

Vaccine Hesitancy Online: A Rhetorical Analysis Through Postmodern Narratives

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Abstract

Vaccine hesitancy is a growing social phenomenon that is threatening the public health of many developed countries (World Health Organization, 2019). The primary objective of this study is to analyze the anti-vaccine discursive tactics, tropes, and rhetorical strategies mobilized by anti-vaccination individuals and groups. Also, the research aims to uncover how the concept of authority is mobilized, negotiated, and redefined by anti-vaccine individuals and groups to advance the anti-vaccine agenda. The research examined the issues through the postmodern medical paradigm and rhetorical lens. This was accomplished by conducting a rhetorical analysis of a well-known anti-vaccine documentary on YouTube Movies, as well as the comments on two anti-vaccine YouTube videos. The findings showed that anti-vaxxers mobilize similar rhetorical strategies across the two communication pieces with the key themes and strategies including 1) emotional/fear appeals, 2) shifting authority from doctors to patients and parents, and 3) conspiracy theories that create an Us vs. Them divide. Anti-vaxxers deconstruct and reconstruct authority by creating an ambiguous dialogical space where “alternative” authorities can emerge.

Keywords: vaccine hesitancy, pseudoscience, rhetorical analysis, discourse analysis, authority, YouTube, Vaxxed

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Dedication

To my late father, Magdy, who has motivated me to always do my best and taught me that if I work hard enough, I could achieve all my goals and dreams.

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Chapter 1: Introduction

Vaccines are among the most valuable public health interventions in the history of mankind, playing a significant role in the eradication of many infectious diseases such as smallpox, polio, and measles in many parts of the world (Centers for Disease Control and Prevention, 2019). Despite the scientific advances in vaccines and their well-established track record of saving millions of lives every year from infectious diseases, what is now called “vaccine hesitancy” and lack of public information and trust in vaccines continues to plague many societies. Not surprisingly, communication is at the heart of the issue of this phenomenon of vaccine hesitancy as social media are being democratized, for better or for worse (Castells, 2009). In their study on the role of health communication in polio eradication, Obrégon et al. (2009) conclude:

There is no vaccine against resistance or refusals that are rooted in social, cultural, religious and political contexts...Medical approaches alone cannot address certain community concerns...These challenges demand effective communication action. (p. 628)

The problem is so pervasive that vaccine hesitancy was identified among the ten threats to global health in 2019 by the World Health Organization (WHO; World Health Organization, 2019). Many countries, including developed countries that had previously declared the eradication of diseases such as measles, are experiencing widespread outbreaks of vaccine-preventable diseases (VPDs) due to the social phenomenon of vaccine hesitancy and vaccine refusal. According to the WHO, “reported measles cases are the highest they have been in any year since 2006”, pointing to a pattern of reluctance or refusal to vaccinate that is putting a strain on health care systems worldwide (WHO, 2019, p. 1). Despite the largest measles outbreaks being in countries with low vaccination coverage such as Angola and Cameroon, the United States and the European region are reporting the highest number of measles cases in the past 25

years and this current decade, respectively (WHO, 2019). The WHO (2019) states a myriad of reasons for lower vaccination rates and measles outbreaks, including limited access to healthcare, conflict and displacement, misinformation about vaccines, or low awareness about the importance of vaccinating. Other research studies have emphasized further reasons such as celebrity influence (Martinez-Berman et al., 2020), religious beliefs (Wolfe & Sharpe, 2000), and the all-encompassing anti-vaccination movement, which has been commonly attributed to the lower rates of vaccination and the increased outbreaks of VPDs (Kata, 2010). While anti-vaccine groups represent a small portion of the population, it appears that a larger portion of the population is prone to be vaccine-hesitant, with many parents expressing concern over the safety and effectiveness of childhood immunizations (Dubé, Laberge, et al., 2013).

In recent years, some media have shone the light on outbreaks of VPDs such as measles in developed countries like the United States, Canada, Australia, and the United Kingdom. The misinformation associated with vaccines has gained increased media attention as it can potentially contribute to lower rates of vaccination and vaccine hesitancy among parents and other interest groups. The anti-vaccination movement of the 21st century is considered to originate from the publication of a falsified study, which linked the measles, mumps, and rubella (MMR) vaccine to autism that was published in the *Lancet* journal in 1998 by Andrew Wakefield (Kata, 2010).

While anti-vaccination or anti-vax groups have existed before then, their voices have been amplified as they gained authority in recent years through social media platforms that allow them to share their ideas with almost no censorship – infecting the minds of individuals who may be already vaccine-hesitant (Kata, 2012). Anti-vaxxers have fuelled public debate on the safety and effectiveness of vaccines and contributed to the negative attitudes towards vaccines. These

groups have increasingly manipulated public opinion through the media and the internet by having a stronger presence online and using tactics such as exaggerating, publicizing, and dramatizing side-effects of vaccines, sharing pseudoscience and misinformation, and personal anecdotes of vaccine injury (Blume, 2006).

Despite the rigorous scientific studies that confirm the safety and effectiveness of vaccines, some individuals continue to be influenced by this misinformation and pseudoscience as evidenced by the surge of measles outbreaks in the most developed countries. Therefore, studying this phenomenon by showing how individuals and groups fuelling the (social) media surrounding vaccine hesitancy discursively operate by presenting themselves as authority figures is key in addressing this social and public health problem.

On March 11, 2020, the WHO declared the coronavirus disease (COVID-19) as a pandemic, and countries across the globe went into lockdown (Ducharme, 2020). As uncertainty grew and some people started to become impatient, the internet was a preferred platform to go for information, connect with others, and learn more about the virus. At first glance, many people thought this pandemic would shut down anti-vaxxers and push them to the fringes of society. Paradoxically, this pandemic only further amplified their voices and their anti-vax perspective and rhetoric. It only took a few weeks since the onset of the pandemic before anti-vaxxers were protesting a yet to exist vaccine, and another anti-vax documentary was released on YouTube called *Plandemic* (Shepherd, 2020). Rife with misinformation, pseudoscience, and anti-vax rhetoric, the video was taken down after millions of views on YouTube in merely ten days. Regardless, the conspiracy theories flourished online amid the uncertainty and fear of COVID-19, and the anti-vax movement, spanning across the globe, is nowhere near being dissembled. Anti-vaxxers are capitalizing on the fear and uncertainty of the pandemic by spreading

misinformation online and playing on their apparent authority on the matter (Shepherd, 2020).

Deconstructing the rhetorical strategies anti-vaxxers use to push their agenda forward represents an even more pressing issue.

Operationalization/Methodology

This research mobilizes a rhetorical lens to analyze a health documentary on YouTube titled *Vaxxed: From Cover-up to Catastrophe*. We envisioned the documentary as a central discursive token acting as a point of convergence for the overall conversation about the topic online. This analysis will be supplemented by an analysis of comments on YouTube videos to demonstrate how the public anti-vaccine conversation began on this platform, was channeled and pushed forward by the documentary, and how this documentary in return has continued to fuel online conversations on YouTube via its affiliated YouTube channel – *Vaxxed TV*. Rhetoric is unique to other forms of discourse analysis because it “helps us understand how knowledge is generated and socially constructed through communication” (Ihlen & Heath, 2018, p.3).

Dialogue, discourse, narrative, story, and engagement are all rhetorical forms that create shared meanings enacting realities. Therefore, using a rhetorical analysis will allow for a fine-grained investigation of the various forms of discursive content encountered in the online documentary, as well as the comments and discussions on the YouTube videos selected for the analysis.

Structure of the Thesis

Chapter 2 will provide detailed definitions of key concepts such as vaccine hesitancy, risk perception, and Web 2.0. Then, we will provide a brief historical background of vaccine hesitancy to show how this social phenomenon has deep historical roots that have been revived in recent years. Following this, we will look at the Canadian context on vaccines, covering Canadian anti-vax groups, vaccination laws, and Canadians’ perspectives on vaccination. The

chapter will also provide a thorough literature review that includes the current research on vaccine hesitancy, focusing particularly on vaccine hesitancy through discourses on social and digital media. The chapter will end with the theoretical framework mobilized for, which comprises the postmodern medical paradigm, rhetorical analysis and the new rhetoric, fragmentation of discourse, and the concept of authority. Finally, the central research questions will be outlined.

Chapter 3 will outline the research design and methodology. The chapter will begin by developing the research design, then will present further details on the specific methods that were employed. A justification for the research design will be provided. The sampling design will be outlined in detail, which will entail the reasoning for the content chosen for the analysis and an overview of the documentary chosen for the central piece of the analysis. Lastly, the strengths and weaknesses associated with qualitative analysis will be outlined.

Chapter 4 will outline the results and analysis of the research. Results from the rhetorical analysis and semiotic to a certain extent of the documentary and YouTube video comments will be presented. Key themes, tactics, tropes, rhetorical appeals, and narrative strategies utilized by anti-vaxxers will be thoroughly analyzed and examined. The chapter will conclude with a discussion of the significance of the key findings and discuss any “unexpected” findings.

Chapter 5 will conclude by summarizing key insights and implications from the research findings. Implications and potential recommendations for pro-vaccination health communication will be discussed with the overall goal of reducing vaccine hesitancy. The chapter will also look at limitations to the study and outline possibilities for future research. Finally, the research’s main conclusions will be addressed.

Chapter 2: Literature Review

This chapter will introduce key concepts and frameworks, including vaccine hesitancy, Web 2.0, risk perception, and pseudoscience. Also, it will provide a brief history as well as the Canadian context on vaccine hesitancy. Next, it will offer a critical review of the existing literature on anti-vaccine content on social media, including YouTube, and anti-vaccine health documentaries. The conceptual framework will then be developed, followed by the research questions, research rationale, and objectives.

Vaccine Hesitancy

Vaccine hesitancy is a growing social phenomenon that is threatening public health and “represents a ‘wicked’ risk communication problem for public health officials” (Greenberg, Dubé, & Driedger, 2017, p. 3). Individuals, mostly parents, who could be qualified as vaccine-hesitant range widely in their knowledge and perspectives on vaccines. According to the *SAGE Working Group on Vaccine Hesitancy*, the term vaccine hesitancy “refers to delay in acceptance or refusal of vaccination despite [the] availability of vaccination services, [and] is complex and context specific, varying across time, place and vaccines” (MacDonald, 2015, p. 4161). Vaccine-hesitant individuals range from those who have minor doubts on the effectiveness of vaccines to those who believe vaccines could cause vaccine-injury or death, to the extreme end of those who believe and propagate conspiracy theories that involve the government or pharmaceutical companies. Therefore, vaccine hesitancy is both an attitude and behaviour (Dubé, Gagnon, Ouakki, et al., 2016). The individuals on the extreme end of the spectrum are often labeled as part of the anti-vaccination movement or as anti-vaxxers; and are often the most group to capture the media’s attention (Capurro, Greenberg, et al., 2018). However, limiting the discourse and media attention to only said-to-be anti-vaxxers is somehow misrepresentative because it mostly

characterizes the issue as a dichotomy of acceptance or refusal of vaccines, which appears to be less clear cut in reality.

The concept of vaccine hesitancy, on the other hand, encompasses the wide range of attitudes and behaviours related to vaccines and acknowledges the nuances and grey areas of the issue. This is particularly important because vaccine-hesitant individuals, such as parents, may still see the value in vaccinating their children despite the perceived risks of vaccination (Salmon et al., 2015). While they nevertheless choose to vaccinate their children, they do so with hesitance and concerns that have the potential to grow and lead to delayed vaccination or complete refusal of vaccines. According to Salmon et al. (2015), vaccine-hesitant parents who are vaccinating their children on time but have concerns may eventually resort to “alternative schedules” for vaccination and are “particularly vulnerable to misinformation, with the potential of being swayed to delay or refuse future vaccines” (p. 67).

There are many justifications for adopting a vaccine hesitancy posture or having concerns around vaccination. A key model that seeks to understand and explain vaccine hesitancy is the “3 Cs” model proposed by the *World Health Organization Euro Vaccine Communications Working Group* in 2011, which identifies three main categories – complacency, convenience, and confidence (MacDonald, 2015). One of the key factors leading to vaccine hesitancy or a decrease in vaccination rates is the fact that vaccines have eliminated the prevalence of many infectious diseases such as smallpox and measles, making the perceived risk of acquiring these diseases lower (Salmon et al., 2015). In this case, because some parents have not seen the negative effects of these infectious diseases, fear has shifted from acquiring these diseases to the potential side effects of vaccines (Salmon et al. 2015). This phenomenon is defined as vaccine complacency,

which “exists where perceived risks of VPDs are low and vaccination is not deemed a necessary preventive action” (MacDonald, 2015, p. 4162).

Vaccine convenience refers to the “physical availability, affordability and willingness to pay, geographical accessibility, ability to understand (language and health literacy) and appeal of immunization services” (MacDonald, 2015, p. 4163). Besides, scarce communication resources to counter negative attitudes play a role in vaccine convenience (MacDonald, 2015). In Canada, this could be an issue for new immigrants, marginalized groups, and those living in remote areas where access to healthcare and vaccine clinics is lower.

Vaccine confidence encompasses trust in the “effectiveness and safety of vaccines,” the healthcare systems that deliver them, including health professionals, and “the motivations of policymakers who decide on the needed vaccines” (MacDonald, 2015, p. 4162). Vaccine confidence appears to be the most common category of vaccine hesitancy among the 3 Cs, with reasons cited such as the “compulsory nature of vaccines for children, the inability of parents to control the risks of adverse reactions, the manmade nature of vaccines, and the unpredictability of adverse reactions, which are dreaded and seemingly exotic” (Salmon et al., 2015, p. 67). These factors are closely linked to Sandman’s (2012) outrage factor in risk communication, which will be discussed next. Besides, the role of Web 2.0 in shaping risk perceptions and theories of health behaviour will be briefly discussed to provide a better understanding of vaccine hesitancy and its plausible causes.

Risk Perception and Decision-Making 2.0

Sandman (2012) describes risk communication as having two main components – alerting the public of the imminent risk and reassuring them so that the public’s panic or outrage does not outweigh the risk itself. Sandman (2012) proposes that the problem is not that the public

is uneducated or that experts are not to be trusted, but rather that experts and the public have a different understanding of what defines risk. Experts define risk as magnitude times probability, or the likelihood of an event to occur, which Sandman (2012) calls *hazard*. Sandman (2012) proposes that this calculation is rather imprecise and is not what anybody would view as a risk. Sandman (2012), thus, redefines risk as *hazard + outrage*, which is what the public means by risk. He outlines twelve key characteristics to outrage and considerations for risk communication, including whether the risk is voluntary or coerced, natural or industrial, familiar or exotic, memorable, dreaded, chronic or catastrophic, etc.

Sandman's (2012) outrage factors continue to be relevant today when it comes to the MMR vaccine debate. Despite the scientific knowledge available today, some parents are still choosing not to vaccinate their children, ultimately leading to measles outbreaks in areas like British Columbia, Canada ("B.C. measles outbreak", 2019). Schools are ordering students who are not vaccinated to stay home until they get vaccinated and can show proof to the school. Sandman (2012) argues that this coercion to vaccinate makes the perceived risk involuntary and increases community outrage and therefore should be avoided. However, this is not practical in this case and could lead to an increase in the actual *hazard* – a measles epidemic.

In the so-called "vaccine debate", Sandman's (2012) outrage factors become instrumental in understanding why some parents may be hesitant to vaccinate their children or completely refuse to vaccinate. First, news media and social media tend to share sensational stories of children with autism, for example, which are much more memorable than stories of children with measles – this makes it both a memorable and dreaded risk, thus generating outrage towards vaccines (Burgess & Burgess, 2006). Furthermore, while science is clear that vaccines do not cause autism, the causes of autism remain a scientific ambiguity – generating uncertainty and, in

turn, outrage and distrust in authority. Moreover, regardless of how rare the risk of autism from vaccines may be, it is morally relevant, catastrophic, unfair, and can potentially affect a vulnerable population – children (Sandman, 2012). Lawrence (2016) argues that the fear of the irreparable (i.e., autism) is a powerful rhetorical tactic because despite quantitative data showing that vaccines are safe and save the lives of millions of children, “quality arguments are persuasive because they emphasize the uniqueness and irreparability of consequences, however remotely possible the irreparable event might be” (p. 208). Therefore, even if there is no evidence to prove the vaccine-autism link, the severity of the risk will deter many parents from vaccinating their children. In recent years, the internet has been viewed as a tool effectively mobilized by anti-vaxxers – amplifying their voices and strengthening their anti-vax authority.

The emergence of Web 2.0 is often cited as a tool that has been utilized by those who generally oppose vaccines for spreading fear and uncertainty, thereby influencing individuals’ vaccine decisions (Kata, 2012; Betsch, Brewer, et al., 2012). Web 2.0 is defined as “Internet applications that enable users to create and upload new content, comment on existing content and share content with other users, e.g., discussion boards, web blogs and social media websites such as Facebook, Twitter, Wikipedia, LinkedIn and YouTube” (Betsch, Brewer, et al., 2012, p. 3728). It differs from web 1.0 in that it provides the opportunity for two-way communication and engagement via tools such as commenting, sharing, liking/disliking, modifying, and even re-using content produced online – blurring “the lines between the reception and production of media content” (Betsch, Brewer, et al., 2012).

While these forms of interaction and user-generated content can be beneficial for health communication by empowering patients and connecting healthcare professional across the world, Web 2.0 has also empowered anti-vaxxers and has given them a platform where they can share

their ideologies and “effectively spread their messages” (Kata, 2012, p. 3779). Anti-vax messages on the internet have been often cited as reasons that influenced individuals’ decision-making in vaccination.

Betsch, Brewer, et al. (2012) outline the decision-making process for vaccination as occurring in three distinct phases – the pre-decisional phase, the decisional phase, and the post-decisional phase. In the pre-decisional phase, individuals tend to gather information and consult resources to determine whether they will vaccinate or not, or if they will delay vaccination. In this phase, many individuals will consult physicians and trusted health resources, however, information easily accessible online is also consulted.

Individuals in the decisional phase then evaluate the consequences, and risks and benefits of adopting certain alternatives (e.g. vaccinating, delaying, or refusing a vaccine) (Betsch, Brewer, et al., 2012). Many health theories predict how individuals make such evaluations depending on their risk perceptions. A prominent health behaviour model is the health belief model that outlines six key determinants in health decisions – “perceived susceptibility, perceived severity, perceived benefits, perceived barriers, health motivation (one’s motivation to engage in health behaviours) and cues to action” (Janz & Becker, 1984; Rosenstock, 1974, as cited in Armitage & Conner, 2000, p. 175). According to this model, an individual is more likely to vaccinate if they perceive the threat of VPDs as high, and there are reduced barriers to vaccinating (Armitage & Conner, 2000). Several other models highlight emotions as a “primary motivational system for human behavior” (Nabi, 2015, p. 114).

A model that combines the tenets of several behavioural models is the extended parallel process model, which predicts that “if perceived efficacy outweighs perceived threat, danger control and adaptive change will ensue, but if perceived threat outweighs perceived efficacy, then

fear control and maladaptive behaviors will result” (Witte, 1992 as cited in Nabi, 2015, p. 115). In the case of vaccines – if vaccinations are accessible then individuals are more likely to vaccinate. In addition, any information obtained online in the pre-decisional phase that affects the perceived personal risk/threat will affect vaccination decisions (Betsch, Brewer, et al, 2012).

Finally, in the post-decisional phase, individuals will assess their decisions and outcomes. Unfortunately, with vaccination, the benefits are intangible and delayed as it is difficult for someone to know whether they would have contracted a VPD if they did not vaccinate. On the contrary, if they do experience side effects from the vaccine, these are usually immediate and tangible (Betsch, Brewer, et al., 2012). Anti-vaccine rhetoric online tends to capitalize on the motivational factors for vaccinating by sharing posts about alleged adverse side effects of vaccines, “vivid anti-vaccination messages”, and fear appeals (Betsch, Brewer, et al., 2012, p. 3728). While Web 2.0 has given anti-vaxxers the upper hand in influencing people’s decisions, anti-vaccine agendas and ideologies were present much earlier than the emergence of the Internet altogether.

History of Anti-Vaccination

Although concerns around vaccine safety have been gaining momentum and attention over the past three decades, vaccine hesitancy and vaccine refusal have been plaguing societies since the 18th century due to a myriad of reasons that resemble today’s hesitancy (Blume, 2006). Today, some parents in developed countries are choosing not to vaccinate their children over concerns of vaccine safety, effectiveness, and individual liberty. Another reason parents may choose not to vaccinate their children despite scientific evidence is religious beliefs. Similar reasons caused the emergence of anti-vaccination groups in the 19th century when the Dutch government made the smallpox vaccine mandatory for all school children as a result of an

epidemic (Blume, 2006). An association that opposed mandatory vaccines was formed and argued that mandating vaccines is an infringement on individual liberty (Blume, 2006). Street riots occurred in both America and Europe over mandatory vaccination laws (Greenough, 1995 as cited in Casiday, 2005). Exemptions to mandatory vaccines were allowed on religious grounds in the 20th century. Similar anti-vaccination groups emerged in the 1870s in the United States, led by “‘irregular physicians’ (including homeopaths)”, who saw that their livelihood could be threatened as a result of “state interventions in healthcare” (Blume, 2006, p. 628). Furthermore, resistance occurred in England in the 1850s-70s when laws made smallpox vaccines compulsory, as the British working class resisted the state attempting to discipline the body and believed that vaccines posed a health danger (Blume, 2006). By the early 1900s, the anti-vaccination movement began to disintegrate and decline because of improved science and medical practices, fewer vaccine accidents, and the repealing of rigid mandatory vaccine laws (Blume, 2006).

Nevertheless, concerns around the safety of the pertussis vaccine, also known as the whooping cough vaccine, began to emerge in the 1970s and 1980s when an article published showed a link between the vaccine and neurological complications in children who received the vaccine (Casiday, 2005). The article published shared findings of 36 children who suffered severe neurological complications after receiving the pertussis vaccine, leading parents to believe that they were putting their children at great risk for the sake of protecting others (Casiday, 2005). The debate around the vaccine’s safety spread from Britain to many parts of the world and ultimately led to a severe decline in vaccination rates and a series of whooping cough epidemics (Casiday, 2005). This case is now often “cited in the medical literature as an instance of unfounded, irrational fears having serious public health consequences” (Casiday, 2005, p. 6).

A similar case occurred in 1998 when Andrew Wakefield published an article in the *Lancet* journal that linked the MMR vaccine with autism. The mainstream media hastily reported the “scientific” link between vaccines and autism, leading to a furious debate on the safety of vaccines that has continued to be fuelled in popular media today (Casiday, 2005; Kata, 2010). At the time the article was published, some parents were uncertain about the safety of the MMR vaccine and were faced with contradictory information, leading to a decline in immunization rates (Casiday, 2005). Although immunization rates have improved since then and more credible sources have disproven Wakefield’s claims, this article continues to be sourced by anti-vaccination groups today (Kata, 2012).

Nowadays, concerns and narratives around vaccine hesitancy are starting to re-emerge accompanied by misinformation, fraudulent scientific research, and the ability of anti-vaccine groups to influence public opinion through social media. Contemporary vaccine skepticism echoes historical anti-vaccine discourse that had concerns with “contamination, distrust in the medical profession, [and] resistance to compulsory vaccination” (Hausman et al., 2014, p. 414). Inarguably, vaccine skepticism is a longstanding phenomenon that societies have dealt with in the past and continue to grapple with today. However, to develop ways for combatting vaccine hesitancy, it is crucial to understand that is also a “locally situated” phenomenon that is “linked to the sociocultural context in which vaccination occurs and is mandated for particular segments of the population” (Hausman et al., 2014, p.403).

The Canadian Context

In Canada, only a very small percentage of individuals seem to subscribe to conspiracy theories against vaccines, but a fair number of individuals continue to be vaccine-hesitant, with Canada having the second-lowest rate of childhood vaccination among developed countries

(Fortin & Marwaha, 2017). According to Greenberg, Dubé, and Dreidger (2017), “the number of Canadian parents who hold strident anti-vaccine beliefs and refuse to vaccinate their children is generally low (fewer than 3%), [but an] increasing numbers of parents (up to 35% in Canada) [...are] 'vaccine hesitant'”(p. 3).

One of the key anti-vaccination groups in Canada is called Vaccine Choice Canada (formerly Vaccine Risk Awareness Network) (Kata, 2012). While this group often positions itself as pro-safe vaccines and a proponent of informed consent, it is in fact an anti-vaccination group (Kata, 2012). In early 2019, the non-profit group launched a billboard campaign in Toronto with messages that implied that vaccines were dangerous with slogans such as “educate before you vaccinate” (“Anti-vaccination billboards”, 2019). Although the ads were removed only days after being spread across the city, they still gained widespread attention from online news media and social media sites. A medical officer at Toronto Public Health described the group’s messages as “half-truths” and a misrepresentation of the facts surrounding vaccination (McQuigge, 2019). The Public Health Agency of Canada (PHAC) responded to the campaign by acknowledging that although there is only a small portion of the population that is strongly opposed to vaccines, they are increasingly becoming more vocal, using powerful images and misinformation aimed at confusing and evoking fears in parents (McQuigge, 2019).

Misleading rhetoric around vaccination has fuelled vaccine hesitancy in Canada with parents becoming increasingly concerned about the safety of vaccines (Caulfield, Marcon, & Murdoch, 2017). For example, a recent survey revealed that “one in four Canadian parents either believes vaccines are associated with autism and other mental health issues or is uncertain about the issue” (Caulfield, Marcon, & Murdoch, 2017, p. 230). Other research showed that around “39% of Canadians believe that the science on vaccines is not clear” (Caulfield, Marcon, &

Murdoch, 2017, p. 230). According to a survey conducted in 2017 by Statistics Canada on behalf of the PHAC, 52% of parents said they are concerned about the potential side-effects of vaccines (Government of Canada, 2019). The same survey revealed that 76% of two-year-old children received all of the recommended doses of the DTap vaccine and 90% received at least one dose of the measles vaccine (GoC, 2019). While the majority of children are being vaccinated, it still falls short of the vaccination coverage goal of 95%, which creates ‘herd immunity’ or community immunity that could prevent infectious disease outbreaks (GoC, 2019).

Less than ideal vaccination rates, along with recent measles outbreaks in Canada have been attributed to misinformation campaigns by the anti-vaccination community and the overarching vaccine hesitancy phenomenon (Caulfield, Marcon, & Murdoch, 2017). A survey on vaccine hesitancy in Canada revealed that the most common reasons and justifications for vaccine hesitancy were “misinformation or lack of knowledge and mistrust and fears around vaccination”; other reasons included conspiracy theories, declining trust in science, and mistrust of conventional medicine and pharmaceutical industry (Dubé, Gagnon, et al., 2016, p. 7).

Currently, Canada does not have a national vaccine registry, which makes it difficult to track the uptake of vaccines; however, there has been a recent upward trend in non-medical exemptions for vaccines in Ontario (Dubé, Gagnon, et al., 2016). A lack of a pan-Canadian vaccine registry makes it difficult to pinpoint the underlying issue of vaccine hesitancy. The increase in exemptions, an increase in VPD outbreaks in North America, and the amplification of anti-vaccination voices on the internet point to the need to combat anti-vax ideas readily available online. To date, only three provinces in Canada have mandatory vaccination laws – Ontario, New Brunswick, and Manitoba (measles vaccine only) (Walkinshaw, 2011). For these provinces, the legislation only applies to school-aged children and includes an exemption clause

for medical and non-medical reasons such as religious grounds or conscience (Walkinshaw, 2011). This legislation allows schools to send children home or exclude them from entry during an outbreak situation (Walkinshaw, 2011). With recent measles outbreaks, public discourses around mandatory vaccination have begun to re-emerge on mainstream and social media.

Furthermore, only Quebec has a vaccine injury compensation program, and in the rest of the provinces that would have to seek litigation – very few cases make it to court (Dubé, Gagnon, MacDonald, Harmon, & Hapuhennedige, 2020). This legal issue often becomes a focal point in the anti-vax rhetoric that argues that the pharmaceutical industry could get away with producing unsafe vaccines and that the government would be reluctant in compensating vaccine-injured children and their families, a posture that we found online as well.

Anti-vaccine Content Online

In recent years, “[s]ocial media has been one of the dominant communication channels for people to express their opinions of vaccination” (Yuan et al., 2019, p. 1). A recent global study on vaccine confidence that mapped vaccination trends between 2015 and 2019 found that vaccine confidence is volatile and vulnerable to online misinformation – threatening vaccination programs worldwide (Kelland, 2020). Several studies have examined media narratives and discursive constructions of anti-vaxxers and the anti-vaccination movement. For example, a study by Capurro et al. (2018) examined the media coverage of the 2014 Disneyland measles outbreak. They looked at the construction of ‘anti-vaxxers’ in leading Canadian agenda-setting newspapers, public affairs magazines, and online news sites and revealed that the media focuses on the small number, but the prominent character of anti-vaxxers while overlooking the wide range of perspectives such as those who are vaccine-hesitant. This inadvertently limits the public’s understanding of the complexities of the health issue.

A study by Jang et al. (2019) observed the vaccine-autism controversy by analyzing Twitter, online news articles, and Reddit posts and looking at the links between mainstream and social media and how information flows between social media and mainstream media. The study found that while Reddit follows news agendas, Twitter drives news agendas – indicating the powerful role social media has on vaccine information.

Other studies have focused on the online presence of prominent anti-vaccination groups such as *A Voice for Choice*, by examining the group's website and presence on Facebook and identifying key misleading claims made by the group (Evrony & Caplan, 2017). Scholars have also analyzed the online debate on vaccines by examining online discussion forums (Nicholson & Leask, 2011), comments of popular Facebook posts (Faasse, et al., 2016), popular anti-vaccination Facebook pages (Smith & Graham, 2017), anti-vaccination narratives on Twitter (Mitra, et al., 2016), search results on HPV vaccine (Madden, et al., 2012), and popular narratives of “mommy blogs” (Tangherlini, et al., 2016).

These studies showed that anti-vaxxers have a strong presence online and have been a contributing factor in the decrease in vaccination rates across North America and Europe. Additionally, they raised the concern for growing anti-vaccine attitudes and the spread of misinformation regarding vaccine safety. Also, despite differences in the types of social media and forms of engagement online studied, they all seem to have one conclusion in common – a call to action for public health officials, academics, the medical community, and the media to take this content more seriously and critically analyze, understand, and develop methods to combat it. Many of these studies provide recommendations for how to fight online anti-vax information by using similar tactics that anti-vaxxers use such as engaging in related discussions and having a stronger pro-vax presence online.

A recent study by Yuan et al. (2019) that examined vaccination content on Twitter and social bot activity showed that despite a larger presence of pro-vaccination content, anti-vaxxers continue to share and retweet anti-vax content within their structural community. This pattern is mirrored by social bots. Also, Yuan et al. (2019) found that when cross-group communication occurred between pro-vaccination users and anti-vaxxers, it was mostly pro-vaccination users retweeting anti-vaxxers. This indicates the difficulty of penetrating anti-vaxxers communities to communicate legitimate health information, as well as the dangers of anti-vaxxers swaying pro-vaccination users to the other side of the pendulum. Anti-vaxxers have a presence on almost every social media platform, including Facebook, Twitter, online discussion forums, and even YouTube.

YouTube and Health Documentaries

Several studies examined vaccine misinformation and pro and anti-vaccine postures on YouTube. For example, Keelan et al. (2007) conducted a quantitative content analysis of YouTube videos related to vaccines. Basch et al. (2017) also conducted a quantitative content analysis of popular YouTube videos about vaccines. In addition, Donzelli et al. (2018) carried out a quantitative content analysis of Italian YouTube videos related to vaccines. More recently, Yiannakoulis et al. (2019) produced a content analysis on influenza and measles immunization YouTube videos by examining videos' views, likeability, and words used by authors. These studies showed that a large proportion of YouTube videos were categorized as anti-vaccine or as having negative views and/or attitudes towards vaccination. Furthermore, these anti-vaccine videos tended to have a larger amount of engagement via comments and likes – indicating that there is a strong presence of an anti-vax community engaging on YouTube. These findings point to the importance of public health officials and health workers to be aware of the content being

shared on YouTube to address anti-vaccine concerns. Moreover, it presents the potential opportunity for utilizing YouTube as a channel to reach anti-vaxxers and clarify their misperceptions.

YouTube is a powerful public channel, as it is increasingly becoming a platform where individuals seek health information and engage with others (Caulfield, Macron, Murdoch, Brown, et al., 2019). What separates YouTube from other social media platforms is its unique exhibition of “novel and powerful uses of narrative” and images (Caulfield, Macron, Murdoch, Brown, et al., 2019, p. 53). It is well-known that in the case of vaccines in particular, “anti-vaccination perspectives exist and are propagated” on YouTube (Caulfield, Macron, Murdoch, Brown, et al., 2019, p. 53). Another study that compared the varying degrees of freedom of speech on several social media platforms and websites such as Google and Wikipedia, found that the freedom of speech is highest on YouTube concerning views linking vaccines with autism (Venkatraman et al. 2015). In comparison to other social media platforms and search engines, this study showed that support for a link between vaccines and autism was most prominent on YouTube (Venkatraman et al., 2015).

In addition to anti-vax YouTube content, there has been a proliferation of anti-vax documentaries on several video platforms including Amazon Prime, Vimeo, and YouTube, some of which have been recently removed from Amazon (Vaccine Confidence Project, 2019). A recent case study by Bricker and Justice (2019) examined a well-known anti-vaccination book called *Callous Disregard: Autism and Vaccines—The Truth Behind a Tragedy* by Andrew Wakefield, as well as the documentary film *Vaxxed: From Cover-Up to Catastrophe*, which is directed by Andrew Wakefield. This paper puts forward a very interesting case study as it critically analyzes two prominent communication products in the anti-vax community that are

both orchestrated by someone who is considered a leader in the anti-vax movement. The case study provides a brief analysis of the documentary film, which outlines several of the conspiracy theories and emotional tactics utilized by the filmmakers to advance the anti-vax agenda. The research brings forth several concepts that have influenced the design of this thesis – the concept of the postmodern medical paradigm and the power of the anecdote to build a said-to-be authoritative voice on the matter.

Bricker and Justice (2019) argue that vaccine advocates must comprehend the methods of persuasion that anti-vaxxers rely on, which favour anecdotes over robust science, and augment their pro-vax agenda and communication with similar persuasive strategies. Anecdotes are personal stories and experiences that are not necessarily representative of the general population and therefore “should not translate into population-based decision making” (Ratzan, 2002, p. 170). Nonetheless, these stories are powerful tropes as they are usually highly emotional, fear-based anecdotes (White, 2014).

While the study does provide a narrative analysis of the documentary, *Vaxxed*, it only briefly analyzes the documentary and does not provide a comprehensive rhetorical and semiotic analysis of its entirety. Also, it limits the case study to the book and documentary, without considering their placement in the broad online conversation of anti-vaxxers. Therefore, this thesis will contribute to the field of health communication by bringing forth a more thorough analysis of the persuasive strategies, key tactics and tropes mobilized in *Vaxxed* and will supplement this analysis with an examination of comments on YouTube videos. This will empirically show the entire discursive ecosystem with the apparent beginning of the online conversation via YouTube, and the continuation of this online conversation via the associated

YouTube channel – *Vaxxed TV*. Further details on the selection of the YouTube videos/comments and documentary will be discussed in the methods section.

A more recent study analyzed an anti-vaccine docu-series available through a private Facebook group (Bradshaw et al., 2020). Interestingly, this series was marketed to parents who were vaccine-hesitant and were looking for information to inform their vaccine decisions, as well as new and expecting parents (Bradshaw et al., 2020). This is critical as anti-vaccine content that is usually confined to anti-vaccine communities is less accessible to a broader audience. However, in this case, the docu-series intentionally targeted “fence-sitters”, making it more likely that these individuals would be swayed to the anti-vaccine side of the pendulum. The analysis found that the films relied on “experts” and “white coat doctors” to seem credible (Bradshaw et al., 2020, p. 2058). Also, the analysis found that the docu-series relied on fear appeals, conspiracy theories that attacked Big Pharma and governmental agencies, and the media – which was portrayed as corrupted and biased (Bradshaw et al., 2020). More importantly, the films in the docu-series were portrayed as authoritative sources that were “superior to the knowledge of doctors” (Bradshaw et al., 2020, p. 2059). This is aligned with the postmodern medical paradigm, which emphasizes multiple truths and allows anyone to potentially be an “expert”.

Overall, the analysis revealed that there was a pattern of eroding trust towards “government, CDC, medical community, and vaccine manufacturers” (Bradshaw et al., 2020, p. 2063). This study is unique in that it is one of few studies that analyze health propaganda films which “may have public health ramifications through decreased vaccination uptake, especially with expansive dissemination potential on social media” (Bradshaw et al. 2020, p. 2058). Therefore, this study contributes to the literature by beginning to bring attention to the power of

health documentaries, especially in the context of vaccines. Nevertheless, Bradshaw et al. (2020) outline a key limitation in their research, which is that it was limited to only one documentary series. The authors state, “[t]here have been other antivaccination documentaries, which perhaps approached this issue through a different lens; notably, portions of two of these, *Vaxxed* and *Trace Amounts* were included within the scope of study” (Bradshaw et al. 2020, p. 2068). Therefore, analyzing the documentary, *Vaxxed*, which has been touted as one of the most popular anti-vaccine documentaries, continues to build on this particular research.

More broadly and as an organization, YouTube has realized its impact on its audience when it comes to vaccine hesitancy and has taken several steps to mitigate this negative impact. For example, ads have been removed from videos identified as anti-vax, more authoritative, and science-driven content is becoming easier to find and anti-vaccine videos are less likely to show up in the recommendations list (BBC News, 2019). Along with these algorithms, YouTube aims to introduce “information panels” that will allow users to fact check the information they receive from videos (BBC News, 2019). Nonetheless and as it will be demonstrated in this research, it remains easy to access anti-vaccine content if one uses vaccine-hesitant terms in their YouTube search.

Furthermore, *Vaxxed: From Cover-up to Catastrophe*, is still accessible through YouTube Movies despite its clear anti-vaccine stance. This indicates that the availability and perils of anti-vaccine content and conversations on YouTube are persistent despite the steps YouTube is taking to limit them. Fragmented discourses are still flowing across social media platforms, and anti-vaccine users are continuing to mobilize rhetorical strategies to gain authority and influence others online. This signals the importance of studying YouTube content on vaccines and its

potential impact on vaccine hesitancy as it continues to be accessible and influential on vaccine-hesitant individuals.

Conceptual Framework

Postmodern Medical Paradigm, Pseudoscience, and the Shift in Authority

Today, the public is increasingly becoming a part of knowledge production and the scientific process (Moedas, 2018). Individuals conduct their own research in an attempt at producing citizen science; or they may be selective on the aspects of scientific research to accept, disseminate, and promote (Moedas, 2018). The digital environment, which allows the public to engage with science, also presents an opportunity for pseudoscience to flourish. With tools such as the internet and social media at the fingertips of individuals, interest groups and organizations oppose vaccines with pseudoscience or junk science that is now widely disseminated online in the guise of fact-based science. According to Blume (2006), “some anti-vaccination organizations attempt to ground their claims in the language of science” (p. 648). For example, Bradshaw et al. (2020) found that mobilizing the perceived credibility of doctors and other “experts”, as well as presenting arguments in a rational, logical, and educational manner was a key strategy in anti-vaccine discourse. Pseudoscience includes misrepresented or distorted research findings, the denial of legitimate scientific findings, the amalgamation of science with political ideologies, the conflation of causation and correlation, lack of ethics in conducting and sharing scientific research, or the use of scientific research to confuse the public (Makgoba, 2002).

Pseudoscience has threatened the value and independence of science and public health during many past health crises (Makgoba, 2002). In the context of vaccines, pseudoscience began to emerge and gain media attention first when Andrew Wakefield published his study in *Lancet* in

1998, which claimed there was a link between the MMR vaccine and autism (White, 2014).

Although this study was later totally refuted by more credible studies, and evidence showed that the author had a conflict of interest, falsified medical records, and had a small sample size, it continues to be referenced and promoted by many anti-vaccination groups (Kata, 2012).

Furthermore, the media played a role in promoting this research study and continue to support other pseudoscience by “publishing erroneous evidence, indulging in celebrity testimony, and balancing credible science with fear-based anecdotes” (White, 2014, p. 270). In an attempt to balance opinions with science, and to present all points of view in the so-called vaccine debate, the media inadvertently create their pseudoscience, fuelled by emotional anecdotes, discredited scientific research, and sensational stories (White, 2014). This problem is exacerbated on social media, where self-appointed experts share their perspectives on vaccines and present their opinions as facts that confuse the public, mirroring a society where many truths seem to exist.

Generally speaking, postmodernism acknowledges more than one “truth” – a perspective that has been widely adopted by proponents of the anti-vaccination movement (Kata, 2010). In the postmodern healthcare model, individuals bypass healthcare workers and doctors, and instead proactively search the web for health-related information to self-diagnose and make health-related decisions (Rosselli et al., 2016). In this approach, “the legitimacy of science [and authority are] questioned and expertise is redefined” (Rosselli et al., 2016, p. 48). Gray (1999) identifies three key characteristics of the postmodern medical paradigm:

1. Hostility toward singular truths
2. Aversion to scientific objectivity
3. Decreased trust in expertise (p. 1550)

While anti-vaccination discourses may not be scientifically accurate and are mainly based on pseudoscience, they continue to be persuasive by relying on the postmodern medical

paradigm and therefore “reject scientific authority, question power, and emphasize the importance of individually created realities” (Bricker & Justice, 2019, p. 184). In other words, some individuals and organizations construct new realities through their arguments, narratives, and justifications on social media, creating an environment in which anti-vax groups can thrive and be more authoritative on the matter. Anti-vax groups rely on postmodern tenets to favour online communities over traditional physicians to obtain their health information (Bricker & Justice, 2019).

In Web 2.0 healthcare, everyone is a potential expert, giving way to patient-to-patient collaboration, but also creating a breeding ground for conspiracy theories (Kata, 2012). The Internet has broken down the walls of the “locked library”, allowing everybody to voice their self-appointed “expert” opinions on vaccines (Kata, 2010). Web 2.0 has empowered patients, shifting the medical paradigm from the “white coat ethos of the ‘traditional’ physician to the current environment of shared decision-making between patients and professionals” (Kata, 2012, p. 3779). This thereby shifts power from doctors to patients – something most anti-vaccine rhetoric demands. The idea that anybody can potentially be an “expert” makes it difficult for government and health officials to be heard as the official voice as anti-vaxxers believe that their “truths” are equally valid and legitimate (Kata, 2012). Web 2.0 has also given those who were considered a fringe population, such as conspiracy theorists and anti-vaxxers, a platform where they can stay connected and have a stronger presence and authority on public opinion.

Moreover, the internet has given individuals tools that allow them to conduct their own research and self-diagnose – making the authority of doctors and the scientific community seem meaningless as everybody can potentially be a “doctor”. A poll conducted in 2013 by Pew Research found that “72% of Internet users surveyed looked for health information online and

35% opted to self-diagnose with Web-based information rather than visit a clinician” (Grant et al., 2015, p. 32). This is one of the defining features of the postmodern medical paradigm, where patient empowerment is emphasized and patients are expected to inform themselves – which Web 2.0 has facilitated (Grant et al., 2015).

Furthermore, innovations in healthcare such as mHealth, or mobile health applications, facilitate communication between patients and doctors, emphasize patient engagement, and empower patients (Grosjean, Bonneville, & Redpath, 2019). These applications create new responsibilities for the patients and grant them a more participatory role in their health. Recent research on mHealth has found that “patient participation or patient engagement in the design of mHealth tools is a crucial factor for improving the implementation of the technology” (Pagliari, 2007 as cited in Grosjean et al., 2019, p. 7). In other words, beyond the applied use of mHealth, patients are also viewed as important actors in both the co-design and conception of mHealth technologies. Essentially, the “partnership paradigm credits patients with an expertise similar in importance to the expertise of professionals. This paradigm implies that while professionals are experts about diseases, patients are experts about their own lives” (Bodenheimer, Lorig, Holman, & Grumbach, 2002, p. 2470 as cited in Grosjean et al., 2019, p. 8). Other new paradigms in healthcare, such as the patient-centered care paradigm, also emphasize the patient’s participation in the design of eHealth technologies that can help improve their quality of life (Grosjean, Sendra, Bonneville, et al., 2019).

With the various shifts in the traditional medical paradigm, which emphasize patient expertise and empowerment, and the increasing availability of online communication platforms, individuals and groups that are vaccine skeptical have mobilized the power of the internet to

disseminate their own experiences and understandings of health and science. This is accomplished through online narratives and rhetorical strategies.

Rhetorical Analysis

Rhetoric could be broadly defined as “the strategic use of language to make worlds, to interpret experience, and to wield power” (Browning & Hartelius, 2018, p. 81). The Aristotelian definition of rhetoric is the art of persuasion – whether through manipulation, deception, or other tactics (Ihlen & Heath, 2018). There are three key concepts in rhetoric that each have an important role in communication – ethos, logos, and pathos (Cheney & Lair, 2005). Essentially, ethos is the speaker or source, logos is the message or rationale, and pathos refers to the audience or emotional appeal (Cheney & Lair, 2005). Rhetoric is unique to other forms of discourse analysis because it “helps us understand how knowledge is generated and socially constructed through communication” (Ihlen & Heath, 2018, p. 3). Dialogue, discourse, narrative, story, and engagement are all rhetorical forms that create shared meanings that enact realities.

A rhetorical approach thus allows us to historically situate the themes and tropes of the anti-vaccination content by “examining how discourses of vaccine hesitancy and refusal operate in a given period” and “how persuasiveness might continue across historical periods, and how discourses circulate and change as they are applied to new circumstances” (Hausman et al, 2014, p. 406). Taking the rhetorical ecology into account, or how “words interact with their environment” is key in understanding how different anti-vaccine discourses operate in a particular social field (Hausman et al., 2014, p. 406). A novel approach to rhetoric is to consider the context in which the discourses are produced, which is what the new rhetoric does.

The New Rhetoric

The new rhetoric is defined as “a theory of argumentation that has as its object the study of discursive techniques that aim to provoke or to increase the adherence of men’s minds to the theses that are presented for their assent” (Perelman and Sloane, 2019, p. 1). In their book *The New Rhetoric*, Perelman and Olbrechts-Tyteca (1969) revive classical rhetoric by emphasizing the interplay between text and context and rediscovering the aspects of classical rhetoric that are concerned with dialectical reasoning. Perelman and Olbrechts-Tyteca (1969) argue that rhetoric is not merely an art or style of discourse, but rather that it is a practical discipline that is intended to have a persuasive impact on audiences. In their book, they re-examine the concept of argumentation and the rhetor-audience relationship. Perelman and Olbrechts-Tyteca (1969) redefine the rhetor-audience relationship as more cooperative, empathetic, and bidirectional, unlike classical rhetoric that is characterized as more one-way, manipulative communication.

New rhetoric differs from classical rhetoric in that it is more contextualized and considers the ecology in which the rhetoric operates. For example, in the case of anti-vaccine content online in the 21st century, the new rhetoric would contextualize it by considering the power of the internet, influence from celebrities, and uncertainties around modern science (Hausman et al., 2014). Furthermore, as the new rhetoric considers two-way communication, it is somehow more aligned with research that involves social and digital media, which blur the lines between and media production and consumption. One crucial component of discourse – and rhetoric by extension – lies in the authority that speakers/producers may attribute or pretend to have in each situation. In the case of vaccine hesitancy, it can be argued that both discourse and authority have been fragmented.

The Fragmentation of Discourse and Authority

In the context of health communication, fragmented discourse is defined as “a complex dynamic nourished by competitive and opposite views about diseases’ causes and risk factors, preventative measures, and therapeutic solutions” (Nahon-Serfaty, 2011, pp. 506-507). While fragmentation of discourse is aligned with the evolution of science, it “is [also] sometimes the result of ‘non-scientific’ interests”, as demonstrated with the case of anti-vaccine and vaccine skeptical discourse (Nahon-Serfaty, 2020, p. 2). This fragmentation of discourse disrupts the dominant discourse on vaccine safety or the discourse of public health authorities and vaccine policymakers. Digital platforms and social media have challenged this dominant discourse by fragmenting both discourse and authority. Also, the plurality of voices online and the amplification of voices that were once marginalized has led to “incredible irrationality of information overloads, misinformation, disinformation and out-of-control information” (Lash, 2002, p. 2 as cited in Nahon-Serfaty, 2011, p. 508). The fragmentation of discourse surrounding vaccine safety and causes of autism have in a way redefined the doctor-patient relationship, and ultimately redefined authority in the medical context. In the same way that discourse is fragmented, produced, and reproduced to meet certain ideological ends – authority is also mobilized, negotiated, and redefined in anti-vaccine or vaccine skeptical narratives.

Authority

The rhetorical apparatus mobilized by anti-vaxxers uses the notion of authority in their rhetoric. In the literature, there are varying definitions of authority, with various types of authority being outlined including formal, institutional, interpersonal, and rhetorical authority (Aggerholm et al., 2020). The notion of authority is often linked to power as “authors have been conceptualizing authority and power as something people may ‘have,’ or as the outcome of

having something” (Bencherki, Cooren, & Matte, 2020, p. 3). One of the more traditional definitions of authority is Lukes’ (1974/1998, p. 23) definition, which “views authority as the subordinate’s agreement with the content of a decision or with the process through which it is reached” (Bencherki, Cooren, & Matte., 2020, p. 2). This traditional perspective on authority often links one’s authority to title, status, or position on a hierarchy. Moreover, this perspective views authority and power as something one possesses (Bencherki, Cooren, & Matte, 2020).

However, this view is somehow limited as authority and power can be obtained in other manners. For instance, the interactional perspective states that “authority and power are concretely achieved in interaction” (Bencherki, Cooren, & Matte, 2020, p. 3). Rather than viewing “[a]uthoritative attributes as pre-existing and fixed”, this perspective sees them as “matters of negotiation in interaction” that recognizes the value of “linguistic, contextual, and rhetorical features of the interaction” (Vasilyeva et al.,2020, p. 40).

This interactional perspective of authority is more aligned with the realities of anti-vaccine rhetoric, which may grant authority through discourse to almost anyone who *authorises* himself/herself to do so. For instance, and as we will see in the analysis, a parent could consider himself/herself a medical expert (i.e. an authority on the matter) only by looking for answers online or even post a comment on the matter, which disrupts the more traditional (and legitimate) authority. Thus, traditional authority is somehow deconstructed, and a new type of authority is co-constructed as anti-vaxxers authorize themselves when they speak of values they wish to push forward.

Anti-vaccine advocates online often invoke different levels and types of authority to further their anti-vax rhetoric and agenda. For example, anti-vaxxers may mobilize institutional authority by affiliating their claims to whistleblower stories from the CDC, scientific findings

from well-known scientists, or claims made by doctors and researchers such as Andrew Wakefield. Moreover, anti-vaxxers may tell their versions of stories on behalf of scientists, institutions, or scientific findings. Through this storytelling and rhetorical acts, they “make speak” certain individuals and scientific research to negotiate their authority and persuade the audience of their credibility. This act of ventriloquism allows one to speak on behalf of the scientist, the institution, and the scientific research and findings. As explained by Coreen (2010), “when someone or something speaks on behalf of something or someone else, that person or artifact is, in fact, sharing the authorship with *who* or *what* he/she is ventriloquizing” (as cited in Aggerholm et al., 2020, p. 60) thereby ascribing authority to themselves.

This is closely linked to a specific form of authority – rhetorical authority – which is “presenting compelling reasons” (Aggerholm et al., 2020, p. 64). Through rhetorical tactics, anti-vaxxers mobilize, negotiate, and challenge authority to speak in place of the scientific establishment and persuade the public that vaccines are unsafe and cause autism. Additionally, anti-vaccine discourse often relies on the “credible” opinions of experts. Accordingly, and in line with this reasoning, the research questions this research aims to address are:

RQ1: What are the rhetorical and discursive tactics, tropes, and images mobilized by anti-vaccination individuals and/or groups via film and online comments?

RQ2: How do individuals and/or groups mobilize, negotiate, and challenge authority through anti-vaccine rhetoric?

Research Rationale and Objectives

Studying the phenomenon of vaccine hesitancy and analyzing the vaccine skeptical or anti-vaccine discourse that parents are exposed to is arguably an important step in reducing vaccine hesitancy and developing effective pro-vaccination health campaigns. A crucial step is understanding “how these messages are framed and delivered” to determine the best ways to counter these anti-vaccine messages (Bradshaw et al., 2020, p. 2059). Parents and individuals

seeking information about vaccines online are exposed to conflicting information that makes it increasingly difficult to make informed vaccination decisions (Bradshaw et al., 2020). While this research does not directly study how parents and individuals seeking vaccination information online interpret and use the information they are exposed to, it takes an important step in examining the availability of information online and studying a unique communication tool – the health documentary.

Although there is some research on anti-vax content online, including social media and mainstream online media – very little research looks at unique communication tools such as online health documentaries, which blend both social media and traditional media and intercept the online and offline worlds. Health documentaries available online, specifically on YouTube, are interesting communication apparatuses as they transcend the online world through screening events, film festivals, and social gatherings for viewing these films. Therefore, they create opportunities for fueling both online and offline conversations about vaccines. In the specific case of *Vaxxed*, it has a broad online presence, an affiliated YouTube channel – *Vaxxed TV*, a website for advertising the documentary, and for information on screening events, as well as a website for raising awareness against vaccination (Bennato, 2017). Also, the organization has an “offline” real-world presence through film screenings, conferences, and meet and greet events, as well as the *Vaxxed* bus, which tours North America to hear stories from families who believe their children were vaccine injured.

Social media sites have been found to be an important platform for the dissemination of anti-vaccine information (Capurro et al., 2018). According to Capurro et al. (2018), “further research could explore how [anti-vax] narratives influence or drive public debates on vaccination and vaccine hesitancy in social media” (p. 42). Therefore, studying the phenomenon of vaccine

hesitancy through a documentary on social media and comments on YouTube videos appears to be a sound research objective that can fruitfully contribute to the existing literature.

Furthermore, many of the studies examining YouTube videos are solely quantitative and do not analyze the narratives and rhetoric used by content producers on the online video platform. Therefore, further studying the content of a documentary on YouTube can make a valuable contribution to the literature by showing how some individuals and interest groups try to shape public discourse about vaccine hesitancy on social media by mobilizing narratives and rhetoric and the many ways this particular framing contributes to its resurgence. Lastly, it is also worth noting that most YouTube videos are short in length and only provide fragments of anti-vaccine rhetoric, whereas a full-length health documentary is likely to encompass many of the rhetorical tools, tactics, and tropes mobilized by anti-vaxxers.

The study of vaccine hesitancy is becoming an increasingly relevant topic in today's world. A recent study analyzed YouTube videos related to the COVID-19 pandemic to determine the reliability and usability of YouTube videos during the century's largest public health emergency (Li et al., 2020). The study found that over one-fourth of YouTube videos that had millions of views had misleading information (Li et al., 2020). This indicates both a problem and an opportunity for utilizing YouTube to convey accurate public health information. Also, new research has shown that the COVID-19 pandemic has not changed the perspectives of vaccine-hesitant Canadians and that approximately one-quarter of Canadians would oppose a COVID-19 vaccine or remain hesitant should it become available in Canada (Carleton Newsroom, 2020). Furthermore, “[n]early half of Canadians (46 percent) believed at least one of four Covid-19 conspiracy theories and myths” that circulated online (Carleton Newsroom, 2020, para. 1). This indicates that the COVID-19 pandemic has amplified anti-vax rhetoric, increased vaccine

hesitancy, and fuelled online misinformation on vaccines. Therefore, continuing to study the vaccine hesitancy phenomenon and the emerging anti-vax communication products becomes increasingly important during a global pandemic where uncertainty and fear operate on a global scale with serious health and societal implications.

Chapter 3: Methodology

Research Design

This section will outline the research strategy employed and the justifications for selecting this research design. The research utilized a qualitative approach by conducting a rhetorical and discourse analysis of the contents of a well-known anti-vax documentary and a sample of comments on two YouTube videos. While a quantitative content analysis is valuable in offering rigorous, replicable, and generalizable data, it remains equally important and necessary to conduct a qualitative analysis of texts “to understand their deeper meanings” (Macnamara, 2005, p. 5). By reviewing the literature on anti-vax content online, it is manifested that there are more quantitative research and only a limited number of studies that employ qualitative approaches that analyze anti-vaccine rhetoric. Therefore, this research will focus on conducting a qualitative study that is informed by the existing literature on the topic.

As opposed to the quantitative content analysis that requires a priori design and a coding framework to begin an analysis, the data collection for the rhetorical analysis will be informed by the findings the researcher will encounter (Macnamara, 2005). In this case, the themes were constructed inductively by gathering the data and identifying patterns, while also deductively working and being informed by the literature, theory, and research questions. Trochim (2002) defines deductive analysis as “working from a broad theory or general position to specific observations to confirm or disprove the former” (as cited in Macnamara, 2005, p.17). Essentially,

while the themes or categories of analysis will inductively emerge through the exploratory analysis of the content (i.e. documentary and YouTube comments), the themes and analysis are informed by the existing literature and grounded in the theoretical framework of the postmodern medical paradigm, rhetoric, and authority.

For example, it may become apparent from the rhetorical analysis that anti-vaccine rhetoric mobilizes fear appeals and anecdotes to persuade audiences. These frames may come up as the researcher collects the information, but their development will be informed by the literature review conducted before coding the findings. Essentially, the literature review will inform the interpretative framework. Contrary to coding for quantitative content analysis, the coding procedure for the rhetorical analysis is predominantly “one of clerical recording” of messages, themes, and frames that address the research questions (Potter & Levine-Donnerstein, 1999, p. 265, as cited in Macnamara, 2005, p. 15). Further details of the interpretation of data will be discussed later in this chapter.

Data Selection

Vaxxed Documentary

Vaxxed: From Cover-Up to Catastrophe was selected because it is considered a critical document in the anti-vaccination discourse, which puts forward arguments and conspiracy theories echoed by the broader anti-vax community. The documentary mobilizes rhetorical tools based on emotions of fear, doubt, guilt, and shame to instigate emotional appeals for anti-vaccination. The film uses cinematic strategies such as repetition, highly emotional, and powerful anecdotes, as well as film techniques of dramatic lighting, sound, music, and contrasting images to channel these emotional appeals. The emotional appeals presented by anti-vaxxers in the larger context and demonstrated in the documentary give way to misinformed and

fearful publics by “rejecting robust vaccine science and validating personal experience as an “equally valid” form of medical understanding” (Kata, 2012, p.3779 as cited in Bricker and Justice, 2019, p.185). These appeals set the tone of the overarching argument and purpose of the documentary by mobilizing several rhetorical strategies, which orient the conversations about vaccines into a potentially controversial topic.

Directed by Andrew Wakefield, who is a prominent figure in the anti-vaccination movement, *Vaxxed* follows an investigation by a group of anti-vaxxers of an alleged cover-up by the Centers for Disease Control (CDC) on research that allegedly proves that the measles-mumps-rubella (MMR) vaccine causes autism in children. They claim that the government’s deception has led to skyrocketing rates of autism and a potential autism epidemic. The documentary stars several pseudoscientists such as Andrew Wakefield, Del Bigtree, and Brian Hooker. Also, the documentary features two celebrity doctors including Jim Sears and Rachel Ross from the show *The Doctors*, several politicians, and parents who believe vaccines injured their children, including anti-vaccine advocates Polley and Jonathan Tommey. The documentary aims to spread fear, uncertainty, and doubt regarding the safety of vaccines, the pharmaceutical industry, and the government and oversight on vaccine research mainly in the United States. This is accomplished by structuring the one-and-a-half-hour documentary into a series of interviews with scientists, doctors, parents, and prominent figures in the anti-vax community who all claim in some shape or form that vaccines have damaging effects on children.

In a sense, the documentary acts as an authoritative voice for the supposedly silenced voices of parents with vaccine-injured children, the anti-vax community more broadly, and the individuals who have witnessed the alleged CDC cover-up – notably, the CDC whistleblower, William Thompson. It presents the issue by sharing countless stories from parents who believe

their children were damaged because of the MMR vaccine, as well as using voice recordings from phone calls between William Thompson and Brian Hooker. Besides, Andrew Wakefield is allowed to share his side of the story regarding his research that was retracted from *The Lancet* journal. The documentary in and of itself is deeply rooted in anti-vax rhetoric and pseudoscience that has been pushed by anti-vaxxers since the 20th century when Andrew Wakefield published in 1998 claiming there was a link between the MMR vaccine and autism. Since then, Wakefield has been viewed as a spokesperson and a leader in the anti-vax community. *Vaxxed* is directed by him and having him as part of the documentary's cast makes it a supposedly credible piece of work for the anti-vax movement. Bennato (2017), who has studied the digital communication strategies implemented by *Vaxxed*, states that “[t]he mere fact that the authors of the documentary are — so to speak — leaders of the global anti-vaccine movement, makes the film not a simple tale, but an instrument to seek the support of the public opinion in reinforcing the anti-vaccine movement” (p. 3).

The documentary shares the four “exhibits” that vilify the CDC: deviation from the analysis plan, the omission of data, destruction of documents, and obstruction of justice. Finally, the documentary serves as the resolution to the issue and as a call to action. At the end of the film, the audience is asked to take action by contacting political leaders and asking for changes to vaccination policy, drug testing practices, and that the single doses of the measles, mumps, and rubella vaccines become available to parents immediately.

The analysis of *Vaxxed* presents a unique opportunity for the analysis of anti-vax rhetorical and discursive strategies as it acts as a centerpiece conveying the many conversations about the controversial topic. Some could argue that *Vaxxed* is not merely a film, but rather an organization that supports the anti-vax agenda. More specifically, a quick search online of the

word “Vaxxed” yields a *Vaxxed* website, YouTube channel, and even other organizations with local “Vaxxed” chapters – including a “Vaxxed Canada” that holds film screenings and events, as well as the *Vaxxed* bus, which allows individuals to share their vaccine-injury stories on a traveling bus. Furthermore, in November 2019, the film *Vaxxed II: The People’s Truth* was released, indicating the success of the first part of the documentary and the continuation of the *Vaxxed* agenda.

It appears *Vaxxed* has not only become a community for anti-vaxxers but a brand name for the movement. In a sense, the documentary has transcended the online world and has made an actual presence in the “real world” through its film screenings, Q and A events, and meet-and-greets with Andrew Wakefield and other film stars. The *Vaxxed* bus, which engages with the public on a personal level, has also allowed for the creation of endless content for the *Vaxxed TV* YouTube channel that continues to fuel the anti-vax agenda and create a sense of community among anti-vaxxers online and beyond. Furthermore, the documentary is unique in “its ability to arouse controversies and elicit statements by the different stakeholders involved, further activating [anti-vaccine] conversations”, beyond the digital anti-vaccine communities (Bennato, 2017, p. 3). This was demonstrated when Andrew Wakefield was invited to present the documentary at the *Tribeca Film Festival*, which is founded by Robert De Niro. This move sparked considerable controversy and gained mainstream media attention that led De Niro to pull the documentary from the festival (Bennato, 2017).

YouTube Video Comments

YouTube channels have been widely used by anti-vaxxers as a platform to share personal stories with vaccine injuries, “expert” opinions from anti-vax doctors and medical professionals, and for disseminating anti-vax documentaries and shows including *Vaxxed: From Cover-Up to*

Catastrophe, *The Truth About Vaccines* docu-series, *Full Measure: The Vaccination Debate*, and most recently *Plandemic*, a documentary film that claims the COVID-19 pandemic is based on deception of the public. *Plandemic* was removed by YouTube after ten days of being posted but still gained millions of views (Frenkel et al., 2020). While analysis of vaccine-related YouTube videos would provide an understanding of the type of content available on YouTube and the ratio of anti-vaccine to pro-vaccine content available, it does not provide a proper understanding of the online conversation. Therefore, the second part of our analysis will examine comments on two YouTube videos that will serve as examples of the conversations that are fuelled by anti-vaccine YouTube content and by the *Vaxxed* documentary. The first YouTube video for the analysis will be an anti-vaccine video posted before the release of the *Vaxxed* documentary, and the second video will be from the *Vaxxed TV* YouTube channel. A sample of comments from these videos will be extracted for analysis.

To obtain the first video for analysis, a general search query was used to mimic what a vaccine-hesitant individual may search on YouTube to get information on vaccines and autism. The search query used is – “do vaccines cause autism” as this is one of the biggest concerns parents have regarding vaccine safety (Dredze et al., 2016). The videos were sorted by view count to obtain the videos that are most viewed and therefore have a larger audience. The video selected for the introductory analysis is titled “CDC Chief Admits that Vaccines Trigger Autism” and was posted in 2008 with 224,252 views to date. The video has 1200 likes and only 279 dislikes, showing that most of the audience agrees with the contents of the video. The video, which is ten minutes in length, shows a CNN interview between Dr. Julie Gerberding – former head of the CDC, and Dr. Sanjay Gupta, a medical reporter, discussing a vaccine-injury case.

Social media sites are “crucial hubs for supporting the distribution and circulation of news reports from the legacy media” (Capurro et al., 2018, p. 42). This video is interesting because while it shows a news report from traditional media, it breaks the video into segments and provides an analysis/commentary on each portion thereby blending traditional media with social media that allows individual citizens to tell their stories and share their perspectives.

The video selected for the last part of the analysis is the most popular and highly viewed video on the *Vaxxed TV* channel with 536,000 views and 4,627 comments. The title of the video is “I am a doctor and I now know the truth about vaccines #vaxxed #DidYouKnow #Praybig”, which was streamed live in October 2017 – over a year after the release of the documentary. It has ten thousand likes and 865 dislikes, which shows that most of the audience agrees with the contents of the video. It is an interview on the *Vaxxed* bus with one of the film’s cast members, Polly Tommey, and a doctor (and mother) who claims her six-month-old daughter passed away after getting vaccinated and suffering a vaccine-injury.

As it would be a challenge to analyze a representative sample of the comments on the videos, a non-random purposive sample of comments from each of the videos was selected to provide an overview of the type of comments, engagement, and conversations encouraged by the video. As the focus of the research is to analyze anti-vaccine rhetoric and narratives, comments were selected only if they had anti-vaccine sentiments. For example, a comment was deemed anti-vaccine if it made claims that vaccines are unsafe, could cause serious side effects like autism, or if the comment attacked legitimate health organizations like the CDC, which supports vaccination. The comments with a larger number of likes and replies were selected as it would be reasonable to assume that they were the most influential for the online conversation and that many viewers have similar perspectives or felt strongly about the comment – therefore replied

either in agreement or disagreement. Similar to the analysis of the documentary, the comments were analyzed to determine the key narratives, rhetorical tactics, and themes that were present.

Data Analysis

Several research tools from thematic network analysis and grounded theory were utilized to assist in segmenting, organizing, and analyzing the data more systematically. Borrowing from these theories and tools, several steps were taken to organize and develop the key themes that emerged from the data. As the documentary is the central piece for the analysis, three broad stages, borrowed from thematic network analysis, were followed to analyze the discourse, images, and filmmaking strategies. These stages include “(a) the reduction or breakdown of the text; (b) the exploration of the text; and (c) the integration of the exploration” (Attride-Stirling, 2001, p. 390). This type of analysis seeks “to unearth the themes salient in a text at different levels” (Attride-Stirling, 2001, p. 387).

With this in mind, we focused on developing categories or themes that correspond to various types of persuasive appeals or rhetorical strategies mobilized in the text (i.e. documentary and comments) including logos, ethos, and pathos appeals (Cheney & Lair, 2005). The first step in the first stage involved developing a coding framework “on the basis of the theoretical interests guiding the research questions” and the salient issues or themes that emerged from the documentary and comments (Attride-Stirling, 2001, p. 390). This involved watching the documentary several times and taking notes of specific scenes and quotations.

Next, the text was dissected into meaningful segments and the codes were applied. For example, we categorized certain scenes or quotations from the documentary under the codes developed. This involved watching the documentary several more times to begin forming categories and then applying the codes in subsequent viewings. We did not transcribe the entirety

of the documentary, however, segments that inspired themes and were used for the analysis were included in the body of the analysis. The same process followed for the analysis of the YouTube comments, with variations in the initial coding framework as slightly different codes and themes emerged from the comments. Screenshots of the comments used for the analysis were included in [Appendix A](#) and the text of the comments was also included in the body of the analysis.

The process of forming the coding framework and applying the codes followed two central procedures developed by Mayring (2000) – “inductive category development and deductive category application”, thereby matching segments from the documentary or comments from YouTube videos to the established codes (as cited in Macnamara, 2005, p. 17). Tenets from grounded theory were also mobilized in this process of forming codes and general themes, where “theory may be *generated* initially from the data, or, if existing (grounded) theories seem appropriate to the area of investigation, then these may be *elaborated* and modified as incoming data are meticulously played against them” (Strauss & Corbin, p. 273).

For example, and as the literature review revealed, fear appeals were commonly used in anti-vaccine rhetoric and narratives and this became one of the codes developed. Also, through several readings of the text for analysis, the codes evolved through the “continuous interplay between analysis and data collection” (Strauss & Corbin, p. 273). Following the formation of a coding framework and applying the codes to the text, themes were formed, arranged, and refined. We organized the themes and refined them so that they would be “(i) specific enough to be discrete (nonrepetitive), and (ii) broad enough to encapsulate a set of ideas contained in numerous text segments (Attride-Stirling, 2001, p. 392).

The second phase involved the re-reading of the text (i.e. watching the documentary several more times and reviewing video comments) through the lens of the themes established to

interpret the findings and reach a deeper level of analysis. Finally, the last stage involved the exploration of significant themes and patterns that emerged that are relevant to the original research questions and theoretical framework for the research (Attride-Stirling, 2001). Following the steps borrowed from thematic network analysis and some concepts from grounded theory allowed for a rich and rigorous analysis of the documentary and YouTube comments, which yielded a deeper understanding of the data.

Strengths and Limitations

Qualitative approaches such as rhetorical analysis have some advantage over quantitative methods in that they offer “a deeper understanding of social phenomena and their dynamics” – as opposed to surface level quantification of data (Attride-Sterling, 2001, p. 385). By analyzing language and text, it allows for more interpretation, contextualization of texts, and reflexivity. Moreover, like the quantitative content analysis, there are few ethical considerations to the research since it is analyzing information in the public domain and does not require consent from participants (Van den Hoonaard, 2012). Nevertheless, while qualitative methods have various benefits and strengths, there are limitations to the method.

A key limitation of qualitative methods that analyze language is the interpretive aspect, which is central to the method (Deacon et al., 2007). Each researcher can yield a different analysis based on their interpretation that is informed by their knowledge and background, therefore affecting the validity of a study (Deacon et al., 2007). Moreover, because of the interpretive nature of the method, it tends to be very time-consuming (Macnamara, 2005). Moreover, the sample size of a rhetorical analysis tends to be smaller, to allow for richer, deeper analysis of the content rather than mere quantification of terms. While this does have its benefits,

it reduces the generalizability of the study, as they are rarely representative of the population (Deacon et al., 2007).

Furthermore, qualitative approaches such as rhetorical analysis are often criticized for their inductive approach in the research design (Macnamara, 2005). Allowing the researcher to add issues, messages, and topics to the variables examined as they conduct their analysis, introduces “inaccuracies in the data”, and contributes to “major biases and invalidity in the study” (Macnamara, 2005, p. 9). However, this analysis will be grounded in a theoretical framework and will follow a systematic analysis of content to ensure that the analysis is coherent. Furthermore, undertaking the research “through the lens of grounded theory is a critical step and can provide insight into what claims are being shared, what persuasive techniques are being utilized, and how viewers’ vaccination information may be shaped by the content presented and the individuals disseminating these persuasive messages” (Bradshaw et al., 2020, p. 2059). While a quantitative analysis can yield results such as the percentage of anti-vaccine content online, it does not provide an analysis of the narratives, tactics, and tropes mobilized by anti-vaccine and vaccine-hesitant individuals or groups. This is key in further developing pro-vaccine health communication as it provides public health communicators with an understanding of the misinformation that vaccine-hesitant individuals may encounter online.

Chapter 4: Analysis

The analysis chapter comprises of three main sections – 1) introduction to the online conversation regarding vaccines on YouTube, 2) analysis of the most popular and talked about anti-vax documentary, and 3) analysis of the extension of the online conversation on YouTube through the *Vaxxed* documentary. As part of the initial analysis, we analyzed a set of comments from a YouTube video through a discursive lens. Next, the documentary, *Vaxxed: From Cover-*

Up to Catastrophe, was used as a case study for anti-vax rhetoric, narratives, and discursive tropes as it encompasses many of the strategies mobilized by anti-vaxxers and has a far-reaching audience. Finally, we studied a set of comments on a YouTube video from the *Vaxxed TV* YouTube channel to demonstrate the persistence of the online conversation.

While the bulk of the analysis focuses on the documentary film, *Vaxxed*, we will begin our empirical exploration by examining a sample of comments on a YouTube video. This will serve as an entry point into the data to highlight the emergence of the online conversation regarding vaccine safety (Rodriguez, 2016). Thus, the overall analysis will bring to light the rhetorical strategies and discursive tropes in both the online comments and the documentary. In complementarity, a sample of comments from an additional video from a YouTube channel related to the documentary, *Vaxxed TV*, will be analyzed to demonstrate how the conversation about anti-vaccination spurs from the Internet, is channeled through the documentary and “goes back” once again into the Web as an ongoing recursive process. As manifested in this YouTube channel and the audience’s interaction with the documentary, *Vaxxed* acts as a discursive centerpiece as it continues to engage with audiences online through one of the most popular anti-vax YouTube channels – *Vaxxed TV* – and even beyond social media through documentary screenings, conferences, and the “Vaxxed bus”, which will be discussed later in the analysis.

Online Conversation: David vs. Goliath

To begin with, we analyzed comments on a YouTube video to establish the emergence of the online conversation regarding vaccine safety. As detailed in the methods section, the video selected for this purpose is a CNN interview between Dr. Julie Gerberding – former head of the CDC, and Dr. Sanjay Gupta, a medical reporter, discussing a vaccine-injury case. The uploader of the video analyzes the discussion and claims that Dr. Julie Gerberding admitted that vaccines

trigger autism in a subset of the population. There is a total of 215 comments on the video, however, it is important to note that in the video's description the uploader includes a note that she closed the comments section on the video as the discussion was becoming difficult to follow.

From a brief review of the comments, it appears that the majority are supportive of the anti-vax posture found in the video. Four comments were selected for analysis of the audience's interaction with anti-vax content on YouTube, as well as the rhetorical strategies mobilized by the audience. The comments were purposively selected if they were lengthier and had more content than a simple comment that either agrees or disagrees with the video. The first comment aims to discredit the scientific establishment and is a conspiracy-based attack against the CDC. Below is a transcript of the comment.

Terrific video!

I am so impressed with how you have broken this deceptive interview down and exposed the lies and hypocrisy of the CDC.

The issue makes my blood boil. I get so angry at the thought of these criminals knowingly damaging children and then lying to avoid taking responsibility.

Please continue your heroic efforts to document and expose these monsters.

How many lives are being destroyed each year to save those 33,000 that she claims are "saved" by vaccines? [posted 11 years ago]

The commenter is noticeably in agreement with the anti-vax video and praises the uploader for their "heroic efforts" exposing these "criminals" and "monsters" – the CDC. First, this is framed as a David vs. Goliath situation in which the CDC "destroys" the lives of innocent children, assumingly for their gain. Interestingly, the video is a precursor to the *Vaxxed* documentary although the YouTube video and online conversation began close to eight years prior to the release of *Vaxxed*. The YouTube video, as well as the comment above, is a direct attack against the CDC, which aims to discredit this traditional authority and questioning its

power. Despite the video being based on the manipulation of the CNN interview, it appears to be impactful based on the viewership and audience’s interaction and support. For example, a video on the same topic from Mayo Clinic that discussed the same topic, but from a pro-vaccine perspective, only received 82 thousand views. Similarly, a pro-vaccine video that discussed the autism myth on the Khan Academy Medicine YouTube channel received 70 thousand views and only 734 likes. This is in comparison to the anti-vaccine video selected for analysis, which had over 224 thousand views, and 1.2 thousand likes.

Additionally, the comment evokes emotions of anger by claiming that the CDC “knowingly damage[s] children” and highlights a seemingly unjust risk-benefit analysis of vaccines. The commenter appears to claim that the risks of vaccines far outweigh the benefits of saving 33,000 lives. More so, by using the quotes around the word “saved”, the commenter implies that vaccines even fail to protect children from infectious diseases. Furthermore, by using the words “damage” and “destroy”, the comment evokes fear of the irreparable. To most parents, the benefit-cost analysis of vaccines and the “greater good” will not carry as much weight as their own child’s health and well-being. Therefore, this comment appears to be playing on this by highlighting the damage a vaccine could potentially cause and contrasting it with the supposedly flawed “greater good” argument. Thus, this aims to tarnish the CDC’s reputation and weaken its authority. This rhetorical pattern of being critical and even angry at institutionalized authority is also seen in other comments on the video.

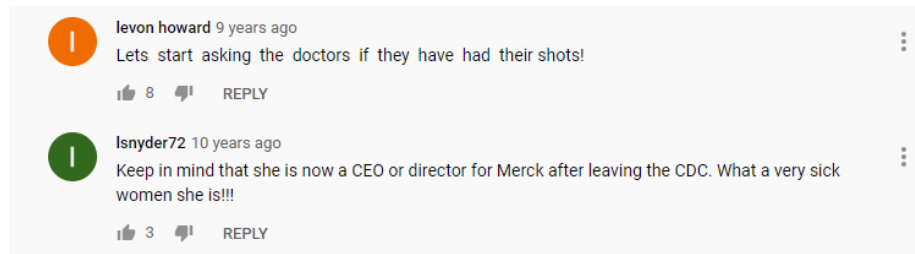


Figure 1. Examples of criticizing institutional authorities

The next comment is less of an attack on the CDC, and more an attempt to shift authority from doctors to the public – thereby creating an ambiguous space where any person could claim to be an authority figure on the matter.

I brought up this subject to my girlfriend's Aunt, who is a pediatrician, and I was AMAZED at how uninformed she was. She had never even heard of thimerosal and was adamant and "SO SURE" that vaccines had nothing to do with autism. She wouldn't even entertain the idea and left the dinner table mad at me for questioning her authority.

As explicitly stated, the commenter is questioning the authority of a pediatrician, claiming that she was "uninformed" on the issue, although she is medically trained. This strategy is mirrored in many of the rhetorical tropes mobilized by anti-vaxxers, where the traditional and institutionalized authority is being questioned, and where there is a shift to non-traditional authority figures such as parents. In this case, the formal authority of a legitimate physician is questioned, and the YouTube video's uploader and anti-vax community members are seen as more credible and knowledgeable. The comment also implies that doctors are arrogant since she describes this particular pediatrician as "adamant and SO SURE" that vaccines do not cause autism – perhaps also implying that the scientific establishment is blind to the "truth".

Moreover, the comment aims to discredit the legitimacy and objectivity of physicians as he describes the pediatrician as getting "mad for questioning her authority", implying that doctors may ignore "facts" that go against their medical practice or orthodoxy. Interestingly, many of the themes in this comment are seen in the *Vaxxed* documentary, where tactics used include discrediting traditional authority, creating distrust in the medical profession, claiming that doctors are victims of the system as they are also uninformed by the CDC, and then deconstructing and reconstructing authority.

Another rhetorical tactic seen in the comments puts forward the mobilization of science and formal authority to persuade the audience that vaccines cause autism.

@kommissarw: Oh, such anger..... I'm wondering, what insecurity you feel that causes such a response..... Anyway, just FYI, kommissarw, I am a doctor, see up to 80 patients a day, and CONTINUALLY inform them about the dangers of vaccines. I hold vaccine danger workshops, and give them the appropriate information should they opt out of vaccinating their children. I'm currently finding other ways to educate the public..... A HUGE network of doctors are doing the same.

This comment is a reply to another comment which was in disagreement with the contents of the video. One tactic used by this commenter is making the person appear as irrational and questioning their legitimacy by framing them as acting on an emotional basis. The commenter says, "oh such anger [...] what insecurity you feel that causes such a response" and immediately contrasts that by saying "I am a doctor". Therefore, the comment aims to question the other's authority and minimize their opinion while mobilizing their alleged authority as a doctor. The commenter claims that he works with a "huge network of doctors", implying that this is not only his opinion but that of an entire medical community. Also, he reinforces his authority persona by claiming that he works on finding ways to "educate the public". Paradoxically, while anti-vax rhetorical strategies tend to question formal authorities, they also mobilize formal authority figures when it is in their favour – as shown in this case. This interplay creates an ambiguous space where a game of authorities is being played out and are continually defined and redefined to bolster the anti-vax agenda, or at least, to instill doubt.

The reliance on emotional personal anecdotes is an additional key strategy mobilized by anti-vax rhetoric. These personal stories are often framed as carrying more weight and authority over a real doctor's diagnosis.

Yeah I'm sure they're stay right on top of it! Please! My son is a autistic, And more and more I'm believing the vaccines are the cause. And by also seeing his two cousins (also autistic) who had the same symptoms as infants after immunizations. These people need to do less talking and more research, Stop feeding us BS and find the cause and admit that they were wrong and are harming our children.

This comment brings forth the idea that parents know their child best and have the “authority” to determine what may have caused their illness. In this case, this mother says that she believes that vaccines caused her son’s autism based on seeing the same type of reaction her son had as an infant to vaccines as his cousins did (who are also autistic). The comment also evokes the “Us vs. Them frame” in which she paints the other as the scientific establishment who is ill-intentioned – “feeding us BS” and “harming our children.” She uses the word “our” to portray the victimized “us” that is in a constant battle with physicians, the pharmaceutical industry, and the scientific establishment who she claims, “need to do less talking and more research”. This type of rhetorical strategy is echoed in the *Vaxxed* documentary, as we will later see, where countless parental anecdotes are shared and framed as more legitimate and authoritative than a doctor’s diagnosis of a child’s symptoms or disorder.

The analysis of this YouTube video and comments posted eight years before the release of *Vaxxed*, demonstrates how the online conversation was active years prior to the documentary and mobilized similar anti-vax rhetorical strategies and discursive tropes. Also, many of the claims in this video seem to be precursors to the grander conspiracy theories and claims made in the film *Vaxxed*, making it plausible that the documentary combined these ideas and strategies into a single discursive apparatus that could potentially reach a wider audience. The next section of the analysis will closely analyze the rhetorical strategies and discourse of the documentary,

Vaxxed, exploring the following key themes and narratives – 1) emotional appeals and anecdotes, 2) the appeal to science and authority, and 3) the Us vs. Them frame and conspiracy theories.

Emotional Appeals

In *Vaxxed*, emotional appeals and evoking emotions of fear, doubt, guilt, and shame are present throughout the documentary. The emotional appeal strategy is used in over twenty scenes or clips. The following section will provide illustrations of how the emotional appeal is mobilized through cinematic effects such as soundtrack music, contrasting images, and lighting, as well as detailed discursive apparatus like anecdotes from parents of vaccine-injured children and home videos of autistic children in vulnerable states.

The film begins with a montage of scenes from several news networks and talk shows that are explicitly pro-vaccination and then cuts to a dark, gloomy scene that sets the stage for what will be presented. In this first scene, there appears to be someone, namely William Thompson, typing a confession on how the Centers for Disease Control and Prevention (CDC) in the United States have supposedly covered up findings related to a vaccine safety study. There is ominous music in the background and the scene transitions to a needle shooting out blue smoke that later transforms into the title of the film – *Vaxxed*. This introductory scene is set to prime the audience right from the start, conveying several emotions and doubts including fear, uncertainty, and skepticism in the CDC and vaccines. The documentary then goes on to present several “theories” and arguments that claim that the CDC has covered up research proving that vaccines cause autism including evidence that it deliberately modified their research to reduce the statistical significance of the findings, omitted data, and destroyed documents – thereby committing scientific fraud. More importantly, it presents countless stories and anecdotes with an explicit emotional appeal about autistic children whose parents believe were vaccine-injured.

The documentary aims to persuade the audience that vaccines cause autism by mobilizing a strategy with the following storyline, 1) vaccines have harmed our children and it could be your child next, 2) it does not have to be your child if you follow our recommendations, 3) these are “our” children and it is our duty to protect them. This strategy is instrumental in generating a response to the fear appeal as it works on increasing the threat severity by presenting many anecdotes of children who were severely damaged by vaccines. Next, it increases the threat susceptibility by arguing that practically every child is susceptible to vaccine injury, and as a result, autism rates are skyrocketing. Finally, the documentary argues that if we, as a society, stop vaccinating children that autism rates will go down and that will essentially protect children from supposedly unsafe vaccines. Therefore, it ensures that the audience’s self-efficacy is enhanced because all they need to do is follow one simple step – stop vaccinating.

Fear of the Irreparable – “It could be your child”

The key tactics mobilized in this strategy is the combined use of imagery, music, and storytelling to increase risk perceptions and saliency. This is achieved by presenting countless similar stories from parents who believe their children were vaccine injured. During the ninety-minute documentary, a total of thirteen of what we could call “parental anecdotes” are staged and all share the same underlying argument – vaccines directly cause autism and a plethora of other physical and neurological diseases that are irreparable. This vaccine-autism argument, which conflates causation and correlation, is not new to anti-vaccine discourse. Through these stories, narrated by “real” parents, the film aims to instill fear by persuading the audience that vaccines can permanently damage children. This “irreparable scheme” is staged across scenes where children are supposedly being vaccine injured. Parents use the word “lost” or the phrase “lost

everything” multiple times, in addition to descriptions of how their children apparently regressed after receiving the MMR vaccine.

One of the key rhetorical tactics mobilized throughout the film is to convey with double-sided contrasting images of 1) autistic children in their most vulnerable states to 2) their pre-autistic state as perfect angelic infants. This strategy of juxtaposition aims to show that vaccines severely damaged these children. Hence, we can infer that by staging the sentiment of fear and distilling uncertainty in parents or future parents who may already be vaccine-hesitant, the film is playing on the fear of the irreparable.

For example, Brian Hooker’s teenage son is shown within the first five minutes of the film with noise-blocking headphones on and drinking from a baby’s bottle. This image is directly contrasted with a baby picture of him as a healthy, happy infant as well as clips of home videos showing how he was a normally developing baby before taking the MMR vaccine.¹ Hooker describes his child’s transformation after taking the MMR vaccine:

Two weeks after his 15-month vaccines, he lost all language, he lost all eye contact, you’d pick him up and he would just hang limp.

This brief story not only draws a direct link between the vaccines and his child’s regression into autism, but it also allows the audience to empathize with Brian Hooker and his son as it is difficult to not be touched by such a tragedy. More so, the arc of the story rapidly evolving from normalness to sickness creates an urgent sentiment of fear towards vaccines and their potential to damage children. The repetitive use of the word “lost” reminds the audience that there is something gone that will never come back (i.e. irreparable) because of this

¹ Brian Hooker is one of the main characters in the film who is the scientist that contacted the CDC and analyzed data he claimed to have obtained from the CDC which proved that the MMR vaccine causes autism.

vaccination. Moreover, by emphasizing the fast-changing timeline of this loss (i.e. two weeks after his 15-month vaccines), it suggests that the rapid health degradation occurred soon after the vaccine, almost overnight. In essence, the quote above highlights that it occurred quickly as a direct result of vaccinating a child. More importantly, it tells the story of a permanent loss.

This introductory scene is followed by several scenes of other autistic children in vulnerable states – wearing diapers as teenagers, exhibiting stereotypical aggressive and repetitive behaviours such as banging their heads, flapping hands, and uncontrollably crying. This representation of autistic children only shows the extreme end of the spectrum and negative side of autism, thus painting a dark picture of the disorder. These clips are accompanied by an interview with psychologist Doreen Granpeesheh who claims that autism rates have been skyrocketing in recent years. The same juxtaposition strategy is at play again: these images and clips being contrasted with the “normal” children before vaccination, creating a sense of fear that vaccines cause significant health damage that is irreparable. The underlying argument suggests that even if the possibility for a child to become autistic as a result of getting vaccinated is very small, the severity of the consequence and more importantly the irreparability of it outweighs the public health probabilism approach (i.e. the high number of children saved from infectious diseases). In this case, vaccine-hesitant parents buying this fear choose to protect their child from vaccines over protecting the general population from an infectious disease.

Evoking this sense of fear or irreparability is a powerful rhetorical (and semiotic) tool since many parents may not be able to cope with this uncertainty by envisioning the pain of potentially harming their child. Parents who watch and hear about other parents’ experiences will care very little about the statistical odds of this occurring (Lerner, 2018). The emotion of fear thus operates on both sides of vaccination arguments – as shown in the film with the contrasting

views that instill fear of another measles outbreak if people stop vaccinating versus fear of vaccine injuries.

However, the power of instilling fear in parents of the potentially harmful effects of vaccines, no matter how scientifically accurate this may be, shows how “fears about even rare vaccine reactions compete equally with fears about disease” (Lawrence, 2016, p. 206). The staging of this rhetorical tactic of displaying emotions to keep the audience attentive and somehow connected to the documentary’s protagonists continues throughout the film.

In the following scene, the documentary’s main characters – Polly and Jonathan Tommey are introduced to the audience.

Polly: I couldn’t wait to be a mom. I remember specifically before we even got married talking about how important children would be in our lives.

Jon: I wanted a daughter first, then I wanted a son and we were planning on having four children.

Polly: We were going to be the most perfect parents that we could be.

Jon: Bella was born, and that was a wonderful experience.

Polly: Bella was just this angelic, perfect child, she hit all her milestones. I got pregnant with Billy pretty quickly. [...] We’ve now got a beautiful girl and a beautiful boy and life was just amazing.

This scene introduces Polly and Jon as the most traditional and “perfect” nuclear family. Polly and Jon both speak in the past tense using words and phrases such as “wanted” and “we were going to...”, implying that despite “planning on having four children” and being “the most perfect parents”, their dreams were never realized. At this point, the audience does not know for sure if their dreams were shattered and if so, how. However, the scene is important as it sets the stage for future scenes in which Polly and Jon would share their story on how vaccines allegedly caused their son to become autistic. It paints the pre-vaccination state of the family that channels

emotions of happiness and peacefulness that would be later juxtaposed with the post-vaccination state that is filled with fear and chaos. There is joyful music playing in the background, as well as birds chirping and twinkling sounds that immerse the audience in positive emotions that would be later contrasted with ominous, anxiety-inducing music. When Polly says, “I couldn’t wait to be a mom” and that children would be “important” in their lives, it emphasizes how parenthood was a dream and life goal that she and her husband shared. Even though the audience has yet to learn of their child’s vaccine-autism story, it is plausible to infer that these parents lost the opportunity to be “perfect parents” and were robbed of normal parenthood. In this case, it not only evokes fear that vaccines could harm children but that they could destroy parenthood and one’s dream of having a family. In other words, the family becomes irreparable. Also, Polly describes her first daughter as an “angelic, perfect child” who “hit all her milestones”, which would be later juxtaposed with her autistic son. This scene plays an important role in the emotive flow of the overarching emotional appeal because it creates an emotional shift from joy, hope, and peace to fear and uncertainty later in the documentary – making these more intense and impactful.

The documentary goes on to show several detailed accounts from parents on how their perfectly healthy child apparently regressed almost overnight because of a vaccine – usually the MMR. Polly Tommey and her husband Jonathan describe the regression of their son into autism after vaccination.

Polly: The day Billy got the MMR was a living nightmare, it was the worst day of my life [...conversation continues] This immediate fear in Jon [...] And we get to the hospital, we rush him in, doctors are coming in and looking at him and that’s when they said ‘he’s had a reaction, he’s had a seizure, this is normal, this is common for many many children who have this, this vaccination[...].

He slept in the bed with us for the night [following MMR vaccine], he seemed...he seemed just very very sleepy, in fact he didn't really ever wake up ...to the Billy that we had before. [image of lights out]

This scene is unique as it shares the most frightening moments these parents lived through when their son had a reaction to the vaccine, allowing the audience to relive it with them. Polly uses the words “living nightmare” and “immediate fear” to describe what happened to her child as an attempt at evoking fear and painting vaccines as a culprit all parents should fear and avoid. The detailed description of events accompanied by ominous music and a fictional dark and eerie scene of someone being rushed to emergency care in a hospital channels the chaos and fear these parents said have experienced.

The scene ends with the mother saying her son went to sleep and did not ever wake up to the child they had before the vaccine – then the scene cuts to a clip of lights turning off. This signifies that this change is permanent, irreparable, and has cast darkness over this family's life – something that could happen to any other family that chooses to vaccinate. This scene also highlights another argument that many anti-vaxxers put forward: doctors and the healthcare system have failed them, lied to them, and have ultimately hurt their child without being held responsible. When Polly says the doctors told her that her son's reaction was “normal” and “common for many many children who have this [...] vaccination”, it implies two points – 1) that doctors and the healthcare system systematically downplay parents' fears, which in this case were legitimate, and 2) that many children experience the same reaction which turns out be more damaging than first thought by doctors. Polly states, “nobody ever told me that there would be any side effects to any of the vaccinations my children had”, which reaffirms that she had put her faith in the healthcare system and felt she was deceived. A few scenes later, Jonathan Tommey describes his son, tearfully.

I mean that was the time where [clears throat], our boy changed from what he was to [long pause] a real tragic, tragic case of a child who regressed into this autistic state and lost everything. Lost everything.

This is the first scene of the film where a parent is crying while describing their child's vaccine injury. This appears to be a powerful strategy since it is difficult, from the perspective of the audience, to question his intentions or verify the authenticity of his story as he cries and struggles to describe what happened to his son. Bradshaw et al. (2020) found that the use of somber music and tears intensifies the emotional impact and allows the audience to become "emotionally involved in narratives" (p. 2066). Jonathan also uses repetition to emphasize the tragic loss his family suffered. Besides, the pause between his sentences intensifies the display of emotions – like if it was too emotional to even speak – a sentiment that the audience can relate to, especially if they are parents. The Tommey family continues to appear throughout the film in several scenes in which they share more details about the reality of living with an autistic child. As a result, we become more familiar and intimate with the family and can empathize with them to some level.

Aside from the main protagonists' accounts of how their children apparently regressed into autism after vaccination, several other parents' stories are staged, which allows the audience to connect even further with "normal" parents. For example, a mother who happens to also be a nurse – both socially recognized authorities/roles regarding children – shares pictures and videos of her healthy baby, and then displays home videos of her son struggling to walk after being vaccinated as well as images of him looking very sick. She describes her son's regression.

He had previously been noted in our videos, home videos that he was walking, actually running at that point. Seven days after the vaccine, he was no longer able to do that. [clips

from home videos of child struggling to walk] He was falling down. He became a really sick, sick little boy.



The sharing of home videos through stories from an “average” parent – rather than the storyline of the film’s producers or what could be considered main protagonists – adds an element of authenticity and normalcy to the discursive strategy. This mobilization of home videos is interesting as it gives the fear appeal at play a supposedly “real” incarnation into what happens when vaccination turns bad. The audience is thus granted intimate access to this family’s struggle. Furthermore, the strategy of juxtaposition by displaying contrasting states is put forward again to emphasize the “day and night” sudden damage that affects children after taking the MMR vaccine. The key fallacious conclusion is that it is only the vaccine that could have made this child sick. Again, the mother stresses the timeline in which the sickness occurred (i.e. seven days) to re-emphasize that the sickness was directly caused by the vaccine.

One of the most powerful illustrations of the fear of irreparable strategy shows a mother who has twins, one who was vaccinated and became autistic, and one who was not vaccinated and grew up to be a successful, healthy woman. We see a mother describing the events that led to one of her twin’s getting a double dose of the MMR vaccine and the other not getting a vaccine. She explains how her vaccinated son experienced a severe reaction and was later diagnosed with autism. As the mother continues to tell the story of her son’s diagnosis, her teenage autistic son

sits beside her and watches a cartoon. This is then juxtaposed with her unvaccinated daughter elegantly playing the piano. Here is the mother's discourse.

Temple's twin is amazing, she is fluent in three languages, she speaks French like a native, she is an A student, she plays classical piano. With all of the guilt that I feel from that day, one of the best decisions I've made for her was to walk out of that office without her being vaccinated. [...] His twin is going into the 11th grade and for someone who still can't manage to cross the street, now am I grateful he's here – you bet. I'm grateful my son lived, I was so naïve that he would live a fulfilling life, he would end up being a happy man, having a family, my dreams for him... and every year that goes by, the older my son gets, the further the dream seems to be. [crying]

This story introduces another emotion to the viewer – guilt. While telling her story, Sheila cries and expresses the guilt she is apparently experiencing when she says, “with all the guilt that I feel from that day...”. The story touches on parenthood and the common ideology that every parent wants the best for their child – whether they choose to vaccinate or not. Many parents watching that scene could immediately empathize with her when she says her dream for her son to have a fulfilling life seems to be getting further. Appropriately, we can stipulate that most parents dream that their child would live a fulfilling life. Losing that opportunity based on the decision of vaccinating a child might trigger a sense of guilt, and in Sheila's case, she feels as though she made the wrong decision to vaccinate her son. Therefore, this story displays the emotion of guilt as Sheila shares her remorse as a mother/parent.

Moreover, Sheila compares her twins – first she speaks calmly but with teary eyes about her unvaccinated daughter who is “amazing” with many talents and skills. She later becomes distressed and begins expressing sadness and disappointment when she says her vaccinated son “still can't manage to cross the street”. The stark comparison between the twins highlights the

skills and abilities that are potentially threatened by vaccination – according to this mother. Also, the emotional shift and flow in this scene make it even more impactful.

The appeal to emotions through some parents' accounts of their child's regression into autism appears to serve yet another "reassuring function, reminding viewers who have autistic family members that they are not alone" (Bricker and Justice, 2019, p. 184). This leads to the second type of emotional appeal the film uses to stage its thesis (i.e. vaccination directly causes autism). The emotional appeal is acting as a channel to "save the viewer's children" from the dire consequences of vaccines. This saviour narrative aims to persuade the audience that the documentary has no hidden agenda nor ill intentions and that the core message comes from a place of genuine care and kindness.

Saviour Narrative.

While most of the anecdotes aim to instill fear by showing what might happen if you vaccinate children, some stories are displayed to support the underlying argument that the film serves a higher purpose: saving other children from the potential harm of vaccines. In a scene in which Polly Tommey describes their life with an autistic teenager, she makes a desperate plea to parents.

What I have on my hand now is a 19-year-old man, he's 6 foot 2, he is volatile. On good days, Billy is as brilliant as an angel. On bad days the slightest thing can trigger him and he's scary.

By describing her current situation, Polly attempts to gain the audience's empathy, as well as paint a realistic and balanced picture of living with an autistic child or teenager. The use of contrast is employed here by Polly when she describes her son's good days when he's an "angel" versus bad days when he is "scary". By recounting her son as "brilliant as an angel", she attempts to normalize autism and show a more realistic account of autism – with some bad and

good days. It could be inferred that this is a way of toning down the rest of the documentary that only shows the extremely negative aspects of living with an autistic child. Nonetheless, she uses the word “scary” to describe her son on his bad days, again reviving the fear appeal. Suddenly, the story cuts to the autistic 19-year-old saying, “I’m going to go downstairs and get daddy right now...I’m going to kill daddy right now!”. Polly continues then to warn the audience.

Out there, there’s millions of me’s, there’s millions of Polley Tommey’s with vaccine-damaged children. I am telling you this because I do not want you to live the life that I’ve led, I don’t want you to go through the pain. I do not want to see you suffer, or your family suffer. That is why I’m telling you. I’ve no other reason to tell you about it. It’s not my concern, my kid’s already damaged.

When Polly says there are millions of her out there with vaccine-damaged children, she attempts to transpose her situation to others by arguing that “we are all in the same boat”. She also tries to communicate that she is not being self-centred and that her intentions are “only to save your children”. Also, by using the word “millions”, she makes the point that vaccine injuries are so widespread and that it is not as rare as many people might believe. This story serves as a warning to parents or parents-to-be because it is reasonable to assume that no parent or family would want to “suffer” or endure the “pain” that Polly speaks about. The scene serves two purposes, 1) instill fear in the audience, and 2) exonerate the documentary’s producers and cast from having malevolent intentions. Polly clearly states, “That is why I’m telling you”, to clarify to the audience that her intentions are to warn them of the potential of going through the same pain and suffering that her family and child have gone through.

This savior narrative is intertwined with emotional stories from parents who have witnessed their children’s health deteriorate post-vaccinations. The way Polly speaks directly to the viewer makes her appear as though she genuinely cares and wants to save you and your

family from the pain and suffering, she has experienced. When she says, “it’s not my concern, my kid’s already damaged”, she reemphasizes the irreparable damage that occurs to vaccine-injured children, but she also sends another message – this documentary is not about us (i.e. parents of vaccine-injured children), it is about you (i.e. the viewer) and we want to save you. While other scenes in the film focused on what happened in the past, these looked more into the future, what could happen if you vaccinate your children, and the possible catastrophic scenarios.

Another story that stars Dr. Racheal Ross from the TV show *The Doctors* also uses language that implies that the documentary is future-looking and intended to save future children from harm caused by vaccines. Dr. Ross is presented with Brian Hooker’s analysis of the CDC’s research on vaccines and autism and is then asked in an interview with Del Bigtree² what she would say the next time a mother asks her about the MMR vaccine. She responds, “Hm...I’m going to tell her. I’m going to say, you know, honestly I’m not going to give the MMR vaccine to my babies, and here’s why”. The scene then cuts without further explanation – but her response makes a few argumentative points. The first one is that when this doctor became more informed about vaccines, her position was to no longer administer the MMR vaccine as she no longer considers it safe. The second point the filmmakers attempt to communicate is that they have good intentions and are making doctors more informed so that they can provide us, the audience, with safer options (i.e. no MMR vaccine) and can ultimately “save us” from its demise. By interviewing this doctor, giving her the analysis proving vaccines cause autism, and giving her an opportunity to share her opinion, the documentary attempts to show that it does not want to

² Del Bigtree is the producer of the documentary, a medical journalist, and the producer of the TV show *The Doctors*

antagonize the medical community, they simply want to equip them with the information “hidden” from them.

We Are All Parents

In the last third of the film, a clip from an anti-vax campaign called “Hear This Well” shows countless parents telling their stories of how vaccines injured their children. The stories are presented successively in a rapid manner with ominous background music increasing the display of fear. This emotional impact is further amplified with the display of disturbing visuals that generate feelings of fear, empathy, and guilt. For example, one of the parents shares a clip of her baby enduring a seizure. The clip is sixteen seconds long and is accompanied by an image of the baby hooked up to medical equipment. This can be severely disturbing and impactful because most people would presumably find it difficult to see an innocent infant suffer in that manner.

The clip ends with a collage of videos of all the parents who shared their story in this antivax campaign, and they all say with conviction and in unison “vaccines cause autism” (Bigtree & Wakefield, 2016). This scene truly utilizes the power of the anecdote – especially the emotion of fear it brings forth. Although no scientific evidence was shared by any of these parents, their parental conviction led by the fear of losing a child appears believable. More so, this type of intervention would “typically go unchallenged” because of how it can resonate with any parent, grandparent, or family member of a child who is autistic or has regressed after being vaccinated (Bricker and Justice, 2019, p. 178).

This clip also plays a significant role in showing the apparent solidarity of the anti-vax community by inviting the audience to join and “hear this well”. In addition, it puts forward the argument that from an ethical standpoint, there would be a shared responsibility for everyone to know the consequences of vaccines. Consequently, these parents with vaccine-injured children

must be believed for the sake of this shared responsibility. The clip ends with a woman crying who says, “one day everyone will know the truth about vaccines. Hear this well.” By using the word “everyone”, she makes it clear that it is a collective responsibility of every member of society to understand the alleged negative effects of vaccines.

In the last five minutes of the film, senior research scientist at the Massachusetts Institute of Technology, Stephanie Seneff makes an alarming prediction.

I just cannot imagine what it will be like if we really do face a future in which half the children born end up on the autism spectrum. [...] We’re just going to have extremely sick children. And parents that will be so distracted by the challenge of bringing up these children that are so sick, that our society will not be able to focus on anything else. [...] continues] I mean this is going to be a complete catastrophe if we just let it happen.

She uses the words “we” and “our society” to describe the situation in the future if vaccines continue to allegedly harm children. This implies that this is not a problem that is isolated, but that it is a real societal issue that “we” ethically should play a role to resolve. When she says, “we’re going to have extremely sick children”, it is implying that these are figuratively “our” children and therefore our responsibility. This takes the saviour narrative to the next level, by not only speaking to parents but to society as a whole – arguing that this issue affects everyone and that every member of society has a duty and ethical responsibility towards these children. She thus paints a dystopian future that will be “a complete catastrophe if we just let it happen”, implying that it is our role as members of society to make sure this does not happen and that we bring an end to unsafe vaccinations. This is a critical scene, because similar to the clip from the “Hear this well” anti-vax campaign, it repositions the issue as a societal one, and is ultimately a call to action or even a wake-up call. While utilizing the parental anecdotes and building up the emotional connection with parents of vaccine-injured children is a key strategy,

making the audience feel accountable, ethically responsible, and ultimately impacted by this harm is even more powerful. Furthermore, it allows any person watching the film, whether they are a parent or not, to potentially feel as though they can become part of this “community” that aims to protect children from the “bad consequences” of vaccination.

The use of emotional anecdotes, the saviour narrative, and the “we are all parents” narrative all engage the audience and, in a sense, channel their attention, leading to several objectives the film aims to achieve. The first objective is the increased risk perception of vaccines by the audience and parents more specifically. Most parents understand that there are some risks associated with childhood vaccines such as a temporary fever or rash, or in rare cases an allergic reaction. Accordingly, the film aims to dramatically increase this “risk perception” to more severe reactions such as permanent disabilities and neurological disorders. The second objective appears to look to normalize the anti-vaccination thesis and paint it in a more favorable light. Rather than being viewed as conspiracy theorists and as a fringe population, the film and its protagonists put forward a relabeling of anti-vaxxers by painting a portrait of them as simply good parents that want the best for their children – and now for *your* children as well. This is achieved through the staging of stories and clips where they warn the audience who may be parents or future parents by making it clear that this could be your child.

Finally, it re-emphasizes this saviour narrative by arguing that it is our collective duty as members of society to become aware of the potential negative effects of vaccines. This serves as a call to action to fulfill an ethical responsibility of protecting “our children” and the future of our society. Overall, the emotional appeal acts as the “hook” to capture the audience’s attention and empathy. Further to this, the documentary mobilizes the appeal to science and “scientific evidence” to persuade the audience that vaccines cause autism.

Appeal to Science and Authority

The scientifically based discursive strategy allows putting in place a specific narrative that supports the idea that vaccines are unsafe and cause autism. This is accomplished by using three key tactics, 1) the appeal to the apparent credibility and authority of individuals in the film, 2) the sharing of pseudoscience and the redefinition of medicine and healthcare, and 3) shifting the vaccine-autism hypothesis in order to appeal to many audiences. The following sections will analyze several scenes and discursive tropes that convey the appeal to science and authority. First, an analysis of the documentary's key protagonists will display how it mobilizes the "traditional" authority by giving credibility to the key spokespersons.

In *Vaxxed*, the filmmakers rely extensively on authorities – i.e. the many ways someone or something has the potential to influence others – to convince the audience that what is discursively expressed is associated with credibility and trustworthiness (Bencherki, Cooren, & Matte, 2020). This is accomplished by linking the protagonists to credible and renowned institutions, in addition to giving them legitimate titles and labels such as "doctor" or "scientist". The filmmakers' strategy is to legitimize these individuals as authority figures who would be more likely trusted and thus can more easily sell their pseudoscience. The second part of the analysis will take a closer look at the pseudoscience offered by these individuals and the shift in authority from more traditional authority to parents. This is achieved by relying on and supporting the postmodern medical paradigm that mostly rejects scientific authority, redefines expertise, and allows individuals to construct new realities through their own arguments, narratives, and justifications (Kata, 2012). Lastly, this section will analyze how the pseudoscience is further propagated by the formation and shifting of the "vaccine-autism"

hypothesis by the misrepresentation, distortion, and use of scientific research findings in an attempt to confuse the audience.

Appeal to “Traditional” Authority

A key rhetorical tactic displayed in *Vaxxed* serves as a way to establish the credibility and trust of the documentary’s main protagonists. The aim is to relabel the scientists and individuals as more than just “mere anti-vaxxers” and to paint them more credibly. As we will see, relabelling these individuals frees them from the somewhat negative reputation associated with being an anti-vaxxer as a way to respond to potential or past critics from the science community. This serves as a defensive posture that is likely to make their messages seem more believable, authoritative, and well-intentioned. The common tropes displayed in these protagonists’ narratives is the “I’m not anti-vax, I’m pro-safe vaccines”, and the trope of “the patient knows best”. While William Thompson is a legitimate authority who was a senior scientist at the CDC, Brian Hooker is not medically trained on vaccines or immunology, and Andrew Wakefield had his medical license suspended due to unethical, fraudulent research. Nonetheless, they are all presented as traditional authorities and “experts” on vaccines. We will analyze this “traditional” authority posture with some of the main protagonists³.

William Thompson. In the film, we are presented with the story of the CDC whistleblower who exposes the CDC’s alleged coverup on research apparently proving a link between the MMR vaccine and autism. William Thompson’s credibility and authority are emphasized by the other main protagonists in the documentary. For example, Brian Hooker describes how Thompson gave him advice for accessing CDC documents and says, “when a

³ See Appendix B for background information on each of the protagonists’ role in the documentary

CDC scientist who'd been there at that time seventeen years tells you this is how you access data...it didn't take me time to realize 'oh I better do what he says because he knows what he's talking about'" (Bigtree & Wakefield, 2016). In a sense, Hooker is validating Thompson's claims due to the fact he has "seventeen years of experience", pointing to his extensive experience working for the CDC. In addition, he demonstrates how Thompson's authority translates into power over his actions when he says, "I better do what he says". Nevertheless, what is interesting is the fact that Thompson does not appear in the documentary: his story is told by the other protagonists and through phone recordings – a discursive strategy of appropriation that gives them more weight by "making him speak" in a way that enhances their anti-vax vision and the overall objective of the movie.

Andrew Wakefield. Within the first ten minutes of the documentary, Andrew Wakefield introduces himself as "an academic gastroenterologist doing research with a particular interest in Chron's disease and ulcerative colitis" and is shown dressed in a lab coat in a science lab, looking through a microscope. The use of the medical terminology that most laypeople will not fully grasp makes Wakefield appear intelligent and knowledgeable in the field of medicine. Also, the imagery of him dressed in a lab coat, sitting in a research lab makes him appear even more trustworthy and knowledgeable. This is supported by recent research in the *British Medical Journal* that found that patients were more likely to trust doctors in formal attire (Petrilli, Saint, Jennings, et al., 2018). In other scenes, Wakefield is dressed in a formal shirt or suit. While this could be a mere coincidence, it may also indirectly influence the audience's perception of Wakefield as a credible medical authority figure.



Brian Hooker. Hooker describes himself in the first five minutes of the documentary. He says, “as a scientist, I have over sixty technical and scientific publications in major international scientific journals and I was contacting the CDC and was deeply critical of their studies [...]”. Firstly, Hooker establishes that he is a scientist that has published extensively, positioning himself as a formal medical authority. When he says that he has published in “major international scientific journals”, it implies that his research is credible and accepted by the scientific community. In addition, Hooker aims to portray himself as a warrior seeking the truth on vaccine safety when he says he was “deeply critical” of the CDC’s studies, and “trying to crack this edifice of the CDC”. By portraying Hooker as a brave scientist, with many scientific publications and years of research, the film makes him appear as a credible and honest scientist with good intentions, which in turn, makes his scientific analysis more palatable and authoritative. Furthermore, showing that he is also a father of an autistic child positions him as someone with both scientific and parental authority. Other characters play an active part in enacting the discursive apparatus put forward to support an anti-vax thesis.

In addition to these key figures, the filmmakers also utilize the “expert” opinions of several other doctors, scientists, and health workers to advance the idea that vaccines cause autism. This strategy lends credibility and authority to the documentary by making it seem more impartial, despite its anti-vaccine stance. For example, the documentary introduces pediatrician Jim Sears in the first fifteen minutes as a pro-vax doctor who was on the US show *The Doctors*.

He says “I’ve been working in pediatrics for almost 20 years. I think most pediatricians view vaccines as they are the number one thing they do for kids.” The documentary establishes that Sears is a pro-vax pediatrician with extensive experience (i.e. 20 years). Nevertheless, towards the end of the documentary, we see that he finally agrees with Brian Hooker’s analysis and believes that vaccines could cause autism. This makes his opinion seem more credible and trustworthy as he is far removed from being a core anti-vaxxer. The documentary portrays him as a pro-vax doctor who eventually learns the “truth” about the apparent negative effects of vaccines.

Through the relabeling of individuals in the documentary and defining them as authority figures, their arguments become “perceived to be “right” because [they are] in concordance with existing and accepted organizational structures” (Benoit-Barné & Cooren, 2009, p.6). These arguments are often opinions or false claims disguised as “real” science. Furthermore, these claims or arguments are fuelled by anecdotes from parents, thus shifting the power and authority from doctors and scientists to parents.

Pseudoscience

Another key rhetorical tactic used in the documentary is what we could call “the peddling of pseudoscience” by the supposedly established credible sources previously discussed. The documentary’s main storyline follows the reanalysis of the CDC’s research study on vaccines and autism by Brian Hooker who reorganizes the data in several ways to show that the MMR vaccine causes autism. However, this is not the only enactment of pseudoscience in the documentary. One of the main ways to incarnate this pseudoscience is the conflation of causation and correlation. That is, claiming or insinuating that because one event followed another event, that the first event caused the second. In this case, individuals in the film argue that children are

getting more vaccines in recent years and autism rates have also been increasing – therefore vaccines are perceived as the culprit in the increase of autism rates.

A commonly used argument is that autism rates have been skyrocketing since the early 90s and that the expanded vaccine schedule is the cause of this dramatic increase. As mentioned by several other “experts” throughout the documentary, Andrew Wakefield also claims that autism rates have been going up.

I knew nothing about autism. When I was in medical school it was so rare, we weren't taught about it. We heard a succession of stories that were very very similar, medicine is about pattern recognition and there was a clear pattern emerging.

First, Wakefield claims that autism was so rare he was not taught about it in medical school. Therefore, he is arguing that the main reason he was not taught about autism was because it was almost non-existent, and he disregards other possibilities such as a lack of awareness of the disorder or misdiagnosis. Second, he says that he and other doctors began to hear “a succession of stories that were very very similar” and that “medicine is about pattern recognition”. When he says this, he implies that because more parents are coming forward with stories about their autistic children's regression, autism rates must be going up. However, this argument ignores the possibility that people are becoming more open about speaking about autism and that the disorder is less stigmatized. Therefore, this could drive an increase in these sorts of stories. More importantly, while he claims that autism was so rare and that “a clear pattern” was emerging, he fails to provide any legitimate data to prove this increase.

The documentary takes this argument a step further by peddling the idea that the stories from parents and the parents' perspective carry more weight and value than scientific research. In

a sense, the documentary aims to portray these stories as “real science” that cannot be refuted.

Del Bigtree, the documentary’s producer and a medical journalist, talks about this phenomenon.

We know in medicine that there have been many many studies proving that vaccines do not cause autism. But the problem I have always had with that is thousands and thousands of parents all telling the same story. My child got a vaccine, usually the MMR vaccine, and then that night or the next day broke out in a fever. And then when they came out of the fever, lost speech, lost the ability to walk, basically regressed into what we know as autism, and never came back. Doctors used to be told to listen to their patient, that was the cornerstone of medicine as we know it. But something’s changed recently where the patient doesn’t know what they’re talking about. And these parents with their story of their children have just been written off as though they have no idea what’s really going on with their child.

This quote is of the most impactful discursive apparatuses as it highlights several arguments put forward. First, when Bigtree says that “many many studies” have proved that vaccines do not cause autism, but then says that he has a problem with this because “thousands and thousands of parents are all telling the same story”. He essentially discredits these scientific findings and raises the value of parents’ stories over actual science. In a sense, he is arguing that science is no longer or should no longer be the authoritative voice when it comes to the “vaccination debate” because it has allegedly failed us as a society. This denial of legitimate scientific findings is a key characteristic of pseudoscience, as well as the postmodern medical paradigm, which shifts the power and authority from doctors to patients.

Moreover, Bigtree attacks the medical community by claiming that doctors no longer “listen to their patient” and that “parents with their story of their children have just been written off”. He implies that without the real data (parents’ stories), doctors are unable to properly diagnose a child or determine the cause of the disorder. While this may be true in some cases, he

takes this argument a step further to claim that parents are somehow better equipped than doctors to determine when and how their child regressed into autism. The collapse between being a parent and a scientist is thus fully consumed and the demarcation not necessary anymore.

I have two kids [pause] and anyone that has children knows that when we first have babies we are overly sensitive to every little hiccup, every cough, every snuffle, so to say that a parent was just unaware that their child had issues and suddenly they realized at one year later that oh they have autism, that doesn't make sense to me. And so I wanted to look into this story and find out what is this disconnect between medicine, science, and real parents.

Bigtree emphasizes that parents are simply more aware of their child's development and that the stories from "real parents" cannot be taken lightly. Also, he attempts to redefine "expertise" by claiming that parents are experts on their own children since they are "overly sensitive" to their children. This view is mirrored throughout the documentary by other parents and health experts who support the idea that everybody is an "expert" and denigrate genuine and renowned authorities.

In addition to peddling the idea that vaccines cause autism and that parents' stories are the most legitimate source of information, the documentary also aims to redefine autism. Doreen Granpeesheh, a licensed clinical psychologist, describes it as follows.

When I want to define autism, I have to say it's the inability to detoxify the way you're supposed to, at the rate you're supposed to, and it all has to do with this toxic overload. These children are not detoxifying from the vaccinations. Same thing with GMO products, the pesticides in our food. If I can prevent the child from being exposed to more toxins, then when I'm teaching the child, at least the child is getting better and not continuously getting worse.

She describes autism as the “inability to detoxify” and as a “toxic overload”, which is associated with the argument that autism is caused by environmental factors such as vaccines. However, rather than saying that this toxic overload causes autism, she claims that autism is in and of itself the inability to detoxify and that the cure is to “prevent the child from being exposed to more toxins” (i.e. vaccines). This is pure textbook pseudoscience as it holds no scientific basis and disregards the fact that autism is a neurological disorder with no known medication or a single approach to treat it. As described by Makgoba (2002), pseudoscience includes misrepresented or distorted research findings, lack of ethics in conducting and sharing scientific research, or the use of scientific research to confuse the public.

In this case, this clinical psychologist uses her traditional authority to confuse the public by misrepresenting autism as well as claiming that reducing toxins (i.e. vaccines) ensures that “the child is getting better” and thus being treated. While this specific argument may persuade some members of the audience to stop vaccinating, it might not necessarily impact everyone. Therefore, anti-vax rhetoric often offers the audience multiple perspectives and arguments that are more likely to impact a wider audience. The following section will demonstrate how the documentary shifts the vaccine-autism hypothesis with the purpose of confusing the public and persuading the audience that vaccines cause autism.

Shifting Hypothesis

Historically, anti-vaxxers’ arguments and the overarching “vaccine-autism hypothesis” has shifted when evidence fails to prove their theories or new research refutes their hypothesis (Kata, 2012). This phenomenon is present throughout the documentary, with different theories emerging to explain the vaccine-autism link. The vaccine-autism hypothesis is framed and

reframed throughout the documentary. Early in the documentary, Andrew Wakefield provides a historical account of an MMR vaccine in 1978 that caused a meningitis epidemic.

Now scientists studied that epidemic, and what they found is that the risk for meningitis was associated with age of exposure. The younger you got the MMR vaccine, the greater the risk of meningitis. For people like me investigating autism, the question was, is there a similar risk in autism, is age of exposure to MMR a risk for autism just as it was for meningitis? We shared with the US Congress and the CDC the hypothesis.

This becomes a central argument in the documentary – that the early age of exposure to the MMR vaccine increases the risk of autism. In fact, the documentary’s producer claims that the CDC’s vaccine schedule recommends that children get the MMR vaccine at the most dangerous time. The documentary adds another element to the hypothesis – “the African American effect”. Brian Hooker describes this phenomenon.

Bill Thompson looked at African Americans, he saw that those African Americans that got the MMR on time were 264 times more likely to get an autism diagnosis than those African Americans that receive the MMR after three years of age.

For the lay audience, understanding statistical significance or interpreting what “264 times more likely” means might not be easy. Therefore, by making such references, it simply confuses the audience with the intention of adding the “race factor” to the issue regardless of the scientific findings. In fact, in one of the recorded calls in the documentary, Brian Hooker says, “it appears in the final publication, that race is downplayed” and William Thompson replies, “of course it is!”. Historically, and in present times, there are many sensitivities around injustice, racism, and mistreatment of African Americans in the United States. Therefore, adding this factor to their hypothesis is an instrumental move that could infuriate some members of the audience.

Later in the documentary, another concept is added to the hypothesis that shifts the attention from African Americans to essentially every healthy child. This hypothesis claims that children with no developmental concerns in their first year of life are at an increased risk of autism. Wakefield says, “this risk group includes essentially every healthy child in the world”. This is an extreme shift in the hypothesis, which first outlined certain risk groups such as boys or African American children. However, it is a strategic discursive move by the filmmakers as this claim requires less evidence to prove its validity, compared to other hypotheses that outline specific characteristics of risk groups. Besides, as this is more likely to affect a wider audience, it can be more impactful as it potentially touches all children. Along with shifting the hypothesis, mobilizing pseudoscience and scientific authority, the documentary also outlines several conspiracy theories with the aim of creating an Us vs. Them divide.

Conspiracy & Us vs. Them

Anti-vax rhetoric is prone to be rife with conspiracy theories that fuel a lack of trust in science, media, and the government. In *Vaxxed*, conspiracy theories are framed as an “Us vs. Them” issue that portrays parents and anti-vaxxers in a constant battle with doctors, politicians, and the scientific establishment (i.e. “Big Pharma” and mandatory vaccine laws). *Vaxxed* thus aims to create a sense of community among parents and those who object to vaccines, portraying them as “good actors” in conflict with the evil “other” (i.e. the government, corporations, doctors, etc.). By continuously grouping the government, media, doctors, and scientific establishment as a conspiring group with a shared goal (i.e., profit), they are more easily perceived as a single, corrupt entity. Conspiracy theories appear to be a central discursive apparatus of the documentary, with the main storyline and title alleging a “cover-up” from the

CDC who allegedly colludes with the pharmaceutical industry with ominous objectives of gaining profit with no regard for the potential negative effects of vaccines.

Overall, this “Us vs. Them” framing questions traditional authority and aims to transfer this authority to parents. This discursive strategy that puts forward an interplay of authorities creates a space where doubts and discredit can emerge. To show how this interplay of authorities unfolds we will analyze several scenes where the themes of censorship, Big Pharma, and corruption of the CDC are staged. More specifically, the documentary attacks the media, the pharmaceutical industry, and the government, and ultimately claims that the three entities collude against the public to profit from vaccines, despite being aware of the vaccine-autism risk. Moreover, the documentary serves as a call to action against those who have power (i.e. government, industry, and scientific establishment). The mobilization of conspiracy theories through an Us vs. Them posture aims at explaining away uncertainties that a potential vaccine-hesitant audience may have, pushing forward the vaccine-autism hypothesis, and deviating from the traditional authority and power of institutions.

Censorship – The mainstream media control the message

While most anti-vaxxers will typically censor dissenting voices, the documentary claims the contrary, that their voices have been censored by the mainstream media in this alleged cover-up. The strategy is used to persuade the audience that vaccines can and do cause autism, but that the media, in collusion with the government and pharmaceutical industry, have essentially muted this issue. Del Bigtree, the producer of the TV show, *The Doctors*, and *Vaxxed* discusses how he was not able to share the CDC’s whistleblower story on his show.

Unfortunately, it was a story I would not be able to tell on a medical talk show because a lot of our funding was coming from the pharmaceutical industry. And we were also very good friends with the CDC who had appeared on our show many many times, but I knew that once

the story broke, two weeks later, that the mainstream news media would pick it up, FOX would be on it, CNN would be on it, MSNBC, and we're talking about the biggest medical story in the last decade or two at least. So that two weeks came [...], and I watched the blogosphere go crazy – tweets, Facebook, social media, everybody talking about it. But not one mainstream media source went anywhere near this story. In fact, on CNN someone put the story up on iReport, and CNN took it down. And at the moment I realized, wait a minute...not only is my medical talk show produced by the pharmaceutical industry...all of television is. We were never going to get this story, but we certainly did get a story [measles outbreak in Disneyland].

When Bigtree says the funding for the show came from the pharmaceutical industry and that they were “very good friends with the CDC”, he is implicitly claiming that both the pharma industry and the CDC controlled the messages on the show. Therefore, even if the CDC was indeed corrupt and covered up research that proved vaccines cause autism, this would never be shared on *The Doctors*, according to him. Bigtree then names several mainstream media sources that he assumed would share the story but did not, showing how the pharmaceutical industry is powerful and controls the media. He explicitly says, “not only is my medical talk show produced by the pharmaceutical industry...all of television is [...] we were never going to get this story”. When he states that all of television is controlled by the pharma industry and that “we” were never going to be able to share the CDC’s whistleblower story, he portrays the issue as a David vs. Goliath situation, in which the pharma industry has complete control and power, silencing all dissenting voices who want to tell the “truth”. He thus positioned himself – in the name of this apparent cover-up – as a victim of the traditional institutions that are protecting their “friends”.

Bigtree continues by saying that he watched the “blogosphere go crazy”, emphasizing how social media was the only outlet – and allies – for opposing voices on vaccines and that “everybody” was talking about it. This implies that not just anti-vaxxers are concerned with the story, but a much wider and diverse population. Thus, he aims to portray social media as the

authoritative and truthful voice on vaccine safety, while arguing that traditional mainstream media and news should no longer be seen as unbiased and objective. Also, he implies that the media also silences citizen journalism when he says, “CNN someone put the story up on iReport, and CNN took it down”. He also ends the scene by claiming that while the CDC whistleblower was overlooked by the media, the Disney measles outbreak received attention – demonstrating how the mainstream media have supposedly been strategically selective.

The documentary thus claims that the media has intentionally ignored the so-called skyrocketing autism rates and has instead focused on instilling fear in the population of measles outbreaks. More specifically, the very first scene in the documentary begins with several news stories and reports on the California measles outbreak in 2014, also known as the Disney measles outbreak. Including this as the initial scene is a strategic way to show how the media overemphasized this outbreak and made it seem more dangerous than it truly was. Additionally, it could be a way to ridicule the media’s overreaction to this outbreak. In one of the news reports, the reporter says, “someone who had probably caught measles abroad, visited Disneyland and may have sneezed”. Selecting this scene allows demonstrating how the media allegedly jumps to absurd conclusions by claiming that someone who “may have sneezed” caused a measles outbreak. Psychologist Doreen Granpeesheh comments on the media’s reaction to the measles outbreak, claiming that the number of measles cases was not significant when compared to the number of autism cases in 2014.

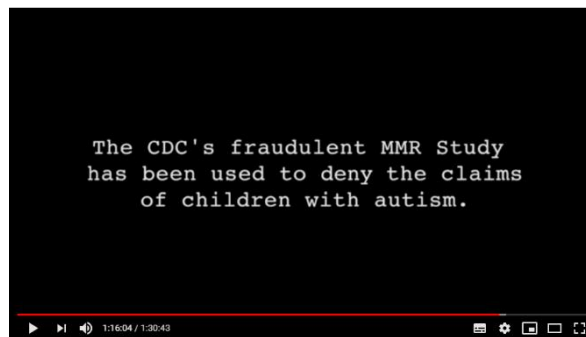
It’s really amazing to consider the number of cases of autism every year and to contrast that to let’s say the number of children who acquired measles by going to Disneyland. It’s a tiny number of children who acquired measles and it’s vast number of children who are being diagnosed with autism every day.



In saying this, she mobilizes her position of authority as a medical professional to claim that autism is a larger issue than measles by drawing a parallel between the two without contextualizing it. Additionally, by evoking statistics and providing comparative figures, whether accurate or not, it makes her claim seem scientifically grounded and legitimate. This is contrasted with the media’s overall position, which Doreen implies is biased and selective in their coverage. Therefore, she strips the media from having any authority on this issue. Broadly speaking, this discursive strategy aims to show that the media are puppets controlled by a corrupt government and greedy pharmaceutical companies.

Big Pharma and CDC Corruption

An overarching argument that supports the thesis that vaccines cause autism is that the CDC orchestrated this alleged fraudulent MMR study to deny the claims of children with autism in “vaccine court”.



Within the first two minutes of the documentary, CDC scientist William Thompson makes an alarming confession about his scientific research at the CDC.

I was involved in deceiving millions of taxpayers regarding the potential negative side effects of vaccines. We lied about the scientific findings. The CDC can no longer be trusted to do vaccine safety work. Can't be trusted to be transparent. The CDC can't be trusted to police itself. Just a few thoughts.

This statement is shown as something being typed on a computer and is followed by a declaration of who was supposedly writing it – “William W. Thompson, senior scientist, U.S. Centers for Disease Control and Prevention”, emphasizing his role and authority as a senior scientist at the CDC. Thompson’s confession, which states that he and his fellow researchers “lied about the scientific findings” immediately shatters the image of the CDC as a trusted public health institute. Also, he explicitly states that it can no longer be trusted, implying that it should no longer be the authoritative scientific source of information for the public. This is troubling as most politicians and doctors in the U.S. would recommend that the public follow the CDC’s recommendations on most health issues. In fact, the first scene in the documentary which shows a montage of news reports about the 2014 measles outbreaks ends with former President Obama urging the public to vaccinate their children and follow the CDC’s recommendations.

I would strongly encourage everybody, look at the science, look at the facts, the CDC – the Center for Disease Control, can give you good information.

Therefore, this claim made by the CDC whistleblower can be considered as a radical perspective, contrasted with Obama’s recommendation, which aims to breakdown the traditional long-established reputation of the CDC as a “go-to” authoritative source of medical information. Moreover, by stating that the CDC can no longer be trusted to police itself, Thompson is suggesting that some other figure should take an authoritative role in policing the CDC and ensuring that there is no corruption. Perhaps, this role could be played by the public or the “millions of taxpayers” whom he refers to, thereby shifting authority from the CDC to the public.

Moreover, Thompson's confession, which is directly preceded by Obama's advice demarcates the line between "us" and "them" and raises suspicions on trusting those with formal authority. Furthermore, by ending his startling confession with "just a few thoughts", it implies that this may be the tip of the iceberg in the CDC's deception and cover-up.

The CDC's reputation and authoritative image is further corroded and blemished throughout the documentary. For example, Brian Hooker claims that the way the CDC does research studies is "very reactionary [and that] they don't study vaccines proactively" (Bigtree & Wakefield, 2016). This is juxtaposed with Andrew Wakefield, who supposedly proactively studied vaccine safety and discovered the vaccine-autism link in 1998. Del Bigtree states, "because Andy Wakefield had put forth this theory that the age at which you receive the MMR may increase your risk of autism, the Institute of Medicine (IOM) looked to the CDC to do that very study" (Bigtree & Wakefield, 2016). Former Congressman and M.D., David Weldon, further highlights the CDC's pitfalls.

There didn't seem to be objective research going on. There was the CDC trying to promote vaccination for children and then they were doing the safety research themselves...The CDC I just thought was institutionally conflicted.

Yet again, the Us vs. Them frame is mobilized to show how individual scientists or doctors researching vaccine safety serve a more thorough and proactive role in uncovering potential negative effects of vaccines – while the CDC is reactive and covers-up scientific findings that may reduce vaccination rates. Weldon's comment implies that because the CDC was promoting vaccines, their research was biased and disregarded any findings that could deter the public from vaccinating.

Andrew Wakefield further emphasizes the CDC's allegedly corruption, while also vindicating himself from claims that his paper in *The Lancet* that linked the MMR vaccine to autism was scientifically inaccurate and unethical.

Wow, really, after everything that had happened, everything that we'd all been through, everything that the families had suffered for the last fifteen years, and the CDC has known all along there was this MMR autism risk.

On behalf of families “who suffered” – he authorizes himself to speak in their name – Wakefield tells how shocked he was with the alleged CDC cover-up, which suggests that this formal authority is rarely if ever, questioned. Additionally, he highlights that it took “fifteen years” to uncover this alleged cover-up, which alludes to how the corruption within the CDC is supposedly entrenched. Moreover, Wakefield uses the pronoun “we” when talking about the families with autistic children, thereby evoking the Us vs. Them frame in an attempt to place the CDC as a foreign (and corrupt) formal authority that the anti-vax community has to grapple with. The attack on the CDC continues throughout the documentary with claims that the CDC colludes with the vilified “Big Pharma”.

Mark Blaxill, the author of *The Age of Autism* claims that while the CDC cannot directly take money from Pharma “they can set up a foundation and the foundation can attract donations from commercial interests, and it does”, which he asserts makes way for “huge multi-billion dollar vaccine business” (Bigtree & Wakefield, 2016). While Blaxill does not prove any of his claims, at this point in the documentary there has been a build-up of distrust in formal authorities. This discursive strategy aims at pushing forward an overall lack of trust, thus making it more palatable to claim that the CDC indeed does collude with Big Pharma. Besides, many members of the audience may more than likely have preconceived notions of the pharmaceutical industry, which has been bombarded with conspiracy theories in the past (Hausman,

Ghebermichael, Hayek, & Mack, 2014). To substantiate Blaxill's claim and to disintegrate the pharmaceutical industry's reputation, a former Merck employee, Brandy Vaughan, discusses a past scandal.

When I was working at Merck, I was a sales rep for Vioxx. The whole scandal started when it was discovered that Merck had manipulated data and covered up the fact that Vioxx actually caused twice the amount of heart attacks and strokes than the placebo. What I learned from that experience is just because things are on the market does mean they are safe.

This testimony comes from authoritative organizations, given that this former employee was privy to information supposedly hidden from the public by Merck. More importantly, this is an attempt to transpose this scenario to vaccines by arguing that if this scandal was possible, then vaccine safety cover-ups are also quite plausible. Vaughan continues to explain the inner workings of Big Pharma.

If a drug company gets just one vaccine added to the schedule, they can make upwards of 30 billion dollars in one year. [...] We have a highly profitable product because the safety testing isn't as rigorous as a normal pharmaceutical drug. [...] If a pharmaceutical drug was tested like this, it wouldn't be on the market, but because it's a vaccine and the safety testing is less rigorous, our children are being experimented on.

This discursive excerpt is interesting for several reasons. First, Vaughan appears to be knowledgeable and authoritative about drug safety testing from her experience working with Merck. Therefore, her claims are more likely to be believed and trusted. Second, Vaughan primarily takes a position where she considers herself part of the pharmaceutical industry when she uses the word "we" when she says, "we have a highly profitable product". Interestingly, she then transfers her role from being part of the pharmaceutical industry and as a member of the

victimized public when she says, “our children are being experimented on”. It appears that Vaughan occupies and mobilizes different positions in the Us vs. Them composition to fulfill several outcomes – gain the trust of the audience, appear as a formal authority, and appear empathetic as well as creating a dialogical space for doubt. The attack on Big Pharma and the CDC culminates when Del Bigtree speaks about Julie Gerberding, former head of the CDC, and how she eventually gets a high-paid job with Merck.

Dr. Julie Gerberding received an award of her own. A high paid job as head of the vaccine division at Merck. Clearly, Merck appreciated the work she had done investigating their vaccine.

Bigtree thus claims that Merck had paid members of the CDC to omit and manipulate data when studying the safety of their vaccine to cover-up any vaccine-autism links or risks. This apparent blatant corruption is further echoed by David Weldon.

People on the IOM [Institute of Medicine] move from industry, government, academia, government, industry, and they bounce around. It’s all the same people and there wasn’t a really good policeman in all this to really make sure that the vaccine safety studies are done properly and that they’re done objectively. It just didn’t seem to me that we were running a system that was credible.

This statement summarizes the documentary’s overarching conspiracy theory translated into an Us vs. Them frame, as it aims to paint the pharmaceutical industry, government, and academia (i.e. scientific establishment) as one unified vilified body. In other words, his statement claims that the pharmaceutical industry colludes with the government as they are “all the same people” with likely the same interests and are protecting these interests. When Weldon says it didn’t seem that the system was “credible” and lacked a “really good policeman”, he is attempting to obliterate the trust in any formal or traditional authority and suggests that a new

authority needs to be formed. Although he does not specify what this new authority would look like, it can be assumed that it would involve voices from the public.

***Vaxxed TV* – YouTube Channel**

To demonstrate how the documentary plays a role in fuelling the online conversation on vaccines, the comments on one of the videos on its YouTube channel will be analyzed. As outlined in the methods section, the video selected for this portion of the analysis is from the *Vaxxed TV* channel and is an interview on the *Vaxxed* bus with one of the film's cast members, and a doctor (and mother) who claims her six-month-old daughter passed away after getting vaccinated. The video follows similar narratives to those found in the documentary such as conspiracy theories that portray the government as corrupt and the “overnight autism” narrative and mobilizes rhetorical strategies of questioning traditional authority and medicine, mobilizing the reconstructed authority, and using emotional anecdotes to gain the audience's empathy.

Three key themes have emerged from an overarching review of the comments and conversations via replies on comments. The first theme is a conspiracy theory type of theme that views the government, medical establishment, and Big Pharma as corrupt with ill intentions. This theme emphasizes the evil Other/Them that want to destroy “us”. The first comment that fits this theme simply states, “it is part of the depopulation agenda...I am so sorry for your loss”, and has 460 likes, zero dislikes, and 65 replies. While the comment may be a simple statement, many viewers agree with the conspiracy theory that the government is trying to depopulate by administering allegedly unsafe vaccinations. This type of comment evokes fear and suspicion in the audience, a common tactic used by anti-vaxxers that aims to create distrust in authority. Another comment of this type expands further on the so-called “depopulation agenda”.

I will pray for this doctor's safety. Many who are awake and speaking out are being killed. We're under a satanic depopulation agenda and a money racket by big med and big

pharmaceuticals industries who have no interest in health. The perpetrators know what not to take or what not to eat and are sitting on cures to chronic disease and cancer. Keep speaking out. God bless the brave ones.

This comment goes a step further by describing the evil Other as having “satanic” intentions and even accuses them of killing those who speak out against them. The comment also points a finger at Big Pharma that he claims is only interested in money and “have no interest in health” – a common narrative in anti-vax rhetoric and one seen in *Vaxxed*. The commenter encourages those who speak out against these allegedly corrupt entities and ends the comment with “God bless the brave ones”. Interestingly, a similar discursive strategy was mobilized in *Vaxxed*, in which those who spoke out against the CDC and the pharmaceutical industry were painted as heroes – including Andrew Wakefield and Brian Hooker. This positions those who speak out as a “new” authority who are seeking the truth. From these comments, it appears that the conspiracy-laden comments with bold statements that create an “Us vs. Them” divide create the most engagement among the audience. This pattern continues with comments that accuse specific entities of government and question their authority.

The second theme is related to comments that are political in nature and refer to the vaccine compensation programs and the so-called vaccine court in the United States. This contentious topic is featured in the last third of the *Vaxxed* documentary and typically receives attention in the anti-vax community. One comment accuses the US Congress of overstepping.

It is my belief that Congress overstepped its authority in giving Immunity to the Pharmaceutical Industry regarding vaccine liability. I do not think Congress can grant immunity when a possible adverse reaction a vaccine may be Death. I hope a suit is brought before the US Supreme Court that finds their action Unconstitutional. It will NOT be the 1st time Congress was wrong.

This comment has 517 likes, zero dislikes, and 58 replies – indicating that the audience was highly engaged with the topic. An interesting aspect is that it is written clearly as an opinion and not facts as the writer uses statements such as, “it is my belief [...] I do not think [...] I hope”. Much anti-vax rhetoric is written as if it is purely factual, which sometimes detracts from its believability when the claims are outrageous. In this case, framing it as an opinion may be more accepted and persuasive. The only statement that is written as if it is factual is the last sentence, which states that “it will NOT be the 1st time Congress was wrong”. Therefore, the writer of the comment shares his process of deduction that led him to his theory and the “fact” that Congress has made mistakes in the past and can be wrong in the case of vaccinations as well. The comment also highlights the issue of authority – in which the writer of the comment questions the boundaries of Congress’ authority and states that “Congress overstepped its authority”. This acts as a way of redefining the boundaries of authorities and creating this ambiguous space where a new authority could be constructed. In a sense, the comments create this new authority that questions the legitimacy and boundaries of the existing formal authorities including the government and medical establishment.

The concerns brought forth in the comment are echoed in other comments. For example, one comment stated, “I believe those senators who passed that bill to take away pharma’s liability should be prosecuted and charged with crimes against humanity!”; this comment has 977 likes, zero dislikes, and 70 replies. It is reasonable to assume that the political side of the vaccination issue is contentious and a cornerstone to anti-vax rhetoric given the high levels of agreement and engagement to these types of comments. In addition to the conspiracy-laden comments and comments that question authority, the final theme evident are comments that are anecdotal and emotional in nature.

Parental anecdotes of their children's injuries that were allegedly caused by vaccines or their regression into autism after vaccination is characteristic of anti-vax rhetoric. In *Vaxxed*, highly emotional anecdotes from parents drive the documentary, and the authoritative value of these stories is highlighted throughout the film. Similarly, comments on this YouTube video give value to stories and tell stories of vaccine-injury as well. One of the comments gives value to parents' stories by claiming that because there are many stories, vaccines must be the cause of damage:

These horrible stories are endless. Vaccines are the cause of many of the problems we see today, not the cure.

The comment is referring to vaccine-injury stories, which the commenter claims are "endless" and then states that "vaccines are the cause of many problems" – implying that because there are many stories that claim that vaccines injured their child, it is plausible to conclude that vaccines are indeed unsafe. This logic is seen in *Vaxxed*, where the producer of the documentary claims that despite scientific studies concluding that vaccines are safe, thousands of parents' stories of vaccine-injury and regression into autism prove otherwise. This comment also has a high number of likes (147) and zero dislikes, showing support from the anti-vax community for this logic.

One commenter mobilizes their age and experience growing up to grant themselves the authority to speak about the alleged dangers of vaccinations.

I am almost 50 years old and in my school days there were no kids with peanut allergies, or gluten problems or any of these other wacko illnesses that are currently plaguing our children. Amazing how many mindless zombies are not able to connect the dangers of vaccinations. How can children be exposed to this before their brains have developed?

The commenter begins by providing their age – “I am almost 50 years old”, perhaps to validate their experience or position themselves to speak with authority. The commenter claims that when she was younger there were not “wacko illnesses that are currently plaguing our children”. This is an attempt to discredit the scientific basis of allergies or gluten problems, which she refers to; in a way, this also delegitimizes the scientific community. Also, by using the statement “plaguing our children”, it implies that allergies and other issues allegedly caused by vaccines are so widespread nowadays compared to the past despite no scientific evidence to show this upward trend. Similar rhetoric is found in *Vaxxed*, wherein they claim that autism rates are skyrocketing. The comment then refers to pro-vaxxers as “mindless zombies”, implying that people who vaccinate their children are complicit and oblivious or naïve of the government’s ill intentions. This comment, which has 647 likes, zero dislikes, and 106 replies, somehow combines the conspiracy logic with anecdotal “evidence” to persuade the audience that vaccines are dangerous. Anecdotes like those in the documentary are also found in the comments.

After my daughter got her vaccines her behaviour change[d]. She had speech problems and was unable to look into people’s eyes. She was 3 when I stop taking her to doctor’s appointments for vaccinations. I knew that if I didn’t stop that and change diet etc. she won’t be “normal”. No milk, no sugar, no vaccines and slowly she got better, she was able to pay attention and look at me when I was talking to her. Now she speak[s] normally and have a healthy normal life.

This “overnight autism” narrative is seen in *Vaxxed* many times; therefore, it is interesting to find this trend continue on YouTube video comments. This mother claims that once her daughter got vaccines “her behaviour change[d]”, she lost speech and the ability to make eye contact. The tendency to confuse causation with correlation is typical in anti-vax rhetoric. In this case, the mother attributes the behavioural changes to vaccines, simply because they occurred in

that chronological order. Also, she claims that by stopping vaccines, her daughter's condition improved. This comment has 110 likes, zero dislikes, and 46 replies. While the comment itself has created a conversation and space for other mothers to share their stories through the replies, there are many more comments of this type on the video.⁴ Reviewing and analyzing all of the comments on this particular video would likely yield interesting findings and demonstrate the continuity of anti-vax rhetorical strategies and narratives from the documentary *Vaxxed*, to the YouTube channel *Vaxxed TV*.

Through a brief analysis of the comments on the sample YouTube video from the channel *Vaxxed TV*, it appears that the online conversation continues to thrive and amplify the voices of the anti-vax community. Despite social media companies attempting to combat anti-vax content and limiting their visibility, the *Vaxxed TV* channel still has over 82,000 subscribers and a total of 1,261 videos to date. New videos are posted almost every week on the channel, fuelling the anti-vax community and reaching thousands of people during an uncertain time with the world suffering a pandemic. Not surprisingly, *Vaxxed TV* has continued to fuel the same anti-vax rhetoric and strategies found in the *Vaxxed* documentary. These patterns of creating an ambiguous dialogical space where “alternative” authorities can emerge are also found in the comments. Furthermore, *Vaxxed TV* has also joined the emerging online conversation on COVID-19, mandatory masks, and discussions of mandatory vaccination of a COVID-19 vaccine that has yet to be fully tested and become available to the public. The online presence of *Vaxxed* as an organization and their stimulation of the online discussion on vaccines will likely

⁴ See Appendix A for screenshots of comments and more examples

continue to flourish over the next few years and will require a unique multi-pronged health communication approach to combat.

Chapter 5: Discussion and Conclusion

Vaccine hesitancy is one of the most important health and social phenomena nowadays that merits attention and academic research. While the spread of vaccine-preventable illnesses and global pandemics tend to be viewed from a medical or scientific perspective, it is crucial to examine this social phenomenon in the context of health communication. Research on vaccine skepticism and anti-vaccine content on social media has emphasized how anti-vaccine voices have been amplified in recent years. Even though anti-vaccine sentiments and groups have existed since the 18th century, the current digital and social media tools and rhetorical ecologies provide anti-vaxxers with a platform where they can build communities, raise awareness against vaccination, redefine authority, and no longer be left on the fringes of society.

This research critically analyzed an anti-vaccine documentary available on YouTube Movies called *Vaxxed: From Cover-up to Catastrophe*, as it appeared to encompass many of the discursive tropes and rhetorical strategies that anti-vaxxers rely on. This documentary has arguably become not only a film but a voice and brand for the 21st century anti-vaccine movement in North America. The research aimed to study this anti-vaccine documentary through a postmodern, rhetorical lens, and to situate the analysis in the broader rhetorical ecology and online conversations. The comments on two YouTube videos were analyzed, using rhetorical analysis, as a way of tracing the online anti-vaccination conversation from YouTube videos, to the documentary, and back online to videos on the *Vaxxed TV* YouTube channel. Mobilizing a qualitative rhetorical analysis was key in uncovering the deeper meanings, fragmented discourse, authoritative voices, and rhetorical strategies used by anti-vaxxers online.

The present research revealed several noteworthy findings that are aligned with the existing literature, but also provide a novel perspective on anti-vax rhetoric with “real world” implications. Through the discursive and rhetorical analysis of the documentary, three key themes and strategies were developed: 1) emotional, fear-based anecdotes and narratives that evoke a sense of community and hold the entirety of society accountable for vaccine injuries, 2) the appeal to source credibility and authority, which includes the reliance on pseudoscience and redefinition of authority, and shifting the vaccine-autism hypothesis, and 3) framing the issue through an Us vs. Them frame that accuses the mainstream media, the pharmaceutical industry, and the government, of corruption and collusion with the intention of making a profit over the health of “our” children. Ultimately, the findings showed that the documentary relied on the three components of classical rhetoric – pathos, ethos, and logos, to persuade the audience that vaccines cause autism or are generally unsafe.

The analysis of the comments on the YouTube videos yielded similar findings to the discourse and rhetorical strategies mobilized in the documentary. In the first YouTube video, which was posted eight years before the release of *Vaxxed*, it appears that the same conspiracy theories were being peddled in the actual YouTube video and that the rhetorical strategies mobilized by commenters on the video were similar to themes in the documentary. The YouTube video comments evoked emotions of anger, a distrust with authority, and fear of the irreparable through the sharing of anecdotes. Additionally, the “vaccine debate” was framed as a David vs. Goliath situation, in which the government and the pharmaceutical industry have financial interests and power that suppress individuals’ liberty and health concerns.

Moreover, comments on the YouTube video attempted to delegitimize, negotiate, and redefine authority by tarnishing the reputations of “traditional” authorities and reclaiming this

authority as patients and parents through their discourse. The comments on the second YouTube video from the *Vaxxed TV* channel revealed similar themes that were demonstrated in the documentary. These themes include, 1) conspiracy theories that mirror the Us vs. Them frame, 2) power and political arguments that further aggravate the divide between Us and Them, and 3) parental anecdotes that blame vaccines for their children's autism.

While the documentary was written, directed, and filmed by a well-established anti-vaccine organization, there were striking similarities in the discursive and rhetorical strategies found in both the documentary and YouTube video comments. This demonstrates how powerful the documentary is in spreading anti-vaccine rhetoric and reaching its target audiences, but also its ability in transferring the anti-vaccine way of thinking to its audiences who may be merely vaccine-hesitant. Also, this shows how anti-vax narratives and rhetorical strategies were ingrained in the online vaccine skeptical community prior to the release of the documentary, and further reinforced by the documentary. This presents significant challenges in penetrating the anti-vax online community. On the contrary, it also shows that anti-vaccine rhetoric is somehow predictable and follows certain patterns and strategies, which can help steer public health communicators in the right direction.

Past research has found that anti-vaxxers operate online within their communities and online channels (Yuan et al. 2019). Although this research does not claim to be fully representative of the issue, it supports past findings as the anti-vaccine YouTube videos appeared to have a higher level of engagement from individuals who are vaccine-hesitant, vaccine skeptical, or anti-vax. As it was demonstrated in the analysis, anti-vaccine videos had a higher number of likes over dislikes, and the majority of comments were in agreement with the contents of the video, with the comments expressing anti-vaccine sentiments stimulating further

engagement via likes and replies on the comment. This indicates that reaching anti-vaxxers or vaccine-hesitant individuals who have entered the anti-vaccine online community is becoming increasingly difficult. Therefore, health communication strategies that aim to promote vaccination must develop more innovative ways to penetrate these online bubbles or echo chambers and engage with vaccine skeptical individuals rather than merely project one-way messaging that is based on scientific facts.

In both the documentary and the YouTube video comments, the notion of authority emerges as individuals and groups redefine and discursively claim authorship. As seen in the analysis, many types of authorities are mobilized, negotiated, and redefined with the key aim of orienting the audience towards the idea that vaccines cause autism. Several protagonists who speak about vaccine safety mobilize their official titles or the institution they belong to, to appear more reliable and to emphasize their authority. In this sense, a more traditional approach of authority is mobilized “wherein authority primarily derives from position” (Weber, 1922/1968 as cited in Benoit-Barné & Cooren, 2009, p. 6). On the other hand, authority is also negotiated for other individuals who may not necessarily be associated with institutionalized authorities. In this case, individuals such as parents negotiate a space to create their own authority, somehow parallel to the traditional authority by constructing their “individual” realities in which they are “right” and supposedly have the legitimate reading over their children and their children’s health.

The documentary in and of itself utilizes its “power” by granting these parents a voice and a given authority. This, in turn, shifts the authority from more traditional actors such as doctors and scientists to parents and patients. This shift in types of authorities and the conflation between them, which the documentary plays on to confuse the audience – constitutes the main strategy of the film. This allows for the construction of an ambiguous space that brings about the

vaccine-autism hypothesis. Similar deconstruction and reconstruction of authority is also demonstrated in the YouTube comments. Despite the challenges that this postmodern medical paradigm presents, where patients and parents have authority, it holds important implications for countering vaccine hesitancy.

Based on these findings, it is reasonable to infer that in order to reach those who are vaccine-hesitant, vaccine skeptical, or completely anti-vax, efforts should be made to communicate through similar channels and by adopting similar rhetorical strategies as those mobilized by anti-vaxxers. Rather than attempting to persuade anti-vaxxers through scientific facts that they have continuously ignored, attacked, and delegitimized, emotional appeals and anecdotes may present better opportunities for pro-vaccination messages. Additionally, public health campaigns should mobilize similar channels for reaching vaccine skeptical individuals such as health documentaries that are increasingly becoming popular health promotion tools. Finally, acknowledging the authority of parents by empowering them with information and tools rather than criticizing their decisions, viewing them as unintelligent, and countering their concerns with scientific facts that do not necessarily answer their questions and concerns, may be a more effective way of communicating pro-vaccination messages. Ultimately, a multi-faceted communication strategy that incorporates various rhetorical strategies and communication channels, including health documentaries and online engagement with target audiences, is key in developing more effective vaccination campaigns.

Limitations and Future Research

A key limitation of any qualitative discourse analysis is that it is a small sample and therefore cannot be used for generalizing. Also, it is important to acknowledge the interpretive role the researcher plays in the analysis. Moreover, while the analysis reveals the rhetorical and

discursive tactics, tropes, and images mobilized by anti-vaccination individuals and/or groups through film and online comments – it cannot be certain what the real intentions behind the messages were. Furthermore, although it is reasonable to infer the effects that anti-vaccination messages have on parents and vaccine-hesitant individuals, interviews with these individuals would provide a better understanding of their reactions and interpretations.

Another limitation of this research due to certain constraints of the research environment (e.g., time), is that it does not systematically analyze the visual and auditory aspects of the documentary. While there is an emphasis on the discursive aspects of the documentary and how it is intertwined with the online conversation, a deeper analysis of the visual elements of the documentary and how they are integrated with the narrative would provide a richer analysis. Future research could consist of a case study of the documentary with a more systematic and detailed analysis of how the visual elements are interconnected with the narrative. For example, a scene-by-scene analysis that considers the visual, auditory, cinematic strategies, metaphors, etc. would be an interesting method to analyze the content.

Future research could build on this study by interviewing vaccine-hesitant individuals and probing into their opinions on anti-vaccine narratives and rhetoric online and how it affects them. In addition, further research could also interview producers of anti-vaccine content online to better understand their intentions. Moreover, research on the potential benefits of mobilizing health documentaries for pro-vaccination is needed. Lastly, future research could examine the online engagement of both anti-vax groups and pro-vaccination users on other social platforms that are gaining more popularity such as Instagram and TikTok. More research could examine the feasibility of using online strategies for creatively combatting anti-vax online rhetoric.

Conclusion

Health documentaries are an important communication product that anti-vaccine advocates have mobilized in recent years. These documentaries are often hosted on social media sites such as YouTube and Facebook, allowing them to serve as both one-way communication tools, but also as two-way communication tools by facilitating online conversations and engagement through their affiliated social media pages. Moreover, it is important to recognize that these documentaries have transcended beyond being merely a film. As was demonstrated by the analysis of *Vaxxed*, the narratives and rhetorical strategies in the film are mirrored in other online forums. Furthermore, the events and screenings of these documentaries receive mainstream media attention, which inadvertently grows the documentary's audience and crosses the online conversations with the offline interactions and vaccination decision-making. Recognizing the power of this tool and studying the storytelling and rhetorical strategies employed in these films provides valuable insights that can inform future pro-vaccination communication strategies.

The present research provided a novel perspective by analyzing the contents of an anti-vaccine documentary, in addition to a sample of comments on YouTube videos, through rhetorical analysis. This perspective allows us to understand how arguments and narratives are constructed by anti-vaxxers online, why they are persuasive, and how they can continue to be influential in the coming years. The text analyzed encompasses a critical anti-vaccine documentary that is directed and starred by Andrew Wakefield, who is viewed as a "hero" in the anti-vaccine community, in addition to comments on online videos – providing a glimpse of the online conversation and engagement among those who are vaccine-hesitant, vaccine-skeptical, and anti-vaxxers.

Through this research, it is evident that the anti-vaccine movement is not being disassembled with the current public health communication efforts. On the contrary, anti-vax voices are growing stronger and capitalizing on the uncertainties and fears of the public amid a global pandemic. We thus argue that to forestall further vaccine hesitancy, public health communicators must listen more carefully to anti-vax and vaccine-hesitant voices, address their concerns and ultimately answer their questions. This can be accomplished through consultations with members of the public and by engaging anti-vaxxers in respectful and empathetic dialogue. This approach will not only recognize their authority, but it will also narrow the gap in perspectives as shared goals may become apparent – i.e., the health and safety of our children and future generations. Future research could analyze the effectiveness of empowering users on social media through warning tags and providing links to informative sources, and the power of teaching critical thinking and media literacy in the context of health information online.

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Appendix A – YouTube Video Comments

Video 1 - CDC Chief Admits that Vaccines Trigger Autism

 **Tim Bennett** 11 years ago
Terrific video!



I am so impressed with how you have broken this deceptive interview down and exposed the lies and hypocrisy of the CDC.


This issue makes my blood boil. I get so angry at the thought of these criminals knowingly damaging children and then lying to avoid taking responsibility.

Please continue your heroic efforts to document and expose these monsters.



How many lives are being destroyed each year to save those 33,000 that she claims are "saved" by vaccines?


Show less

 2  REPLY



 **Michael Calvano** 10 years ago


I brought up this subject to my girlfriends Aunt, who is a pediatrician, and I was AMAZED at how uninformed she was. She had never even heard of thimerisol and was adamant and "SO SURE" that vaccines had nothing to do with autism. She wouldn't even entertain the idea and left the dinner table mad at me for questioning her authority.

 2  REPLY



 **Michael Tremba** 9 years ago

@kommissarw : Oh, such anger..... I'm wondering, what insecurity you feel that causes such a response..... Anyway, just FYI, kommissarw, I am a doctor, see up to 80 patients a day, and CONTINUALLY inform them about the dangers of vaccines. I hold vaccine danger workshops, and give them the appropriate information should they opt out of vaccinating their children. I'm currently finding other ways to educate the public..... A HUGE network of doctors are doing the same :)

 1  REPLY


 **Autumnleaves713** 10 years ago

Yeah I'm sure that they're stay right on top of it! Please! My son is a autistic, And more and more I'm believing the vaccines are the cause. And by also seeing his two cousins (also autistic) who had the same symptoms as infants after immunizations. These people need to do less talking and more research, Stop feeding us BS and find the cause and admit that they were wrong and are harming our children.



  REPLY

Video 2 - I am a doctor and I now know the truth about vaccines #vaxxed #DidYouKnow

#Praybig

 **Kamala Pati** 2 years ago (edited)

It is part of the depopulation agenda...i am so sorry for your loss.

 460  REPLY

[View 65 replies](#)



Robert Leshner 2 years ago

I will pray for this doctors safety. Many who are awake and speaking out are being killed. We're under a satanic depopulation agenda and a money racket by big med and big pharmaceutical industries who have no interest in health. The perpetrators know what not to take or what not to eat and are sitting on cures to chronic disease and cancer. Keep speaking out. God bless the brave ones

👍 217 🗨️ REPLY

▼ [View 14 replies](#)



Katie Garrett 2 years ago

Is this part of the new world orders desire to reduce the population?

👍 110 🗨️ REPLY

▼ [View 13 replies](#)



baja joes 2 years ago

It is my belief that Congress overstepped its authority in giving Immunity to the Pharmecutical industry regarding Vaccine liability.

I do not think Congress can grant Immunity when a possible adverse reaction to a vaccine may be Death. I hope a suit is brought before the US Supreme Court that finds their action Unconstitutional. It will NOT be the 1st time Congress was wrong.

Show less

👍 517 🗨️ REPLY

▼ [View 58 replies](#)



Elaine Wilhelm 2 years ago

I believe those senators who passed that bill to take away pharma liability should be prosecuted and charged with crimes against humanity!

👍 977 🗨️ REPLY

▼ [View 70 replies](#)



TruthSeeker4Life 2 years ago

These horrible stories are endless. Vaccines are the cause of many of the problems we see today, not the cure.

👍 146 🗨️ REPLY

▼ [View 7 replies](#)



Paula Oyedele 2 years ago

I am almost 50 years old and in my school days there were no kids with peanut allergies, or gluten problems or any of these other wacko illnesses that are currently plaguing our children. Amazing how many mindless zombies are not able to connect the dangers of vaccinations. How can children be exposed to this before their brains have developed?

👍 647 🗨️ REPLY

▼ [View 106 replies](#)



Adriana Veliz 1 year ago

After my daughter got her vaccines her behavior change, she had speech problems and was unable to look into people's eyes. She was 3 when I stop taking her to doctors appointments for vaccinations. I knew that I didn't stop that and change her diet etc she won't be "normal" No milk, no sugar, no vaccines and slowly she got better, she was able to pay attention and look at me when I was talking to her. Now she speak normally and have a healthy normal life. When my son ...

👍 110 🗨️ REPLY

▼ [View 46 replies](#)



Samantha Smiles 2 years ago

I didn't know about how much in denial most people are until it happened to me. I live in California where vaccines are enforced. No vaccines, no education. My son was 3 years old and we had to vaccinate to keep him in school. He received his first round of shots and the MMR was the last one on his list. He received the MMR on a Friday morning. A few hours later he began to stutter. By Saturday, the stuttering was getting worse. By Sunday, he could not get out any words. I called my Mom, worried, and she advised me to go see a doctor right away. Monday morning I get in contact with the nurse and she tells me to go to the emergency room immediately. She said it could be his brain swelling, or neurological damage. She asked me "Did your son receive a vaccine recently" and that's when it all made sense. The stuttering happened soon after his first MMR and now my son was barely able to speak. I call out to work and take my son to the hospital. He had a severe reaction to the MMR (most likely due to the aluminum) and the doctor said that the MMR reaches its peak at 10 days, so potentially this could get worse. (worse than not being able to speak). My Mom was crying and I just remember not being able to process all of this. I do some research and I find a lot of research that says that MMR should be given as an individual shot. Some countries have even outlawed giving the measles, mumps and rubella together because it is just too much toxins for child to process. I have a Mom's group that I love and I shared my experience. Wow. People were ruthless. One Mom said "well that's your opinion, that's NOT facts." and she attached a link to the CDC website that says MMR vaccines are safe. My opinion, my opinion? A neurologist and a medical doctor both agreed my son suffered neurological damage from the MMR. I could have the medical records in my hands and I think they will accuse me of breaking into the ER and falsifying records.

Show less

👍 134 🗨️ REPLY

▼ [View 28 replies](#)

Appendix B – Key Protagonists

William Thompson

William Thompson never appears in the documentary, but the audience hears his voice and confessions via phone recordings between himself and Brian Hooker. These recordings are used as “hard” evidence of the apparent coverup. As such, these recordings give authority to the coverup claim as it would be challenging to refute the authenticity of the recorded phone calls. Also, the fact that William Thompson is an official and recognized scientist at the CDC, a reputable health agency, makes him a credible source of information as he has firsthand access to research and was one of the lead scientists on the studies related to vaccines and autism. Hence, Thompson acts as a mouthpiece for the CDC – making him an authoritative source of information. Thompson’s authority is an “institutionalized and socially sanctioned form of authority” that is difficult to negate (Bencherki, Matte & Cooren, 2020, p.11). While the authority he holds does not give him power over what others do, it does affect how individuals may socially behave (i.e., stop vaccinating children).

Andrew Wakefield

One of the main protagonists of the documentary that appears to be painted in a positive light is Andrew Wakefield. The documentary serves as a tool for exonerating him and his previously published findings that were retracted from *The Lancet*. Wakefield is shown in the film in many scenes in which he appears to be calm, composed, and is well-spoken. Throughout the documentary, Wakefield appears in scenes in which he describes his past research that supposedly uncovered that vaccines cause autism. Wakefield is given the opportunity to present his side of the story which is contrasted with scenes of individuals attacking him and his research. In one scene, Wakefield states that he “will continue to vigorously support the use of

the single vaccine” as opposed to the MMR vaccine, which implies that he is not anti-vax but rather pro-safe vaccines.

Brian Hooker

Brian Hooker is the main scientist that interacted with the CDC whistleblower William Thompson. He is an environmental scientist trying to uncover the alleged CDC coverup on vaccine research. Hooker is one of the key protagonists in the film as we follow his story and “quest” in reanalyzing and reinterpreting the CDC’s research on vaccines and autism and how he allegedly finds a link between the MMR vaccine and autism. The main storyline is drive by Hooker’s claims that the CDC covered up the findings that showed that African American boys have a greater risk of becoming autistic after taking the MMR vaccine. Brian Hooker is also a father of an autistic teenager, who shares his story in the documentary.