term refers to a phenomenon where "greater access to information has also made it more challenging for the reader to evaluate the reliability of information" (Stano, 2020, p. 8). This means that rather than helping users to find more

[3] The term traditional media refers to any medium present before the digital age. This most commonly includes newspapers, radio and television (Berganza et al., 2016).

diverse opinions and to have the ability to not have one opinion set in advance – as was often the case in times of newspapers – there is an abundance of differing sets of information to a point where users are so confused and uncertain that they are not able to choose which information to trust and focus their attention on (Stano, 2020).

Another factor exclusive to social media is the platforms' algorithms and their effects on user-specific content. As users interact with specific posts, i.e. like, share or comment on them, automatic algorithms learn these personal preferences and thus expose users to similar content more often than showing posts that go against their belief system. According to Mortimer (2017), these so-called "filter bubbles" lead users into an "echo chamber" (p. 5) where they are exclusively exposed to posts from like-minded people and are isolated more and more from the neighbouring environment. While social media services in the past claimed that their algorithms would prevent such an effect, quite the opposite has been shown in scientific studies by independent researchers, as well as the services themselves (Mortimer, 2017)[4]. Ultimately, these circumstances lead to the creation of barriers to critical discourse and also to the weakening of democracy itself.

Lastly, the role that social media have in crisis situations ought to be explained. As one may imagine, the more people are involved in the digital realm, the more they rely on information shared on these social networks. As Tang et al. (2018) argue, "how these EIDs[5] are portrayed and communicated in media shapes people's perceptions of risks, which in turn have a significant impact on their decision-making process and risk management behaviors" (p. 963). This demeanour is especially troubling considering the previously mentioned fact that social media posts are rarely checked for their accuracy. Consequently, an environment where people may rely on false information is created, ultimately leading to the risk of rumours, misinformation and conspiracy theories spreading uncontrollably (Tang et al., 2018).

[4] In their paper, Mortimer (2017) refer to studies conducted by Facebook employees that indicate that the platform's own algorithms are at least partly responsible for the creation of filter bubbles.
[5] EID is an abbreviation for **e**merging **i**nfectious **d**iseases, as used by Tang et al. (2018) in their article.

3 Methodology and Sources

In the following, methodological aspects relevant to this research paper will be explained. Firstly, a case study as the chosen method for the analysis will be explained, which includes the criteria for the case selection, as well as the specific cases that were ultimately chosen. Secondly, the availability and use of different types of sources will be examined with respect to the two groups of cases. Lastly, other methodological aspects relating to the analysis will be outlined.

3.1 Selection Criteria and Choice of Cases

Within the limited scope of this bachelor thesis paper, the amount of data to be examined had to be limited. Thus, a case study (Norander & Brandhorst, 2017) of six pandemics from the last 150 years is included. Since this study aims to compare in how far social media have impacted the nature and narratives of conspiracy theories, the cases had to be selected with respect to their technological context, i.e. to what extent social media were present and popular at the particular point in time of the pandemic. Furthermore, the cases had to be at least somewhat similar in their respective courses. This point mainly refers to the issue that, if a virus outbreak was rather contained locally, there would firstly not have been as much data on them and secondly, there would have been a risk that conspiracy theories that were popularised during these outbreaks could be impacted heavily by local predispositions and not reach the point where they could have been spread on a larger scale and a potential effect would not have developed.

These criteria, in the end, led to the selection of the following three examples of modern[6] pandemics: firstly the 2009 Swine Flu pandemic, secondly the 2015 Zika Virus outbreak – which, despite being somewhat regionally contained to a relatively small area, did spark enough conspiracy theories and theorising among people to qualify for these parameters – and thirdly the ongoing Coronavirus pandemic that started in 2020.

The comparative cases without social media influence undoubtedly had to be chosen in a way that guarantees no possibility of interference from digital ways of communication, which means that they needed to have happened before the time of the internet. On the other hand, going too far back in time could have resulted in the unavailability of reliable scientific evidence since conspiracy theories were often only transmitted by word of mouth in the distant past (van Prooijen & Douglas, 2017). Consequently, the time frame of case selection was limited to 100 years prior to the invention of the internet in the early 1990s (Dennis, n.d.). Three pandemics

[6] For the sake of simplicity, the term "modern pandemics" will be used to refer to the three 21st century pandemics investigated in this paper.

that qualified for these criteria and were ultimately chosen are the 1889 Russian Flu pandemic, the 1918 Spanish Flu pandemic and the 1957 Asian Flu pandemic. All these cases fulfil the main criteria of being significant enough to generate conspiracy theories as well as sparking enough scientific evidence to make them suitable for further analysis.

3.2 Data and Sources

The data for this research project consists in large parts of previously established qualitative data and – so far as it is possible – historical sources. Especially concerning the three older cases, historical data was often rather scarce and gathering data by oneself is quite unrealistic given the limited time frame of this paper and the accessibility of historical records and newspaper archives, for example from the early 20th century. As a viable alternative, this paper refers to secondary scientific sources. Due to it being the smallest of the three pre-digital public health crises in scale, there was a considerable scarcity of available data sources in the case of the 1957 Asian Flu pandemic, which resulted in the reliance on mainly modern newspaper articles from trusted sources and scientific studies. While this circumstance is certainly not ideal, it is not a reason to entirely disregard this information from the very beginning. In the instance of the three pandemics in the digital age, there is not only a greater availability of data, but it has also already been processed by scientists and turned into reliable and meaningful data. Thus, there is plenty of opportunity to access mostly qualitative data that is relevant for the analysis.

Another aspect that has to be mentioned while on the topic of data is the availability of quantitative data. While much more quantitative research has been done in recent years, there is almost no such data for the older[7] pandemics. Since the media of interest in that period of time were primarily newspapers, figures like readership numbers or the number of sold copies would have been beneficial to assess the dissemination of conspiracy theories advocated in these papers.

3.3 Methodological Approach for the Analysis

As the method of data analysis, a content analysis (Holman, 2017) will be conducted. Since the exploratory research question of this paper is directed at the investigation of differences and similarities between two historical periods, allowing the identification of patterns and relationships between themes or variables, a comparison between a number of cases will be conducted. Using content analysis, a variety of sources can be analysed in the

[7] For lack of a more scientifically accurate term, “older pandemics” will be used as a reference to the three pandemics before the digital age.

same way in order to draw connections between them. Especially in the case of this research topic, it makes sense to look for patterns, overarching themes and motives, as there have been many theoretical arguments made about the nature of conspiracy theories in general. Thus, looking for irregularities between the two groups of cases may be indicative of an effect of social media.

One has to acknowledge, though, that some texts, especially when referring to historical sources, might be open to subjective interpretation and may reveal multiple meanings. Thus, one ought to keep a certain distance from the data and be conscious of the level of trust one can put into a certain piece of information.

4 Presentation of Cases

In the first part of the analysis, the cases will be presented separately from one another. The nature of the diseases, the course of the corresponding pandemic as well as the historical context will be outlined. Following, selected conspiracy narratives and the way they were communicated will be outlined.

4.1 Conspiracy Theories in Pandemics Before the Emergence of Social Media

4.1.1 The 1889 Russian Flu Pandemic

The Russian Flu Pandemic was the first major influenza outbreak in a mostly modern setting. The virus was first discovered in St. Petersburg in mid-October of 1890 and, due to advances in technology in the 19th century, quickly spread between European capitals via the railroad system, as well as road and shipping connections. By the end of November, major outbreaks were recorded in Berlin, Vienna and Paris and half a month later, the disease had advanced to the peripheral European countries with documented cases in Stockholm, London and Madrid. While the pandemic ultimately lasted for about two and a half years, the waves were rather short with the first one hitting in late 1890 and early 1891, the second wave breaking out around March 1891 and the last one happening some time in 1892. Though the pandemic was declared over by late 1892, it is notable that there was an increased influenza season in 1893 (Honigsbaum, 2010).

At the time of this pandemic many technological innovations had been made, connecting, advancing and globalizing society, such as the previously mentioned railway network throughout Europe. Although this was also the case in medicine, with a new way of understanding the transmission of diseases surfacing, modern medicine was still at a very early stage by 1890, which led to doctors developing their own ideas on the virus' origin and these sometimes being spread in newspapers. As an example, theories circulated that the Russian Flu was caused by stardust in the earth's atmosphere, volcanic dust or bird migration (Knapp, 2020).

Another function that newspapers fulfilled was the advertisement of supposed cures or vaccines for the virus, which rarely had science backing these claims. While some suggestions were comparably harmless, like the idea that drinking brandy and eating oysters would prevent or delay an infection, other recommendations like taking quinine could even be harmful to the body and prevent others who truly needed the drug from getting the treatment they required. Such practices being replicated by a lot of people ultimately lead to minor, but avoidable medical crises. In Kansas, for example, the price for quinine pills skyrocketed and the high

demand partially kept the medicine out of the hand of people suffering from malaria, the initial disease quinine had been used against. Furthermore, there were several documented cases of people dying due to following such self-treatment practices, recommended by doctors and communicated through newspapers (Knapp, 2020).

Moving away from these supposed treatments toward more general conspiracy theories, some newspapers published narratives that resonated with pre-existing public prejudice. For example, the British newspaper *The Times* published an article claiming that the infection was caused by wind-blown dust from the rotten corpses of dead Chinese that were killed by a flooding of the Yellow River, one of China's major waterways. While there was some level of truth to that story[8], a sense of British superiority in terms of scientific and technological leadership, as well as civic responsibility, could be found in that article. These generally negative views of the Chinese did not develop without any history. Rather, the British defeat of China in the two opium wars[9] had forced the Asian country to open its markets to Western Capitalism. Ever since, there were permanent tensions between the two states (Murdock, 2022).

4.1.2 The 1918 Spanish Flu Pandemic

After the Russian Flu had struck mankind on the verge of modern medicine, the Spanish Flu three decades later truly was the first pandemic in the setting of modern medicine. Furthermore, means of transportation had advanced even more, allowing for frequent intercontinental travel. This led to the virus being able to spread to every corner of the world and the Spanish Flu thus being titled the "first true global pandemic" (Huremović, 2019, p. 19).

A possibly even more important fact, however, was its historical context. As the disease outbreak intersected with World War One, its spread was amplified by massive military movements and overcrowding. Some scholars even claim that the virus could have tilted the outcome of the war due to the German and Austrian-Hungarian armies having been affected earlier and more virulently. Overall, it is estimated that as much as a quarter of the world population contracted the virus at some point. The mortality rate was at about 10 to 20 per cent with the final death toll being between 50 and 100 million (Huremović, 2019).

What is also worth mentioning, is the origin of the virus' most common name. Due to the political circumstances of World War One, many countries suppressed news about the influenza for fear of panicking civilians. Since Spain was a neutral country though, it did not have such limitations and thus was the first country to freely report on the pandemic, leading to

[8] A devastating flood had taken place in 1877, destroying towns and cities and leaving an estimated one to two million people dead (Murdock, 2022).

[9] Two wars were fought between Britain and China in the early 1840s and mid-1850s, respectively, over the opium trade from India to China (Pletcher, 2015).

it being called the Spanish Flu. Despite this name, however, the actual country of origin was never determined for certain. Epidemiological evidence is not entirely clear, with theories suggesting numerous countries on different continents, including the United States, China and Denmark (Honigsbaum, 2018).

While the pandemic was not a major news topic for the whole duration of the war, actors still developed narratives to serve their own agendas. As an example, the *Philadelphia Inquirer* published a story that presented German soldiers as distributors of the virus. According to the article, these Germans had been "docking in Boston and flooding the city with tainted vials and releasing the influenza virus in crowded places including the cinemas" (Malešević, 2022, p. 52).

Other theories advised people to stop taking medicine from the German pharmaceutical company Bayer, as it was suggested that they had poisoned aspirin with the influenza virus. Such nationalist thinking could be found in many other countries though, as the virus oftentimes had been given another denomination, adapted to the respective country's concept of an enemy. In Russia, the virus was called "Chinese sickness", in Germany it was the "Russian Plague" and in Japan, it was labelled "American Disease" (Malešević, 2022).

4.1.3 The 1957 Asian Flu Pandemic

The Asian Flu was, at least in comparison to the preceding Spanish Flu, rather small in scale and had less of an impact on the social, political and economic sphere. In February 1957 a new influenza virus emerged in China, spreading to Hong Kong in April and through Eastern Asia to large parts of the Middle East in June. By that time, at least 20 countries, including the United States, had reported their first cases. About two months later, the virus had reached South America and Africa and in September, there were widespread epidemics in North America and Europe. A factor that was rather unique to this pandemic with respect to the United States was the fact that after the virus had hit closed institutional-like settings like military bases and naval ships, there were no wider outbreaks and the epidemic was declared over in mid-August. Only with its second wave were there widespread infections throughout the country. However, it only took the Asian Flu two months to sweep the whole country and by mid-November, the spread was effectively complete (Henderson et al., 2009).

Such a comparatively short time frame, combined with the fact that while infection rates were high, hospitalisation and mortality rates were very low, resulted in a rather insignificant impact on societal and everyday life. In the end, there were an estimated 116,000 deaths during the Asian Flu pandemic, which was, while higher than in a normal flu season, significantly lower than during the Spanish or Russian Flu a couple of decades earlier. Furthermore, such a

course was not entirely unique to the United States but could also be observed in other countries (Henderson et al., 2009).

In the end, this led to rather low media coverage and relatively sparse moral panic among the population. Nevertheless, there were some relatively popular conspiracy theories and ideas that had been heavily influenced by the time's Cold War context. For example, one theory followed the narrative that the virus was caused by nuclear testing in the Pacific Ocean. Another conspiracy theory suspected the Soviet Union of having planted the virus deliberately in the United States (Kelly, 2020).

4.2 Conspiracy Theories in Pandemics After the Emergence of Social Media

4.2.1 The 2009 Swine Flu Pandemic

The 2009 Swine Flu was a weaker resurgence of the 1918 Spanish Flu virus. It originated in Mexico in April 2009 and spread quickly, reaching pandemic proportions within weeks. By the end of 2009, however, the effects eased off in many parts of the world and already about a year after its original start, the pandemic was declared over in May 2010. In the end, it is estimated that the Swine Flu infected about ten per cent of the global population with a death toll of between 20,000 and 500,000 (Huremović, 2019).

A unique factor that made the virus seem especially threatening was that it disproportionately affected healthy, young adults. One explanation that was suggested by health professionals was that older people may have built up a resistance during a similar H1N1 outbreak in the 1970s (Huremović, 2019).

During the Swine Flu pandemic, a significant dissonance developed between public sentiment and health organisations, as the World Health Organisation and other health professionals initially predicted a rather grave development of the outbreak, which ultimately did not happen in reality. Thus, these organisations were accused of trying to cause panic and the term *panicdemic* was coined (Huremović, 2019). In addition to that, the public did not limit their accusations to such messages, but a lot of conspiracy theories began to surface and spread, also through social media. As an example, there was a lot of anti-Mexican sentiment in the United States following the virus' spread to southern states like Texas and California:

> Some of the narratives that were circulating within the U.S. portrayed Mexican migrants as disease vectors who were threatening the nation, which led to discrimination against Latino farmworkers and migrant workers […]. The dangers posed by migrants from Mexico was stressed in blogs, talk radio, and internet forums. (Smallman, 2015, p. 5)

Some used such sentiments for their own political arguments, blaming undocumented Mexican migrants and suggesting that "political correctness had stopped the U.S. government from enforcing its borders" (Smallman, 2015, p. 5).

In Mexico itself, however, other issues triggered the spread of conspiracy theories. At the start of the pandemic, Mexicans were highly frustrated with the media coverage of the virus, as stereotypical images of Mexico as a country wracked by drug violence and social breakdown were reproduced in other Latin American countries and the virus was coined the *Mexican Flu*, which many perceived as stigmatising their entire country. These sentiments, combined with the severe economic consequences the country had to endure due to tourism being almost entirely shut down, encouraged the emergence of conspiracy theories. People theorised that the virus had intentionally been started by sinister organisations in a laboratory or that it had even been started by the government itself to deflect public attention away from the current financial crisis. In other instances, pre-existing public concerns like Mexico's economic reliance on the United States were reflected. One theory that was particularly fruitful and spread quickly through alternative media[10] in all of Latin America claimed that the United States biodefence agency was working to weaponize avian influenza with references to biological warfare tests in the 1950s and 1960s and to Gilead Laboratories, a Californian company that had, in actuality, manufactured Tamiflu, a possible treatment against avian influenza (Smallman, 2015).

The currently rather prevalent anti-vax movement[11] also had a particular momentum in 2009. This was firstly due to influenza vaccines typically being less effective than vaccines against other illnesses. Secondly, there was particular media coverage highlighting the limitations of vaccines and influenza medicine. This led to people doubting the WHO's imperatives to have themselves vaccinated. Furthermore, questions about whether actors, especially governments, were making choices based on scientific expertise or whether they were influenced by pharmaceutical companies were being asked (Smallman, 2015).

4.2.2 The 2015 Zika Virus Outbreak

Before the outbreak in 2015, Zika had been a rather unknown virus with only one minor epidemic among humans in Micronesia in 2007. In 2015, it was identified in Brazil after the outbreak of a mild illness with symptoms resembling those of dengue fever[12]. While it was classified as not being a public health concern due to its moderate symptoms, it was discovered some time later that Zika could cause *Guillain-Barré Syndrome*, a "rare neurological disorder in which the body's immune system mistakenly attacks part of its peripheral nervous system"

[10] Smallman (2015) refers to platforms "such as YouTube, blogs, and talk radio" (p. 2) when using the term alternative media.

[11] The anti-vaccination (colloquially anti-vax) movement alludes to the surge of people – especially in Western countries – who refuse to have themselves vaccinated, thus partially leading to the outbreak of diseases that had previously been thought to be eliminated (Hussain et al., 2018).

[12] Dengue is a common disease in tropical countries and is transmitted by female mosquitoes. The disease can manifest itself in a variety of ways, including flu-like symptoms to more severe symptoms such as severe bleeding, organ impairment or plasma leakage (Cogan, 2022).

(*Guillain-Barré Syndrome*, 2018), in adults and *Severe Microcephalia*, a birth defect where a baby's head is smaller than expected (*Facts about Microcephaly*, n.d.), if the mother contracted the virus during pregnancy. In the end, Zika continued to spread from South America to Central America, the Caribbean and several southern territories in the United States and has never been fully eradicated due to the nonexistence of a vaccine (Huremović, 2019).

This epidemic was featured prominently on social media with Zika being mentioned up to 50 times a minute on Twitter in early 2016. While social media were used to disseminate information, communicate concerns and educate, there was a grave disconnect between scientists and officials trying to educate while the public concentrated on their emotional concerns (Huremović, 2019). As people focused on the emotional side of the virus, many conspiracy narratives emerged, blaming vaccines or drawing upon other pseudo-science. The accusations varied heavily, from multi-billion-dollar corporations like Monsanto to famous individuals involved in the scientific community like Bill Gates to the eugenics movement. One YouTube video proposed the conspiracy narrative that the company Oxitec had biologically engineered a mosquito that transmitted the Zika virus with funding from Bill Gates – who himself was accused of being part of a eugenics movement – to ultimately get rid of "undesirable races" (Smallman, 2018, p. 3). Notably, some accusations included in this narrative even have a partial truth behind them. While the company likely would not have systematically increased the spread of Zika, they had indeed developed genetically modified mosquitoes that resulted in the death of the offspring of female mosquitoes that had transmitted Zika. Overall, conspiracy theories accusing organisations and technologies which were intended to protect people from being responsible for the crisis could be found plentiful in online forums (Smallman, 2018).

Other conspiracy narratives built upon pre-existing narratives, such as a theory from the 1970s and 1980s which included the Rockefellers and the creation of a new world order. As in the Swine Flu pandemic five years earlier, vaccines were also at the centre of several conspiracy theories during the Zika outbreak. While some argued that vaccines may actually be the reason for Zika, others went even further with this narrative and suggested that vaccines would be used to poison or sterilise entire communities (Smallman, 2018).

4.2.3 The 2020 Coronavirus Pandemic

The first case of Coronavirus was officially reported in Wuhan, China in late December 2019. About three weeks later, the virus had spread to other Asian countries as well as the United States. In early February, the new disease was named Covid-19[13] to avoid stigma against any country or people. Four months after the first reported case, the virus had advanced all over the world with cases having been reported in 171 countries across six continents (Taylor, 2021).

What followed were major health measures to contain the spread in some severely affected countries, including movement restrictions, mandatory face masks and the closing of numerous businesses. This led to many people losing their jobs[14] and major economic recessions in most countries. By late September 2020, the global death toll had reached one million and two months later, the biotech company Pfizer had developed the first vaccine against the virus (Taylor, 2021). Two more waves followed in April and August 2021, respectively, partially due to the Coronavirus developing a new, more contagious Delta variant and around December 2021, the number of global cases exploded with weekly cases almost quadrupling the previous highest level. About two and a half years after its initial discovery[15], the global death toll was at around 6.3 million (*WHO Coronavirus Dashboard*, n.d.).

While many different conspiracy narratives circulated throughout the course of the pandemic, Goreis and Kothgassner (2020) were able to identify four general conspiracy narratives that most theories could be classified as belonging to. Firstly, many theories claimed that the Coronavirus was related to 5G networks with a link to the Chinese technological company Huawei, which develops equipment for these networks. Secondly, there were accusations that the virus was released as a bioweapon, either by accident or on purpose. According to Knight (2021), the alleged perpetrators were most often China or the United States depending on who the specific claim comes from. Thirdly, some people believed that the severity of the virus was greatly exaggerated by officials. This included the idea that either the virus was merely as dangerous as the common flu or that it was not even existent at all. Lastly, some conspiracy theories connected Coronavirus to Bill Gates and an alleged plan of his to establish a global surveillance system. Goodman and Carmichael (2020) add that this would be done by implanting trackable microchips into everyone through a vaccine. In some cases, multiple narratives were even combined, such as a theory with the claim that Coronavirus is

[13] The WHO proposed *Covid-19* as an acronym for **Co**rona**vi**rus **d**isease 20**19** (Taylor, 2021).
[14] Just in the last week of March 2020, 6.6 million people filed for unemployment in the United States, easily surpassing the previous record of 695,000 from 1982 (Taylor, 2021).
[15] This statement refers to the most recent numbers available to the author as of June 25th, 2022.

just a cover-up story to hide the damage that was supposedly done by 5G exposure, thus blending the 5G narrative with the idea of Coronavirus just being a hoax (Krishna, 2020).

Romer and Jamieson (2020) examined in how far conspiracy beliefs translated into an actual refusal of preventive measures in the United States. In the end, their "findings suggest that conspiracy beliefs play a causal role in reducing the embrace of public health recommendations to control the pandemic" (p. 6). Furthermore, they found out that social media use was positively related to the belief in Covid-19 conspiracy theories while mainstream print media had a negative effect (Romer & Jamieson, 2020).

5 Conspiracy Theories in Public Health Crises: Comparative Analysis

After having examined the theoretical background and conspiracy theories in the specific cases, the two groups of pandemics will firstly be investigated separately from one another as a first step of the analysis. Continuous patterns and recurring motives will be inspected with respect to the Russian, Spanish and Asian Flu before moving on to the Swine Flu, Zika Virus and Covid-19 pandemics. Subsequently, insights from these analyses will be used to infer similarities, as well as differences between conspiracy theories from the two historical periods considered in this thesis paper. Lastly, principles presented in chapter two concerning the use of social media and the psychological aspects of conspiracy thinking and beliefs will be utilised to assess the previous findings and judge in how far conspiracy narratives have changed because of the widespread use of social media.

5.1 Recurring Patterns in Conspiracy Theories in Times of Traditional Media

Comparing conspiracy theories that were being popularised during the pandemics of the late 19th and early to mid-20th century, one central aspect immediately becomes evident. Many of the narratives that were spread either contained or directly reproduced pre-existing prejudices or the country-specific concept of an enemy. During the Russian Flu, this meant accusing the Chinese or, rather, China of being the country of origin (Murdock, 2022), even though the earliest reports of cases had been from St. Petersburg (Honigsbaum, 2010). In World War One, during the Spanish Flu, various countries blamed their respective political enemies with very little scientific evidence (Malešević, 2022). The first reason might be that there was rather scarce media coverage in general in most countries due to the ongoing war (Honigsbaum, 2018). Secondly, the fact that this military crisis had massively overshadowed the events of the pandemic might have made governments more likely to use any information available against their enemies, including a new virus that had not been investigated medically in detail or known publicly. This resulted in misinformation being spread in many countries and the virus merely being associated with the current war enemy, rather than its actual country of origin. Likewise, in the late 1950s, the political enemy Russia was blamed for the Asian Flu in the United States as having caused the spread of the virus (Kelly, 2020). Thus, these viruses were used as a tool against the political enemy rather than labelling them in a scientifically correct way.

Concerning the issue of scientific accuracy, a clear connection can be observed between conspiracy narratives and the advancement of science. During the Russian Flu, modern medicine was still at a very early stage with a new, more precise way of understanding how diseases spread only surfacing, but not yet being widely accepted. This led to many doctors developing their own theories which often had little scientific value (Knapp, 2020). When this

understanding changed in the 20th century and medicine advanced, this was reflected in the respective conspiracy narratives. During the Spanish and the Asian Flu, suggestions that the viruses may have been biologically engineered surfaced because medical science had advanced enough that these allegations did not seem too far-fetched (Malešević, 2022; Kelly, 2020). All of this leads to the observation that in general, conspiracy theories from the older three pandemics contain a very nation-centric way of thinking. In each of the cases, the alleged perpetrator of the secret plot was a nation, and the virus was generated, either accidentally or on purpose, to destroy one's own country. In the two later pandemics, this belief was closely related to the general historical context of World War One and the Cold War, respectively.

5.2 Recurring Patterns in Conspiracy Theories in Times of Social Media

Looking at conspiracy theories from the 21st century pandemics, major similarities can be observed. In these narratives, a strong focus was laid on influential corporations as well as powerful individuals. This mostly refers to companies that are active in the health and technology sector which were often suggested to be the source of the disease. Gilead Laboratories were accused of having artificially created the Swine Flu (Smallman, 2015), Oxitec was blamed for having genetically engineered a mosquito that had transmitted Zika (Smallman, 2018) and during the Coronavirus pandemic, Huawei and its involvement in 5G technology was seen as the root of the disease (Goreis & Kothgassner, 2020).

What is apparent when looking at these three cases is the fact that there is always some form of distorted truth backing these theories up. Gilead Laboratories had worked to develop a cure against avian influenza (Smallman, 2015), Oxitec had been working in the field of genetically modified organisms to reduce the speed of the transmission of the Zika virus (Smallman, 2018) and Huawei had been involved in the establishment of 5G technology in many countries (Smith & Weir, 2020). This might also indicate an inherent fear of novel technology. All these innovations or developments had not been of wider use at the time of the pandemics and thus, people could have thought of alternative theories concerning these technologies.

Another thread that leads through the 21st century pandemics is the involvement of Bill Gates in many conspiracy theories. During both the Zika and Coronavirus outbreaks, Bill Gates and, to a lesser extent his foundation, were being viewed as the agents responsible for the viruses (Smallman, 2018; Goreis & Kothgassner, 2020). One factor that may have contributed to this is that Bill Gates is not only a rich and powerful individual, but also that he is very active in the scientific community, supporting programs that are concerned with many modern problems like gender equality, world hunger, education, health care social equality and,

probably most significantly in pandemic times, vaccine development (*Our Work*, n.d.). This might have created an image of Bill Gates being a perfect, flawless idealist which in turn might have made people more inclined to suspect secret wrongdoings.

What is also interesting to observe is the fact that in modern times, the own government is part of conspiracy narratives more often. During the Swine Flu, for example, Mexicans accused their government of having started the virus themselves (Smallman, 2015) and during the Coronavirus pandemic, narratives were very similar with accusations that officials massively exaggerated the actual effects of the virus (Goreis & Kothgassner, 2020).

To summarize, one can say that a specific characteristic of modern pandemics is that they are more detailed and specific, feeding upon concrete names, facts and other data.

5.3 Nation-Centric Thinking as a Constant Narrative

Besides the common motives unique to the two time periods considered in this thesis paper, conspiracy ideas from older pandemics were picked up again and popularised once more in the 21st century. For example, the theory that a virus was biologically engineered by an actor and deliberately released to cause harm to a country or group of people seems to be a recurring motif throughout the last one and a half centuries. Some U.S. Americans blamed undocumented Mexican immigrants for carrying the Swine Flu across the border intentionally to sabotage the United States (Smallman, 2015). During the Zika outbreak, a conspiracy theory circulated in Latin America that accused a group of American actors of using a biologically engineered virus to get rid of "undesirable races" (Smallman, 2018, p. 3). Similarly, the United States or China respectively, had allegedly manufactured Covid-19 and released it as a bioweapon (Knight, 2021). Thus, a return of nation-centric thinking comparable to the one during 20th century pandemics could be observed in recent health crises.

5.4 Interpretation of Results

After having compared the two eras and their respective patterns, it is now important to discern how these differences and similarities can be explained. A general aspect from a psychological standpoint is the emergence of conspiracy theories in times of crisis. As discussed in chapter 2.1 of this paper, conspiracy thinking and the spread of conspiracy narratives is especially prominent in times of societal crisis (van Prooijen & Douglas, 2017). This is, evidently, a consistent motive throughout time, as the essence of pandemics rarely changes. Whether in a setting with or without the existence of social media, such medical crises will always lead to the development of conspiracy theories since pandemics are usually caused by the spread of a new disease which is inherently unpredictable due to its novelty. Thus, the emergence of conspiracy theories is almost guaranteed.

Similar arguments could be used when talking about other psychological factors. Very much like in the past, people still tend to feel powerless when being confronted with large-scale disease outbreaks and may turn to conspiracy narratives to justify or somehow explain these feelings. Unpredictability, leading to the creation and use of a scapegoat as a target, is another consistent factor throughout the two time periods discussed. While the scapegoat itself may vary, depending on the specific pandemic, the concept remains.

What becomes evident when directly comparing the variety and narrative qualities of conspiracy theories from both the last two decades and the more distant past, is the fact that there is a larger variety of overall narratives today and that the theories themselves are comparably more detailed than they had been before. This means that, compared to conspiracy theories during the Spanish or Asian Flu, when enemy countries were merely vaguely accused of being involved in a secret plot, specific people and companies are named today and conspiracy theorists are able to explain in detail how all these actors are supposedly connected.

Furthermore, while often being untrue and containing distorted facts, some kind of link to the real world can be found. An example is a theory which circulated during the Zika outbreak concerning the company Oxitec (Smallman, 2018). In early pandemics, such a narrative would have been limited to claiming that another country was somehow responsible for a virus, without any real explanation behind these accusations. Due to the availability of information, however, nowadays people are able to do the research themselves and, through the internet, find actual facts and twist them to fit their narratives. This strengthens conspiracy theorists, so that their claims seem much more reasonable and realistic because they can back them up with (pseudo-)facts, rather than saying that a country had somehow created and spread a virus.

A reason why there are more narratives today may be the modernisation of science and technology. In the more distant past, people may have been more accepting of the randomness and unpredictability of the world and since science had not advanced as much, the idea of a new disease occurring with the potential to cause societal chaos would not have been that surprising. Nowadays, however, science has made major leaps, there is much more medical knowledge and vaccines and treatments for most diseases exist. The fact that there could be an unknown disease that would disrupt society to a level that Covid-19 has done in the last two years could not only be more surprising for people but also feel less like a coincidence, thus fuelling their critical side of thinking. Furthermore, the idea of this degree of randomness and unpredictability in such a technologically advanced society may be difficult to understand and accept.

A sentiment that is connected with this train of thought is that in a globalised world, people may long for simple answers. This means that with the world becoming more complex, more interconnected and more advanced, explanations for certain phenomena, including the emergence of new diseases, also become more complicated. Since the human mind longs for simple explanations, the scepticism inside the human brain may end up being triggered more than in a simpler, less advanced world. This behaviour can be seen in the modern day, as there have been several conspiracy theories connected with novel technology, suggesting that this complexity may have encouraged people to find simple explanations. During the Coronavirus pandemic, 5G technology was connected with Covid-19 symptoms (Goreis & Kothgassner, 2020), proposing that this new technology may be the root cause of these symptoms. Since these symptoms and the new technology were two complicated concepts, it was easy to use one to explain the other without having to understand the science behind it.

The most significant differing factor that can be observed is the role of the people's own government. While it played a minor role, if at all, in conspiracy narratives from the Russian, Spanish and Asian Flu, there were multiple conspiracy theories accusing or blaming their own government in the 21st century pandemics investigated. This difference could have been, while not entirely caused by, helped by the popularity of social media since online forums, messenger apps and other social media sites allow users to produce content themselves and the nature of the platforms allows them to distribute and popularise their thoughts. Furthermore, the non-existence of screening mechanisms on most sites allows people to post almost anything they want without having to verify it, give evidence or base their posts on facts entirely (Stano, 2020). When newspapers, and later television, were the popular medium, this was not possible, as these were broadcasting media, leading to the average citizen only having the possibility to receive information that was given to them. They did not have the ability to spread information of their own, since the production of newspapers was cost-intensive (Herriman, 2010). This leads to the assumption that conspiracy theories about the own government would not have been widely spread through the papers because the elites would not have wanted to set their government against themselves, and the government would not want to spread false narratives about secret plots about their members. This would explain why a country's own government was part of conspiracy theories less often in the late 19th and early to mid-20th century than in the 21st century.

Another aspect that might have influenced the development of conspiracy theories in our modern age is the effect of so-called filter bubbles on social media sites. As people are interested in conspiracy theories and interact with such content more frequently, they will be

recommended similar posts more often and will move into that bubble, also interacting with people that have similar views to theirs rather than hearing critical voices or seeing disapproving posts (Mortimer, 2017). This may lead to a greater acceptance of even more niche and more obscure conspiracy theories. Since these theories would likely be shown to other people that already have a predisposition towards that kind of content, obscure theories may meet more acceptance than if they were presented to people that have a critical opinion towards conspiracy theories. On the other hand, one may argue that since these niche conspiracy narratives would only be shown to people with already established conspiracy beliefs, and they are likely to stick with people of their own or similar beliefs, these theories would not spread outside of the conspiracy theory bubble and thus not affect the outside world in major ways. Thus, more obscure conspiracy theories may end up only affecting people that already have established conspiracy beliefs. In the end, the argument around filter bubbles and what effect they may have on conspiracy theories, their spread and their narratives is not entirely clear and could lead into different directions. However, it is fair to say that the spread of more different conspiracy narratives was helped by social media and filter bubbles, even if that spread was contained to people with already pre-established conspiracy beliefs.

6 Conclusion

This research paper was aimed at investigating the effect of social media on conspiracy narratives during times of public health crises. Using a comparative case study research design with six individual cases of pandemics as examples of public health crises across two historical eras, characterized by the existence and absence of social media, popular conspiracy theories were examined and compared to answer the central research question: In how far has the existence of social media impacted the nature and narratives of conspiracy theories in times of public health crises?

Some recurring patterns could be determined in almost all cases. Firstly, the use of a scapegoat as a way of explaining a seemingly random or unpredictable event has been detected in every pandemic investigated. This is mainly due to the way humans work during crisis situations, with pandemics being one special kind of societal crisis. Another similarity with regard to concrete narratives that has been observed is a nation-centric thinking found in both the old and modern pandemics. On the other side, there are also major differences. Conspiracy theories tend to be much more detailed and specific in the 21st century, likely as a result of the advancement of the internet and the wider availability of information. In parallel, an increased variety of narratives has been observed in the three later health crises, presumably due to similar factors. In addition, a distinctive fear of novel technologies has been apparent when inspecting modern pandemics. Lastly, and most significantly, the own government was part of alleged secret plots much less frequently in the older pandemics. This shift may have been helped or even partially been caused by the existence of social media, as they allow anyone to express and spread their opinions with almost no restraints, which was not possible in the time of traditional media.

These considerations lead to the conclusion that the existence of social media has indeed shaped conspiracy narratives in some ways due to them offering anyone the possibility to popularise their theories, which had not been possible in the age of traditional media.

In the future, such trends are likely to continue as long as social media site operators do not develop more refined methods to regulate the users' ability to post content without any verification process. Furthermore, the existence of filter bubbles may lead to further isolation and possibly even radicalisation of certain societal groups, thus reinforcing the division of society. Naturally, this aspect leads to another, even larger debate, namely the argument revolving around freedom of speech online and the spread of misinformation. This issue is, undoubtedly, a matter too broad to be discussed at this point and is probably better suited as a debate related to society as a whole.

Certainly, there are limitations with regard to the research design of this thesis paper, one of them being the limited use of quantitative data. While more widely available for the three newer pandemics, reliable numbers could not be obtained for the older pandemics easily, as explained in chapter three of this bachelor thesis. This leads to the data that was used in this research paper being less representative. One might criticise that concrete conspiracy theories examined are possibly just random samples from a larger pool of narratives which were included in the scientific papers that this thesis is based on by chance. With a more extensive literature study or the use of quantitative data, also the extent to which certain theories had been spread could be examined. Furthermore, this would even allow a direct comparison of the extent of dissemination of conspiracy theories in older and newer pandemics. Another limitation of this research paper might be the selection of cases. While several pandemics were chosen specifically for the sake of greater validity of the findings, extending the selection even more may enable researchers to support conclusions from this paper or add new results. Lastly, inferences from this thesis might not undeniably be attributed to the existence of social media as next to the rapid development of the internet, a number of other societal factors have changed dramatically and thus may have contributed to or even caused shifts observed in this argument.

In conclusion, social media are not only an opportunity, but also a challenge that society will have to continue to face in the future. While they support diversity of opinion, division of society is often a by-product, as shown by this thesis paper.

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