

Running head: THE CANADIAN SHIELD

The Canadian Shield: Vaccine Hesitancy and Ontario's *Immunization 2020* Health Initiative

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Master of Arts (Communication) Thesis

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Table of Contents

Abstract.....	iv
Acknowledgements.....	vi
List of Tables.....	vii
List of Figures.....	vii
Chapter One: Introduction.....	1
The Role of Persuasion and Expertise.....	5
Fantasy Theme Analysis.....	6
Content Analysis.....	9
Chapter Two: Literature Review.....	10
Why Some Parents Avoid Vaccines.....	10
Media Reporting and Vaccine Safety.....	12
Research on Vaccine-Hesitant Discourses.....	13
Characteristics of Vaccine-Hesitant Discourses.....	15
Fantasy Themes, Stories and Group Identity.....	19
Overall Conclusions from Literature Review.....	20
Chapter Three: Methods.....	22
Content Analysis.....	24
<i>Immunization 2020</i> Key Messages.....	24
Search Strategy.....	25
Coding Scheme.....	25
Fantasy Theme Analysis.....	26
Search Strategy.....	26

Coding Scheme.....	27
Chapter Four: Results.....	29
Content Analysis.....	29
Key Messages.....	30
Social Media Shares.....	35
Fantasy Theme Analysis.....	37
Fantasy Themes.....	39
Characters, Actions and Settings.....	41
Fantasy Types.....	44
Conclusion.....	49
Chapter Five: Discussion.....	50
Content Analysis.....	50
Fantasy Theme Analysis.....	57
Rhetorical Visions.....	59
What Motivates Vaccine-Hesitant Parents.....	66
How Discourse Unites Vaccine-Hesitant Parents.....	72
Conclusion.....	73
Chapter Six: Conclusion.....	75
Limitations.....	81
Areas for Future Research.....	82
Recommendations for Future Health Initiatives.....	83
References.....	84
Appendix.....	95

Abstract

There was a time when diseases such as measles, mumps, whooping cough and polio posed an imminent threat to Canadians, hopping across the country unimpeded. But starting with the whooping cough vaccine in 1918, Canada had a new weapon against those diseases — armour that could not be easily penetrated — and slowly the diseases' spread ebbed. However in recent years, Canada's shield has begun to crack. Most Canadians immunize their children, but there's a growing trend away from vaccines and the protection they provide. Faced with falling immunization rates, the Ontario government released *Immunization 2020: Modernizing Ontario's Publicly-Funded Immunization Program*, a 20-point action plan with the simple goal of increasing public uptake of immunizations. This study uses both content and fantasy theme analyses to examine how *Immunization 2020*'s key messages manifested in media coverage, how the concept of vaccination is embodied in reader comments following media coverage about *Immunization 2020*, themes and stories that are present within vaccine-hesitant discourse communities and how those themes and stories function to form a vaccine-hesitant group identity that maintains vaccine hesitancy. Results from the content analysis show that of the eight key messages, *evidence-informed choices* was the only one to appear in every article. Notably, other key messages crucial to addressing public trust in vaccines such as *shared responsibility*, *patients first/patient-centred* or *transparency* did not appear frequently. In the fantasy theme analysis, vaccine-hesitant parents emerged as a rhetorical community that used four stock scenarios to create a culture among group members. Vaccine-hesitant parents engaged in discourse that positioned group members as the heroes and members of the public, the government and vaccine makers as the villains. Three rhetorical visions also emerged, creating a worldview that maintained vaccine hesitancy. Overall, vaccine-hesitant parents share common ground, symbols

and stories that build a shared identity and reality. Belonging to this community goes beyond a simple decision about vaccines, making it very difficult for parents to “switch sides” and immunize their children. In the absence of another online community that encourages immunization, vaccine-hesitant parents stick with the one that persuades them to stay by validating their stories and the one with which they share an identity.

Keywords: vaccine hesitancy, immunizations, fantasy theme analysis, culture, shared identity, vaccine-hesitant discourses, health communication

Acknowledgements

Thank you to Dr. Tess Laidlaw for your thoughtful comments, mentorship and guidance throughout this process. Your early suggestions at the beginning of my graduate studies planted the seeds for what would grow into this thesis. I'm grateful to have had the opportunity to work with you during the researching and writing of this study.

If I were to put together my dream thesis committee it would be the one I had: Dr. Tracy Moniz, Dr. Christine Chambers, and Dr. Laidlaw. I appreciate your time, effort and suggestions in helping to make this thesis its best — thank you! A special thank you to Dr. Moniz for your incredible mentorship and advice inside and outside of the classroom throughout my graduate studies. Working with you in various capacities has made me a better researcher and academic.

As a young girl, my parents, Humberto and Deolinda Pedro, would drive me to the public library no matter how many times I asked, help me carry books home, and encourage my curiosities about the world. I would not have achieved this without you.

Pursuing a graduate degree consumed much of my life and time, but my husband, Nick, and three children, Cole, Malin, and Carys, were patient through the ups and downs, and quiet when "Mom was studying." Nick, thank you for encouraging me to apply for graduate studies and drilling into me that there is never a perfect time in life to do anything. Cole, Malin, and Carys: You can have your Mom back now. Thanks for waiting around for me while I went off and pursued my own dreams.

List of Tables

Table 1: Research questions.....	23
Table 2: <i>Immunization 2020</i> key messages, definitions and frequency in earned media sample.....	26
Table 3: Examples of <i>Immunization 2020</i> key messages in media coverage.....	30
Table 4: Social media shares of earned media sample for <i>Immunization 2020</i>	36
Table 5: Anatomy of a fantasy theme analysis.....	39
Table 6: Sample of reader comments referencing each fantasy theme.....	41

List of Figures

<i>Figure 1</i> : Frequency of likes, replies and social media shares of <i>Immunization 2020</i> reader comments and media articles.....	38
<i>Figure 2</i> : Frequency of characters, actions and settings in sample of reader comments.....	42

The Canadian Shield: Vaccine Hesitancy and Ontario's *Immunization 2020* Health Initiative

Chapter One: Introduction

There was a time when diseases such as measles, mumps, whooping cough and polio posed an imminent threat to Canadians, spreading like wildfire and hopscotching across the country unimpeded. But starting with the whooping cough vaccine in 1918, Canada had a new weapon against those diseases — armour that could not be easily penetrated — and slowly the diseases' spread ebbed, so that by 1983 they showed up mostly in textbooks and via the memories of those who lived through the experience (Canadian Public Health Association, n.d.). Vaccines changed the Canadian health landscape so much that they are heralded as one of the 12 greatest public health achievements (Canadian Public Health Association, n.d.). But in recent years, Canada's shield has begun to crack. Most Canadians immunize their children, but there's a growing trend away from vaccines and the protection they provide.

In a 2011 survey of Canadian parents, four in 10 said they were more concerned about vaccine safety now than they were five years ago (Ekos Research Associates, 2011). One-third said they think children today receive too many vaccines and about 40 per cent of parents surveyed said they don't think adverse reactions to vaccines get enough media attention (Ekos Research Associates, 2011). At the same time, research into Canadian school records found the number of students being immunized has dropped between the 2002/2003 academic year and 2012/2013 (Wilson et al., 2015). That same research shows that religious and conscientious exceptions among school children for the measles, mumps and rubella vaccine are up significantly in those 10 years (Wilson et al., 2015). A separate national survey found that by age two, only 76.6 per cent of Canadian children had received four doses of the diphtheria vaccine; 76.4 per cent had received four doses of the pertussis and tetanus vaccines; 89.7 per cent had

received the same number of doses of the measles vaccine; and 89.4 per cent had been immunized against mumps and rubella (Public Health Agency of Canada [PHAC], 2017). Those numbers continued to drop as children grew — with the exception of the rubella vaccine, where, by age seven, 94.8 per cent of children were protected from the disease due to immunization (PHAC, 2017). By age seven, only 70.8 per cent of Canadian children had received the five recommended doses of the pertussis vaccine; 85.7 per cent had full protection from measles and 85.1 per cent had received the mumps vaccine (PHAC, 2017). Those numbers mean that the number of Canadian children being immunized is below the national immunization coverage target of 95 per cent for pertussis and tetanus by age two and 97 per cent for measles, mumps, rubella, and diphtheria by age two (PHAC, 2017).

Ontario's immunization rate mirrors what's happening nationally. A survey analyzing immunization coverage for school pupils in the 2013-2014, 2014-2015 and 2015-2016 school years found that up-to-date immunizations were on the decline (Ontario Agency for Health Protection and Promotion, 2017). In the 2013-2014 academic year, 94 per cent of seven-year-old pupils had received the measles vaccine, followed by 93.6 per cent for mumps and 98.2 per cent for rubella (Ontario Agency for Health Protection and Promotion, 2017). By the 2015-2016 school year, only 91.8 per cent of Ontario seven-year-olds had received the measles vaccine, 91.6 per cent had received the mumps vaccine and 95.9 per cent had received the rubella vaccine (Ontario Agency for Health Protection and Promotion, 2017). As a result of this crumbling Canadian shield, Canadians more generally, and Ontarians specifically, have recently seen the return of troubling diseases once thought eradicated. In 2006, Ontario recorded more than 1,200 cases of whooping cough (Canadian Broadcasting Corporation [CBC], 2015). A decade later, Canada faced another whooping cough outbreak, with at least 500 cases in Ontario and more

than 100 scattered across Manitoba, New Brunswick, British Columbia and the Northwest Territories (CBC, 2015). Normally provinces have fewer than 10 cases a year (CBC, 2015).

Vaccine-preventable illnesses have become so pressing that in 2015 the Ontario government tightened rules around vaccines, making it harder for parents with children in school to get an exemption (Ministry of Health and Long Term Care [MHLTC], 2015). *Immunization 2020: Modernizing Ontario's Publicly Funded Immunization Program* is the province's response to the growing trend away from vaccination. In the face of growing disdain for vaccinations fuelled by influencers, such as celebrities and politicians, who publicly share misinformation about vaccines (Hadhazy, 2010), and misinformation online about vaccines and their efficacy (Kata, 2009), the campaign is part of an international strategy to increase vaccination rates around the world (World Health Organization [WHO], 2013).

As provincial, national and international immunization rates decline there is limited literature in Canada specifically to characterize vaccine hesitancy (Wilson et al., 2015). This thesis provides an opportunity to expand the literature in Canada around vaccine hesitancy and its characteristics using *Immunization 2020* as a case study. *Immunization 2020* generated significant media attention from both local and national media outlets and was billed as the “first of its kind roadmap” (MHLTC, p. 2) focused on increasing a Canadian province's immunization rate by modernizing its immunization system. Changing public attitudes and vaccine hesitancy in Ontario have resulted in the province falling short of national immunization targets (MHLTC, 2015) and *Immunization 2020* is a direct response to this new Canadian, and, indeed global, reality.

In December 2015, the MHLTC released a 26-page report focused on increasing the number of Ontarians being vaccinated in an effort to reduce the number of vaccine-preventable

diseases in the province and offer better overall health for all Ontarians. While *Immunization 2020* is a policy-driven initiative, it is also, in effect, a health communication campaign. Health communication campaigns seek to promote a specific health objective, in this case immunizations, through sharing messages in the media with the intent of informing, modifying or changing behaviour (Everett & Storey, 1988). What role might the media play in the success of this initiative? One clue emerged December 11, 2015 when Eric Hoskins, then the Ontario Minister of Health and Long Term Care, shared the provincial government's plan at a news conference at a community school in Toronto, Ontario, Canada (Tonge, 2015), thus calling upon the media to both share knowledge about *Immunization 2020* itself as well as the important role that immunizations play in the broader public health arena. There, Hoskins set out the roadmap to increase immunization levels among Ontarians and cut the province's ties to vaccine-preventable illnesses (Tonge, 2015). In this thesis, I use *Immunization 2020* as a case study to answer four central research questions:

RQ1: How do key messages in *Immunization 2020* manifest in media coverage?

RQ2: How is the concept of vaccination embodied in reader comments following media coverage about *Immunization 2020*?

RQ3: What themes and stories are present within vaccine-hesitant discourse communities?

RQ4: How do themes and stories function to form a vaccine-hesitant group identity and maintain vaccine hesitancy?

The Role of Persuasion and Expertise

In *Rethinking Expertise*, Harry Collins and Robert Evans (2007) argue that in the absence of technical expertise, the public should “focus on *who* to believe rather than *what* to believe” (p. 139). As much as scientists would like to let quantitative data stand, information sharing is as much a social function as a scientific one. It’s how we interpret and translate that knowledge that is the key. Judy Segal (2005) addressed this idea in Chapter 7 of *Health and the Rhetoric of Medicine* when she looked at why a patient may not follow a physician’s advice. More than just a lack of trust in doctors, Segal (2005) argues that patients may not follow a physician’s advice because they are relying on their own experience or that of others within their group, such as friends and family. In some groups, non-compliance is seen as a way of being “independent-minded” (Segal, 2005, p. 138). Segal (2005) suggests that physicians need more training on how to persuade patients to comply. While that may be true, what physicians need to first understand is what is persuading patients *not* to act. Part of the answer for physicians dealing with vaccine hesitant parents may be that those parents are identifying with a group more than their doctor.

What is the role of persuasion in vaccine decision-making? James Herrick (2009) argued persuasion plays a role in every human relationship; that is, every human relationship depends to “some degree on efforts to change other people’s thoughts and actions” (p. 4). Persuasion and rhetoric, the means of understanding what is persuasive and why, influence “every aspect of knowledge-building, from what counts as a fact through how the fact will be interpreted to how it will be employed to justify actions” (Herrick, 2009, p. 22).

As it stands, in the absence of pro-vaccine stories the vaccine-hesitant community is amplifying the minimal risks associated with immunizations through its own stories of vaccine injury and misinformation. Ashley Shelby and Karen Ernst (2013) point out that the anti-

vaccination community has become masterful at using stories persuasively, so much so that many stories go unchallenged. “The anti-vaccination movement has long understood the power of Internet storytelling, and its members have created virtual communities in which stories become facts that drive beliefs and inform medical decisions” (Shelby & Ernst, 2013, p. 1799). There is nothing scientific about what group members are doing and yet, their stories resonate with anxious parents and serve to instil fear and vaccine hesitancy. More than “story swapping,” Shelby and Ernst (2013) argue that these virtual communities become so bonded that participating in anti-vaccine rhetoric feels like a cause. Beyond looking at *why* the anti-vaccination community is so persuasive, it is valuable to understand *how* this group’s dynamics function as a form of rhetorical persuasion.

Fantasy Theme Analysis

Developed by Ernest Bormann (1982), fantasy-theme analysis examines how people use narratives within a group to form identities and a shared reality. Bormann’s symbolic convergence theory and fantasy-theme criticism methods are based on the idea that communication creates reality. Bormann (1982) argues that groups share language and symbols that become insider information to those within the group. When these symbols overlap among group members, then those within the group share common experiences or fantasies that develop into mutual understanding (Bormann, 1982). As a result, their communication is a way to create community (Bormann, 1982).

Typically, the term “fantasy” is used to refer to something akin to science fiction, something unbelievable, but Bormann (1982) uses the term as a way to explain how characters, settings and actions come together to create a social reality in a group. In other words, the

fantasy serves to build a community among group members and craft a group identity so much so that messages do not have to be explicit in communication. Part of the group's identity and structure is rooted in implicit messages during communication that are understood by those within the group (Bormann, 1982). Bormann (1982) argues symbolic convergence theory is one way for those within the group to organize their experience. The theory gives scholars a means to explain or understand what is happening in a group's communication when members share stories, engage in word play and use metaphors as part of their interactions.

In a fantasy-theme analysis, a researcher examines an artefact, in this case, reader comments under online media articles about *Immunization 2020* that express vaccine hesitancy, and then codes the artefact for setting, character and action themes (Foss, 1999). When the themes overlap, they create a rhetorical vision that helps describe the group's worldview (Foss, 1999). Symbolic convergence occurs when these themes and rhetorical visions become so common within the group, they are understood without being explicitly spoken or written, much like an "inside joke" (Foss, 1999). Foss (1999) points out that symbolic convergence theory is epistemic, that is, that rhetoric creates knowledge and hence creates truth for community members. "Fantasy themes tell a story that accounts for the group's experience and that is the reality of the participants" (Foss, 1999, p. 123). In other words, in symbolic convergence theory we believe the experiences and knowledge we have are a true reflection of the world. In this way, symbols and rhetoric weave group members together to create a shared reality (Foss, 1999).

Building on Bormann's theory, Foss (1999) sets out a roadmap for how scholars should approach a critical essay that is grounded in fantasy-theme analysis and symbolic convergence theory. She points out that fantasy themes hinge on either past events or future conflicts. As group members share fantasies repeatedly, they build a rhetorical vision, also known as a fantasy

type (Foss, 1999). This fantasy type motivates how group members act (Foss, 1999). Therefore, their actions make sense in the backdrop of the fantasy type (Foss, 1999). For example, anti-vaccine parents may share stories around poor past experiences they have had with doctors — either they felt the doctor wasn't listening or was dismissive of their concerns. This creates a fantasy type that doctors are not really interested in listening to their patients and furthers the idea that a parent cannot trust a doctor to listen to them and address their concerns in a caring and open way. Therefore, when vaccine-hesitant parents tell stories where doctors are paternalistic or dismissive, they are recalling a rhetorical vision among group members with similar past experiences of physicians who behaved in the same way. It makes sense to them then that they would not trust or listen to a physician who tells them to vaccinate their children because their experience tells them otherwise.

When it comes to vaccine hesitancy, symbolic convergence theory is a valuable framework for understanding what motivates parents to act. Fantasy theme analysis is about analyzing the bigger picture of a group. Metaphorically, if we were to think of a group as a snowball rolling down a hill, fantasy theme analysis doesn't look at the individual snowflakes that form the snowball, but instead tries to understand the conditions that created the snowball and how it got so big in the first place. The main point of a fantasy theme analysis is to find evidence that symbolic convergence has occurred (Bormann, 1982; Foss, 1999). Symbolic convergence theory helps us understand the social reality of vaccine hesitant parents. If vaccine hesitant parents see other parts of themselves within the group beyond their specific decisions around vaccination, then this reinforces their beliefs and persuades them that they made the right choice.

Content Analysis

Part of this research is a content analysis to analyze how often the media shared key messages about *Immunization 2020* as a way of understanding how the concept of immunizations manifests in media coverage about the initiative. This content analysis uses media articles about *Immunization 2020* to compare what knowledge the media conveyed about vaccination as it reported on the campaign, how often media articles about *Immunization 2020* were shared to note the amplification of media coverage as a means of quantifying the broader reach of the campaign, and how readers responded to the media coverage in comments following online articles, which framed their discussions about both *Immunization 2020* and vaccines themselves. The objective of both the media content analysis and fantasy theme analysis is to contribute to physician and public health knowledge around vaccine hesitant parents as a culture and community so that public health officials and physicians can better understand how to communicate with this community both via health communication initiatives and with vaccine-hesitant parents as individuals. Following the media content analysis, I'll perform a fantasy-theme analysis, grounded in symbolic convergence theory, of how vaccine hesitant parents use stories in comments under online media articles about *Immunization 2020* to create a shared identity about group members that persuade them not to immunize their children.

Chapter Two: Literature Review

Why Some Parents Avoid Vaccines

With vaccine-preventable diseases such as whooping cough and measles rising from the ashes once more, researchers have studied why some people are no longer vaccinating their children. There are several reasons why vaccine-hesitant parents avoid vaccines. Some believe vaccines are more dangerous than the disease and that the human body is capable of fighting infection on its own (Kata, 2009). Others believe that pharmaceutical companies are pushing vaccines as a way to make money (Kata, 2009). Some believe vaccines do not provide true, lasting immunity and some still believe that vaccines cause autism (Kata, 2009). While each of those reasons may seem varied and only marginally linked, a common thread weaves through each of them: Trust, or lack thereof. Mistrust strikes at the very heart of vaccine hesitancy.

Declining social capital, defined as the “links, shared values and understandings in society that enable individuals and groups to trust each other and so work together,” (Organisation for Economic Co-operation and Development, 2007, p. 102) is what happens when trust is lost. A break in social capital is a break in shared values and a sense of goodwill in society that brings people together, resulting in silos of people looking inward instead of out. In this type of environment, misinformation thrives.

Misinformation around immunizations has given some parents pause over whether to vaccinate their children, such as the continued false impression that some vaccines cause autism (Kata, 2009). With the rise of the Web 2.0 world, where readers can interact with online content or post their own content online, misinformation, particularly around immunizations, has become pervasive (Kata, 2009). In her content analysis of eight anti-vaccine websites, Anna Kata (2009) found misinformation was prevalent but that better education has not been effective in changing

the attitudes around immunizations. Instead, Kata (2009) called on researchers to consider underlying reasons for refusing vaccines and suggested that this may require alternative understandings of health and parental responsibility. Though I hope to address some of these issues in my research, these are not easy questions to answer. “These discourses exemplify postmodern tensions in society, making anti-vaccination one of significant complexity,” Kata writes (2009, p. 1715).

Niche online communities have thrived with the rise of the Web 2.0 world and in this virtual landscape there is little cross-ideological exposure (Himmelboim, McCreery & Smith, 2013; Thorson & Wells, 2015). While the Internet has enabled people to connect with other like-minded individuals without geography acting as a barrier, this connection is not without its issues. One study looked at cross-ideological exposure on the social media site Twitter and found it unlikely (Himmelboim, McCreery & Smith, 2013). In other words, there was little opportunity on Twitter to view a topic from different viewpoints. Instead, Twitter users have networks that, in effect, become echo chambers. Kjerstin Thorson and Chris Wells (2015) called these echo chambers “curated flows,” creating filtered, isolated groups of like-minded individuals online.

Vaccine hesitant people have taken advantage of the characteristics of online communities to share stories about vaccine safety concerns in tightly controlled virtual communities that fuel vaccine avoidance (Shelby & Ernst, 2013). Parents reading stories of other children who have suffered an adverse reaction to a vaccine or who were diagnosed with autism after receiving an immunization become skeptical of vaccines and their safety (Shelby & Ernst, 2013). Parents who disagree with these stories or medical professionals who attempt to correct the record in these virtual communities are quickly rebuked and ex-communicated from these online groups, leaving only the fearful, unchecked stories of vaccine hesitant parents behind

(Shelby & Ernst, 2013). Any well-meaning parent who comes across these online communities and reads such stories would find it difficult to trust vaccines without reservation (Shelby & Ernst, 2013). Interestingly, the medical profession played a role in the rise of vaccine avoidance. As doctors marginalized parent concerns around vaccines or dismissed parents' increasing desire for absolute answers from science, parents turned to online communities to validate their fear or experience with immunizations (Shelby & Ernst, 2013). "In the absence of absolute answers, parents often make up their own minds" (Shelby & Ernst, 2013, p. 1796).

Media Reporting and Vaccine Safety

In addressing the role of the media around why people may avoid vaccines, Graham Dixon and Christopher Clarke (2012) looked at the role of false balance in newspaper articles and the influence of those articles in creating uncertainty about vaccine safety. While journalists aim to offer balance in their news coverage, Dixon and Clarke (2012) write, "false balance" exists when "a perspective supported by an overwhelming amount of evidence is presented alongside others with less/no support" (p. 376) and journalists do not provide context as to where the "strength of the evidence lies" (p. 376). Articles written in this way may give the wrong impression that scientists are split about vaccine safety when in reality they are not (Dixon & Clarke, 2012). In their study, Dixon and Clarke (2012) looked at the effect of these news articles on participants' perception of a link between the measles, mumps, rubella vaccine and autism. They randomly assigned 327 undergraduate students to one of four treatments: falsely balanced news articles about an autism-vaccine link, anti-link claims only, pro-link claims and a control group with unrelated information (Dixon & Clarke, 2012). They found readers in the falsely-balanced group had heightened uncertainty about whether vaccines caused autism and were more

likely to believe scientists were divided on the issue, potentially fuelling vaccine avoidance (Dixon & Clarke, 2012). Dixon and Clarke (2012) argued that health officials needed to focus on more nuanced messages as well as the challenges journalists face in communicating vaccine safety.

Much vaccine-sentiment research has focused on the latest vaccines to hit the market, such as the Human Papillomavirus (HPV) vaccine. The Human Papillomavirus is the most common sexually transmitted disease and can lead to cervical cancer (Nan & Madden, 2012). Surveying 341 university students, Xiaoli Nan and Kelly Madden (2012) randomly assigned them to one of three blogs (positive, negative, control) to gauge the influence of user-generated content on vaccine decision-making. They found those who read the negative blog were less likely to vaccinate because they believed the HPV vaccine was less safe (Nan & Madden, 2012). In a separate study about the HPV vaccine, U.S. researchers Nan, Michael Dahlstrom, Adam Richards and Sarani Rangarajan (2015), analyzed the influence of quantitative evidence (statistics) versus qualitative evidence (narrative) in uptake and risk perceptions around the vaccine. That study found participants who heard first-person stories about HPV had higher risk perceptions about the disease than those who heard third-person stories on the subject (Nan et al., 2015). As well, participants who heard messages containing both statistics and stories about HPV had a higher perceived risk of getting HPV than messages that had a singular focus, either statistical or narrative (Nan et al., 2015).

Research on Vaccine-Hesitant Discourses

Researchers have long tried to gauge links between risk perceptions and vaccines. In 2009 the world faced the global H1N1 flu pandemic (WHO, 2010). Unlike seasonal flu viruses

that are dangerous to the very young and the very old, the swine flu caused death and illness in otherwise healthy people (WHO, 2010). By 2010, the swine flu had infiltrated 214 countries and killed more than 18,000 people worldwide (Gilmour & Hofmann, n.d.). In Canada, 428 people died from the virus and thousands of others were infected (Gilmour & Hofmann, n.d.). Despite that, only 41 per cent of Canadians surveyed had received the H1N1 vaccine (Gilmour & Hofmann, n.d.) Of those who did not get immunized, more than 74 per cent said it was because they did not think it was necessary and 6.5 per cent declined it out of a fear of needles (Gilmour & Hofmann, n.d.) These statistics provided a source of rich data for researchers, who studied perceived risk during the H1N1 pandemic (Laidlaw, 2010; McGreevy, 2010).

Tess Laidlaw (2010) looked at this indifference to H1N1 vaccine protection as an archetypal phenomenon of “symbolic” disease protection. This phenomenon, Laidlaw argued, could explain why “governments were caught off guard by the public’s apparent indifference to the availability of a vaccine in the fall and winter following the H1N1 outbreak, despite earlier panic” (2010, p. 19). Ambivalence toward the vaccine could have been a result of “othering” — the idea that people who weren’t part of a high-risk group were safe from the disease (Laidlaw, 2010). In an article published in *Health Science Inquiry*, Alan McGreevy (2010) found researchers did not understand some people’s decision not to vaccinate very well. Indeed, he found the decision not to vaccinate was wrapped up in an individual’s perception of risk rooted in their experiences (McGreevy, 2010). Though McGreevy’s findings were compelling, they stopped short of looking at the role of knowledge-sharing and knowledge translation between the media and the vaccine-hesitant community with respect to vaccine decision-making. My study will build on McGreevy’s findings and address this gap in the research.

Characteristics of Vaccine Hesitant Discourses

As the number of vaccine-preventable deaths increases — in the United States there are an estimated 70,000 every year (Dermen & Evren, 2010) — researchers have sought to understand why. Bernice Hausman (2016) looked at stories of parents with vaccine-injured children. Using a phenomenological lens, she also addressed the idea of “othering” with respect to the experience of these parents with the medical community. The phenomenon of vaccination circulates in networks of “value and consequence” that include government agencies, medical researchers, manufacturers, marketing plans, medical offices and families (Hausman, 2016, p. 194). As the act of vaccination circulates in these networks, they build meaning, like a snowball rolling down a hill:

What vaccines mean to people depends on where the people are situated in these networks, their active or passive relationship to the vaccines themselves and their administration, what happens to their bodies or the bodies of their children as a result of vaccination, and their relationship to the medical practitioners who tend to them and the bodies of their children. (Hausman, 2016, p. 194)

Hausman argues that government officials who try to separate perceived vaccine injuries from vaccines themselves, only further alienate parents who are vaccine hesitant. While government officials, physicians or vaccine manufacturers may not see a connection, those who believe they or their children were harmed by vaccines feel they know better than the government, their physician or a vaccine manufacturer because they are better connected to their own body (Hausman, 2016). Hausman argues that parents are driven by this divide, particularly when it comes to their family physician — a relationship they think should be personal and caring — and so when physicians don't acknowledge their vaccine injury, they feel both betrayed and isolated,

further fuelling their vaccine hesitancy.

Some of the most compelling research was recently published. In 2016, Meghan Bridgid Moran, Melissa Lucas, Kristen Everhart, Ashley Morgan and Erin Prickett published a content analysis of techniques used by anti-vaccination websites to persuade readers away from immunizations. The researchers were seeking to understand how vaccine hesitancy is formed, and analyzed what was shared about vaccines on those websites and how the information was shared (Moran et al., 2016). In their study, they analyzed 480 anti-vaccination websites and coded the content, tactics, values and lifestyle associated with these sites and their readers, using persuasion theory and social judgement theory as their lens (Moran et al., 2016). They suggest that a parent who does not feel strongly about vaccines or does not feel connected to the merits or reasons underpinning vaccination is more likely to be persuaded not to vaccinate. At the same time, the more passionate the parent is about refusing vaccines, the less likely they are to shift in their beliefs or attitudes as these attitudes are central to their identity and lifestyle. Therefore, they make decisions about vaccination that are consistent with their core beliefs. Anti-vaccine websites often reflected this, Moran et al. (2016) found. Content on vaccine hesitant websites often connected vaccine hesitant messages with core beliefs, namely individual freedom and choice, while also stressing that government officials and the medical community cannot be trusted (Moran et al., 2016).

Trust plays a critical role in vaccine hesitant discourses. The Edelman Trust Barometer, a global trust survey, found 63 per cent of people trusted someone they perceived to be like them while only 38 per cent trusted a government official (2015). A recent study addressing the HPV vaccine and trust shows similar results. In an experimental study of 1,538 American adults, researchers Dan Kahan, Donald Braman, Geoffrey Cohen, John Gastil and Paul Slovic (2010)

found that when people were shown a photo of an advocate who appeared to share their values, they believed what the advocate said. “People notice, assign significance to, and recall the instances of misfortune that fit with their values; they trust the experts whose cultural outlooks match their own” (Kahan et al., 2010, p. 6). In investigating the role of trust in vaccine decision-making, Kahan et al. (2010) looked at the idea of biased assimilation, the tendency of individuals to believe and dismiss information as it lines up with their prior beliefs. Based on that idea, “persons of opposing predispositions, it is thought, become more divided, not less, as they react to balanced arguments” (Kahan et al, 2010, p. 7). In vaccine hesitant discourses, this means that those who oppose vaccination become entrenched when presented with balanced arguments because the arguments are outside of the shared values and experiences the vaccine hesitant hold. They are bonded by their beliefs, but isolated by them as well.

Kahan et al. (2010) demonstrated this by using fictional experts who either supported or opposed the HPV vaccine. The researchers tested whether people’s opinions about the vaccine changed based on what they knew about the values of the fictional experts in the study. Individuals were shown photos of each “expert” (though they did not know they were fictional) and were given information about their cultural worldviews. Then, they were asked to read opposing arguments about the HPV vaccine written by each “expert.” Kahan et al. discovered that participants more often placed stock in the expert whose cultural worldviews lined up with their own. They concluded:

Polarization grows where culturally diverse subjects see the argument they are disposed to accept being made by the advocate *whose values they share* [emphasis mine], and the argument they are predisposed to reject being made by the advocate *whose values they repudiate* [emphasis mine]. In contrast, when subjects see the

argument they are disposed to reject being made by the advocate whose values they share, and the argument they are predisposed to accept being made by the advocate whose values they repudiate, polarization shrinks to the point of disappearing. (Kahan et al., 2010, p. 25)

In other words, when people are presented with an argument that they are likely to disagree with by someone who shares their values, they are more likely to keep an open mind and make an effort to find common ground and build consensus because they view the person as being someone like them. But when individuals are presented with an argument from an expert they believe does not share their values, they became further entrenched in their beliefs. Hence, decisions around immunizations are not solely based on scientific evidence, but are influenced by the role of shared values in persuasion.

A sweeping analysis of narratives and persuasion with respect to anti-vaccination sentiment, Nathan Rodriguez's research (2016) is perhaps the most closely related to my own. He examines persuasion in online discussion boards over five years with respect to vaccine hesitancy. He found that most vaccine hesitant parents are really just confused and seeking assurances beyond bland arguments that vaccines are safe and effective. Rodriguez (2016) goes beyond a content analysis to explain how someone understands the arguments around vaccines — how they seek out, process and interpret that information, and how vaccine hesitant parents justify their beliefs when challenged (Rodriguez, 2016). His research focuses on individual decision-making and in this way, differs from mine. While researchers have either looked at websites or individual behaviour around immunizations, my research focuses on how knowledge manifests within vaccine hesitant discourses, how the vaccine hesitant group identity is formed and the themes and stories that exist as part of that identity. I am also analyzing how stories form

a group identity that persuades someone not to vaccinate. In fact Rodriguez (2016) called for future research to examine narratives in greater detail to understand and document how and why specific elements are persuasive.

Researchers have also examined the persuasive elements of both pro-vaccine and vaccine-skeptical websites and their design. Lenny Grant et al. (2015) conducted a qualitative analysis of four vaccine websites — two pro-vaccine websites and two that were skeptical of immunizations. They found the vaccine-skeptical websites engaged in user-generated content that served to build a community among its online users (Grant et al., 2015). In other words, those websites focused on the personal aspect of the Internet—its ability to connect individuals and enable the development of relationships. In contrast, the pro-vaccine websites exclusively engaged in one-way communication — they shared information but didn't provide users with a way of interacting with the information (Grant et al., 2015). There was no community building and the websites were more authoritative, institutional and impersonal. While they analyzed the websites qualitatively, Grant et al. (2015) only performed a “compare and contrast” analysis of the websites and their rhetorical elements. The research did not examine the overlapping and broader themes present to illuminate the group dynamic and its persuasive elements.

Fantasy Themes, Stories and Group Identity

Researchers Margaret Duffy (2003) and Amanda Hinnant and Elizabeth Hendrickson (2012) have used fantasy-theme analysis, a way to examine how people use stories within a group to form identities and create a shared reality among group members (Foss, 1999), to unpack online hate groups and celebrity magazine articles, respectively, relating to health. Duffy (2003) was one of the first researchers to look at the rhetorical visions of an online community.

She argues that a fantasy-theme analysis is a useful way to understand the power of the Internet to persuade the disenfranchised. Without the Internet, the disenfranchised may not have discovered a virtual community that reflected their particular perception of their experience (Duffy, 2003). Duffy (2003) argues that in the Internet setting, the disenfranchised can find a “credible interpretation of reality” in a group’s fantasies (p. 293). The interactive aspect of the Internet is what Duffy (2003) argues is so crucial to symbolic convergence. Symbolic convergence theory posits that stories build understanding and communicate what it means to be a part of the group (Duffy, 2003).

Hinnant and Hendrickson (2012) examine how mainstream and entertainment magazines frame celebrity stories of illness and disease. They argue that the public understands and learns about illness and disease by reading about related celebrity experiences (Hinnant & Hendrickson, 2012). Interestingly, they found that health and morality are entangled, but that the magazines also suggested culpability based on the illness (Hinnant & Hendrickson, 2012). As a result, they found that the fantasy themes around celebrity health and illness revolved around morality, privilege and authority (Hinnant & Hendrickson, 2012). This created a rhetorical vision that health was a personal choice and within personal control (Hinnant & Hendrickson, 2012). They argue that a fantasy-theme analysis is useful in analyzing “moral discourses” around health (Hinnant & Hendrickson, 2012, p. 198). Since immunizations and parental decisions are intertwined with morality, a fantasy-theme analysis is a valid approach to understanding how parents become part of the vaccine hesitant community and how this group membership is persuasive in motivating them not to immunize their children.

Overall Conclusions From Literature Review

Much of the anti-vaccine research has focused on the U.S. Internationally, Unicef (2013) has tracked the influence of the anti-vaccination movement over social media in Eastern Europe in a bid to stem the tide of parents turning away from vaccines. However, fewer Canadian researchers have tackled the issue — and even fewer from a social constructivist worldview that perform a fantasy theme analysis to understand the characteristics of vaccine hesitant discourses. In fact, Sarah Wilson et al. (2015) noted the limited Canadian literature on the characteristics of vaccine hesitancy. My research attempts to contribute to this area of knowledge and build on existing research around vaccine hesitancy and its key characteristics in forming a group identity that strengthens a parent's resolve to avoid vaccines. *Immunization 2020* is an opportunity to collect and understand vaccine hesitancy in a Canadian context. If we can understand why people are choosing not to vaccinate or delaying vaccination, then health communicators can target public health campaign messaging more effectively and physicians can understand how to better communicate with their vaccine-hesitant patients. This research could also inform future public health campaigns around this issue. Effective public health campaigns are beneficial to society on several fronts: They have the potential to save money as fewer health costs related to vaccine-preventable diseases are placed on the medical system; but more importantly, tackling vaccine hesitancy can elevate Canada's vaccination rate, protecting those who cannot vaccinate, potentially saving lives. Minister Hoskins, a physician himself, captured the importance of *Immunization 2020* and vaccines in general, when he launched the initiative at a press conference: "It takes all of us to protect each of us" (Ferguson, 2015).

Chapter Three: Methods

Traditionally, media outlets have a history of sharing important information, particularly around science. In reporting on science, the media's role is not just to translate information, but, by virtue of its coverage, to also increase relevance and understanding of scientific research among a public of non-scientists (Peters, 2013). In a Web 2.0 environment, the message sharing, relevance and understanding does not end with the media. Rather, through user-generated content such as reader comments on online media articles, audiences interpret and shape media messages. This research will use a content analysis as well as a fantasy theme analysis to offer insight into this dynamic with respect to vaccine hesitancy and Ontario's *Immunization 2020* health initiative.

As a case study, *Immunization 2020* presents an opportunity to understand how knowledge about immunizations manifests in vaccine-hesitant communities, contributing to the limited Canadian literature on the characteristics of vaccine hesitancy. To establish what information the media shared about *Immunization 2020* as a health initiative as well as messages around the importance of immunizations, I first look at *Immunization 2020* and its key messages. In describing *Immunization 2020*'s key messages, I analyze what knowledge and key messages the Ontario government wanted to share about the initiative and how often the media shared those messages in its coverage of *Immunization 2020* to answer RQ1 (Table 1). James (2011) argued in a cluttered environment where audiences are exposed to so many messages, message repetition is crucial. James (2011) also noted the more often audiences are exposed to a message, the more likely they are to believe it. Thus, the more often *Immunization 2020* key messages appear in the media the more likely the campaign is to succeed. I could find no research that

explicitly states how often a key message in a health initiative such as *Immunization 2020* needs to appear in media coverage to penetrate the public's perceptions. Therefore, I determined that to define the success of *Immunization 2020* in a quantitative way, key messages would need to appear in the sample of earned media articles at least 50 per cent of the time as a way of defining whether the initiative would receive a passing grade. As well, I compiled quantitative data from the online media sites that posted the articles in my sample and noted how often the media articles were shared as a way of understanding the amplification of the media coverage. To address RQ2, I analyze a sample of reader comments in online media articles about *Immunization 2020* that express vaccine hesitancy and contain dramatizing messages, that is, comments that include a "story about people, real or fictitious, in a dramatic situation in a setting other than the here-and-now communication of the group" (Bormann, 1989, p.451) to analyze how the concept of vaccination is embodied in reader comments following media coverage about *Immunization 2020*. To address RQ3, I perform a fantasy theme analysis on a sample of reader comments to determine what themes and stories are present in vaccine hesitant discourses. Finally, to answer RQ4 and establish how stories function to form vaccine-hesitant group identity and maintain vaccine hesitancy, I look for deeper, overlapping themes in the fantasy analysis to determine whether symbolic convergence has occurred and analyze how it functions rhetorically, that is, how it serves as a means of persuasion among group members.

Table 1. Research questions

RQ1: How do key messages in <i>Immunization 2020</i> manifest in media coverage?
RQ2: How is the concept of vaccination embodied in reader comments following media coverage about <i>Immunization 2020</i> ?
RQ3: What themes and stories are present within vaccine-hesitant discourse communities?
RQ4: How do themes and stories function to form a vaccine-hesitant group identity and maintain

vaccine hesitancy?

Content Analysis

In this thesis, I use content analysis as a strategy of inquiry. Content analysis is a qualitative research method that is structured around three main phases: the researcher prepares data that informs the central research questions; the researcher organizes the data through a process called coding to analyze themes that inform the central research questions; and, the researcher reports the results of the coding process and discusses its implications within the context of the central research questions (Elo et al., 2014).

Communication scholar James Carey (2009) argues qualitative research enables a researcher to “seize upon the interpretations people place on existence” (p. 49) by studying matters such as rituals, conversations or myths within a culture or way of life. The coding process is a central part of a content analysis (Schreier, 2012). During this process, the researcher analyzes the data to the point of saturation, the point in which all themes have been identified; then, the researcher interprets the data, giving it meaning (Schreier, 2012).

Immunization 2020 key messages. *Immunization 2020* has eight guiding principles that form the foundation of the campaign and are one way the government is measuring the initiative’s effectiveness (MHLTC, 2015). The plan is rooted in four pillars: access, connect, inform, and protect (MHLTC, 2015). Earned media coverage of the campaign serves both the “connect” and “inform” pillars. In fact, fostering “knowledge translation and exchange” is a key part of the plan (MHLTC, 2015). As such the media is an important part of *Immunization 2020*. As the government has established that the eight principles are key to reaching its goals, it seems reasonable to suggest that they are also the campaign’s key messages. Therefore, how often these

messages (outlined in Table 1) appear in earned media is key not only to *Immunization 2020*'s success, but are also an important indicator of knowledge sharing.

Search strategy. To find earned media articles about the campaign, I searched the Canadian Newsstream database via s ProQuest and full-text newspapers indexed by the Eureka database using the key words “Ontario”, “Immunization 2020”, “Eric Hoskins” and “vaccine.” Hoskins was the Health Minister when *Immunization 2020* was launched and a key spokesperson for the initiative. The search spanned from December 11, 2015 (the day the campaign launched) to January 13, 2016 (one month later). I focused on a one-month timeframe because how the media reported on *Immunization 2020* and its key messages in its initial coverage would frame public perception of the health initiative overall. ProQuest turned up one document, while Eureka turned up two. I also hand searched the online search engine Google using the same key words and found a further 10 articles, for a total of 13 articles (marked by an * in References).

Coding scheme. First, I took a small sample of three of the collected media articles and read them while looking for themes as to how knowledge is shared. My intention was to look for overlapping codes in the media articles to help develop a coding chart. While reviewing the media articles, I considered several questions, such as: What are the key themes present in the media articles? What knowledge about immunizations is shared? How is the knowledge shared (e.g. a quote, a statistic, a story)? What key messages does the media share about *Immunization 2020*? After I established key themes, I created a coding chart and independently coded the media articles in a Microsoft Excel spreadsheet to analyze how often *Immunization 2020*'s eight key principles appeared in the news coverage, using the definition the government provided for

each of the principles as a guide (see Table 2).

Table 2. *Immunization 2020* key messages, definitions and frequency in earned media sample

Key message	Definition	<i>N</i>
Evidence-informed choices	Ensures the public and health care providers make evidence-informed choices	13
Protect/Strengthen	Strengthens the immunization system to achieve herd immunity and protect vulnerable Ontarians	11
Shared responsibility	Health is a shared responsibility; everyone plays a role in keeping Ontarian's safe from diseases	6
Health equity	Health protection and immunizations are a right; Ensure vulnerable communities have equal access to immunizations and protection	5
Value in health care	Guides healthcare decisions based on value, quality and performance of a vaccine	4
Innovation	Improved access and sustainability of the immunization system (reduce vaccine waste)	4
Transparency	Consults the public and explains decisions/process	4
Patient first/Patient-centred	Immunization 2020 puts patients first by improving their experiences with the health system	4
Total		51

Fantasy Theme Analysis

Fantasy theme analysis begins with a content analysis of dramatizing messages to discover fantasy themes, fantasy types and rhetorical visions (Bormann, 1989). In this phase, messages are analyzed to categorize characters, such as heroes and villains, and actions, such as common plotlines as well as setting to understand where the characters perform their actions. This becomes the basis for a critical qualitative analysis that analyzes and looks for the presence of overlapping themes, called symbolic convergence, to understand how those themes function to persuade group members (Bormann, 1989). Symbolic convergence theory acts as a framework to understand and explain why group members communicate in a particular way (Bormann, 1989).

Search strategy. In the larger sample of media articles ($n=13$), four contained reader comments. In all, there were 1,245 reader comments. I reviewed the reader comments and took a purposeful sample of reader comments that expressed vaccine hesitancy, contained dramatizing messages and had at least three interactions, either “likes” or replies (chains). Chaining is a “minor symbolic explosion” (Bormann, 1989, p. 451) when group members reacted to a message the way they were supposed to react, for example, when another reader “likes” a comment that expresses a common storyline in vaccine-hesitant group conversations. For the purposes of this research, I decided chaining had occurred when a reader liked and/or responded to a comment that contained a dramatizing message about vaccine hesitancy. As chaining is a crucial part of fantasy theme analysis, I only included dramatizing messages that had at least three interactions — either likes or replies. After reviewing all reader comments and removing those that did not fit with the parameters of my purposeful sample, I was left with 36 comments (2.9% of all reader comments). A purposeful sample is when data is collected and analyzed, in this case reader comments, which specifically informs the central research question or questions.

Coding scheme. First reader comments were coded for action, characters and settings in a coding table created in Microsoft Word. The coding table also noted the media outlet and a link to the story in which the comment originally appeared, as well as the number of interactions (likes/replies) the comment generated and the reader’s name or “handle,” the name the reader used to identify him or herself in comments. CBC News also ranks each commenter and notes how often they have responded to media articles on the news site and how often they liked other reader comments. These three categories were also noted for reader comments from the CBC News article in the original coding table. Next, the Microsoft Word table was imported into

MAXQDA, a qualitative and mixed methods analysis software, and then the comments were coded again for actions, characters and settings, as well as fantasy theme, fantasy type and rhetorical vision to the point of saturation.

Chapter Four: Results

In this chapter, I will report on the results of the data analysis of as it relates to both the content analysis of *Immunization 2020* and the fantasy theme analysis of reader comments that expressed vaccine hesitancy and appeared in response to the media articles. First, I will report on the frequency of key messages in a sample of earned media articles that reported on the *Immunization 2020* health initiative in the first month following the launch of the campaign. This aspect of the results will address RQ1 (see Table 1). Next, I will report on the results of the fantasy theme analysis as it relates to my sample of reader comments that followed those media articles and expressed vaccine hesitancy to address RQ2 and RQ3 (see Table 1). The results that relate to RQ4 will be addressed in the next chapter.

Table 1. Research questions

RQ1: How do key messages in <i>Immunization 2020</i> manifest in media coverage?
RQ2: How is the concept of vaccination embodied in reader comments following media coverage about <i>Immunization 2020</i> ?
RQ3: What themes and stories are present within vaccine-hesitant discourse communities?
RQ4: How do themes and stories function to form a vaccine-hesitant group identity and maintain vaccine hesitancy?

Content Analysis

As mentioned in Chapter Three, a content analysis is built around collecting qualitative data, coding that data to analyze themes which inform the central research questions, reporting the results and discussing their implications (Elo et al., 2014). In this section, I will report the

results of the coding process as it relates to RQ1, which addresses how *Immunization 2020* key messages manifest in media coverage of the initiative. (The results that address RQ2 and RQ3 will be discussed in the fantasy theme analysis section later in this chapter. The results related to RQ4 will be addressed in the next chapter). Part of analyzing how key messages manifest in media coverage of *Immunization 2020* is noting how often those messages appear. As indicated in Chapter Three, I determined that in order for a message to penetrate a reader's attention, it would need to have appeared at least 50 per cent of the time in the earned media sample.

Key messages. Across the 13 sample articles collected from the Canadian Newsstream database via ProQuest and the full-text newspaper database Eureka, *Immunization 2020*'s eight key messages appeared 51 times (see Chapter 3, Table 2). Five of the articles were a version of a *Canadian Press* wire story. Additionally, three articles appeared under the same byline and were published in different newspapers in the same geographical region. Only two key messages — *evidence-informed choices* and *protect/strengthen* — appeared in more than 50 per cent of the articles.

Evidence-informed choices. This key message appeared in all 13 articles (100 per cent). It was consistently framed around the government's requirement for vaccine-hesitant parents to take a science class about immunizations at a local health unit before they would receive an exemption so that their child could attend a publicly funded school (see Table 3 for examples of key messages in media coverage). This was the only message to appear in every article.

Table 3. Examples of *Immunization 2020* key messages in media coverage

Key message	Example 1	Example 2
Evidence-informed choices	Ontario parents who don't want to have their children vaccinated will have to be educated themselves about the risks their kids will face before they can go to school. (Leslie, 2015)	
Protect/Strengthen	Health Minister Eric Hoskins says the proposed new strategy, called Immunization 2020, will strengthen the publicly funded immunization program. (CBC, 2015)	
Shared responsibility	"It takes all of us to protect each of us." (Hoskins as cited in Ferguson, 2015).	"These changes not only protect these children, they protect all children, including those who cannot protect themselves," said Hoskins. (Leslie, 2015)
Health equity	Immunization 2020 also includes a push for increased public outreach efforts. (Stacey, 2015)	As well, the province wants to step up immunizations through such measures as clinics in schools and community centres... (Bostelaar, 2015)
Value in health care	The province wants to know vaccine coverage rates in local areas. Ontario is also seeking a comprehensive system to gauge the performance of the immunization program provincewide. (Stacey, 2015)	Public Health Ontario could not say exactly how many additional students are facing suspension, however, since the information is collected by local health authorities and not consolidated by a central agency. The Ministry of Health says it hopes to remedy that as part of its five-year plan for renewal of its immunization program. (Urback, 2016)
Innovation	Health Minister Eric Hoskins said Ontario will seek ways . . . to give people access to a secure online site for access to their records. (Bostelaar, 2015)	Ontario will also increase the scope of practice for pharmacists so they can administer certain travel vaccines. (Leslie, 2015)
Transparency	"There will be expanded public reporting of coverage rates so everyone in Ontario knows where their community stands on immunization." (Hoskins as	C.D. Howe Institute report from 2015 that suggested "public health bodies and healthcare providers focus on delivering information about the benefits

	cited in Leslie, 2015)	and risks of vaccinations to support decision making, especially for vaccine-hesitant parents.” It seems as though the Ontario government has taken precisely that advice. (Urback, 2016)
Patient first/ Patient-centred	She said the information session would also be a chance for open communication. "We know on the Internet there's all sorts of information out there and sometimes it can be difficult to sift through the information ... and we know that sometimes there is also misinformation there. So we really look forward to have that opportunity to clarify any misinformation that they may have read," Andrews said. (Stacey, 2015)	While local health units collect vaccination records, the source of Cameron and Ferguson’s problems could be the clunky provincial database that holds the information. On Friday, the province announced plans to expand and streamline the tracking system, but the changes won’t come in time to help Ottawa Public Health update the records of as many as 50,000 school children. (Bostelaar, 2015)

Protect/Strengthen. The second most frequent key message to appear, *protect/strengthen* was coded 11 times (84.6 per cent). After *evidence-informed choices* this was the only other key message to appear in more than half the articles. This key message was coded whenever an article referred to the key terms “protect” and/or “strengthen” and often overlapped with another key message, *shared responsibility*. When key messages overlapped and contained elements of several categories, I coded the messages under all of the relevant categories. This meant that the same sentence or phrase could be coded under more than one category. Often the terms “protect” and “strengthen” appeared in conjunction with references to Ontario’s publicly funded immunization program. For example, in explaining the purpose of *Immunization 2020* one article noted: “The proposed new strategy, called *Immunization 2020*, will strengthen the publicly

funded immunization program by requiring parents who want a non-medical exemption for their kids to attend an education session, said Hoskins” (Leslie, 2015).

Shared responsibility. Arguably one of the most important key messages of the campaign, *shared responsibility* was only present in six articles (46.1 per cent). Media coverage always translated this key message via direct quotes from Hoskins such as: “It takes all of us to protect each of us” (Ferguson, 2015).

Health equity. Health equity comprises the idea that health protection and immunizations are a right. This turns traditional tactics used by vaccine hesitant messengers about individual rights on its head by suggesting that individuals have the right *not* to be exposed to disease (McCoy, 2015). The government wants to ensure vulnerable communities such as new Canadians have equal access to immunizations and immunization coverage. Health equity was coded in five articles (38.5 per cent) — three under the same byline. It was coded when an article referenced the public’s right to access immunizations, particularly in underserved areas or among vulnerable populations that may not have access to a primary care physician. It was often referenced with respect to Ontario’s efforts to bring immunizations to neighbourhoods, local schools and local community centres — essentially meeting the public where they are — rather than the public accessing immunizations at a central location, such as a public health unit.

Value in health care. Value in health care appeared four times (30.7 per cent), once in the *National Post* and again in *The Tillsonburg News*, *Woodstock Sentinel-Review* and *The Norwich Gazette*. This message reinforces that the Ontario government is making decisions

about immunizations based on their value, quality and performance. This message was coded when an article referred to reporting practices around immunizations in Ontario to demonstrate the value vaccines provided, or health decisions based on vaccine performance or the performance of the immunization system in Ontario. Similar to the key message *transparency*, the key message *value in health care* manifested around reporting immunization coverage in the province — or rather, the lack of a comprehensive immunization reporting system in Ontario. Several articles referenced the lack of a comprehensive immunization reporting system in Ontario, including one article, which reported: “The province wants to know vaccine coverage rates in local areas. Ontario is also seeking a comprehensive system to gauge the performance of the immunization program provincewide” (Stacey, 2015a; Stacey 2015b; Stacey 2015c). This was coded under the key message *value in health care*, however, because knowing and understanding immunization rates is one way to measure a vaccine’s performance, and thus, its value.

Innovation. Innovation also appeared four times (30.7 per cent). It was coded three times in a *Canadian Press* story and once in an article published in *The Ottawa Citizen*. Innovation was coded when a journalist referenced improving access to immunizations in innovative ways, that is, outside of traditional avenues for immunization or the sustainability of the immunization system. Notably, the key message *innovation* mostly manifested in messages around the province giving pharmacists increased immunization powers — a new strategy to increase immunization rates. However, *innovation* was also coded whenever an article referenced new technology with respect to medicine and/or medical records. For example, one article noted how the province was

seeking ways to use technology “to give people access to a secure online site for access to their records” (Bostelaar, 2015).

Transparency. One of four key messages that appeared least often ($n=4$, 30.7 per cent), *transparency* encompassed the campaign’s objective for the Ontario government to consult the public around vaccine safety, delivery, immunization rates or why a vaccine was approved. It often appeared with respect to transparency around immunization rates.

Patients first/Patient-centred. This message appeared four times (30.7 per cent) — once in an *Ottawa Citizen* article and again in *The Tillsonburg News*, *Woodstock Sentinel-Review* and *The Norwich Gazette*. It’s important to note the latter three articles all appeared under the same byline. The key message *patient first/patient-centred* focuses on changing a patient’s experience with the health system. This key message manifested in two ways in media coverage: in Stacey (2015a; 2015b; 2015c), it was a quote by a public health nurse who welcomed information sessions for parents as a way to have “open communication” and clarify any misinformation they may have read or heard; in Bostelaar (2015) it was stories from parents frustrated with the province’s “clunky” immunization database. Parents were annoyed that they had reported immunizations, but that the system did not record them properly making it appear as if their children had not been immunized (Bostelaar, 2015). As a result, many children faced school suspensions (Bostelaar, 2015). The news coincided with the launch of *Immunization 2020* and Bostelaar (2015) noted the province had plans to “expand and streamline the tracking system.” Since this would potentially change parents’ experiences with the health system by addressing their frustrations, this was coded under the key message *patients first/patient-centred*.

Social media shares. Eight articles enabled social media sharing (61.5 per cent). Of those, three articles indicated how often the content was actually shared (37.5 per cent). The remaining five articles enabled sharing but did not indicate how often or if the article was shared. Among platforms that were specified, Facebook was used most often ($n=548$). One article (CBC, 2015) with the headline “Vaccination exemptions for school kids could get tougher to acquire” was shared most often ($n=5,436$), however the platform wasn’t specified, although readers had the option of sharing the article through Facebook, Twitter, Reddit, LinkedIn and via e-mail (see Table 4). It is also worth noting that same CBC article also generated the most comments ($n=1,198$). It’s unclear why this article generated such social media attention and reader interaction. It is possible that someone of influence shared the article or that it was shared on a vaccine-hesitant website, prompting others to weigh in, however, that information is outside of the scope of this research. The article, which did not appear under a specific reporter’s byline, contained only three of the eight possible key messages: *protect/strengthen*; *evidence-informed choices*; and *shared responsibility*. The article’s content centred around *Immunization 2020*’s requirement that vaccine-hesitant parents take a science class about immunizations in order to qualify for a vaccine exemption for their child. It is possible that the focus on science classes was the impetus for both the article’s considerable social media shares and reader interactions, however, it is difficult to know for certain without analyzing who shared the article on social media and how it was framed in the process.

Table 4. Social media shares of earned media sample for *Immunization 2020*

Platform	Quantity
Facebook	548
Twitter	0

LinkedIn	0
Email	0
Google+	0
Other (platform not specified)	5,436
Total	5,984

Fantasy Theme Analysis

Similar to a content analysis, a fantasy theme analysis notes themes in reader comments with respect to *Immunization 2020* and vaccines themselves. However, a fantasy theme analysis differs from a content analysis in that it goes beyond analyzing themes and probes deeper into the broader implications and motivations of vaccine-hesitant group members. The point of a fantasy theme analysis is to find symbolic convergence. In order to do that, the researcher must conduct a deep analysis that looks for overlapping themes to understand how the vaccine-hesitant group functions rhetorically — that is, how do group members attract the unconverted and how do they persuade those in the group to stay and maintain vaccine hesitancy. These ideas are inherent in RQ2, RQ3 and RQ4, which all pertain to how the concept of vaccination is embodied in reader comments following media coverage about *Immunization 2020* (RQ2), what themes and stories are present within vaccine-hesitant discourse communities (RQ3) and how those themes and stories function to form a vaccine-hesitant group identity and maintain vaccine hesitancy (RQ4). Overall, four major fantasy themes emerged during the analysis of reader comments, along with four fantasy types (i.e. stock scenarios). As well, after analyzing characters, actions and the settings present in reader comments, I found that vaccine-hesitant parents positioned themselves as the heroes in their discourse. In this section, I will look at the results of the fantasy theme analysis in more depth as it relates to RQ2 and RQ3 as well as provide examples of how the fantasy themes and fantasy types manifested in reader comments. I will address RQ4 in the next chapter.

Between recurring themes and the number of replies and “likes” the reader comments included in the sample generated, I found evidence of symbolic convergence. In all, the 36 sample comments, selected for analysis because they expressed vaccine hesitancy and contained dramatizing messages, generated 451 replies and 181 likes (Figure 1). One comment, “Thoroughly Orwellian” (Essene, 2015) generated both the most replies ($n=94$ replies) and the most number of likes ($n=46$ likes), which accounted for 20.8 per cent of total replies and 25.4 per cent of total comments.

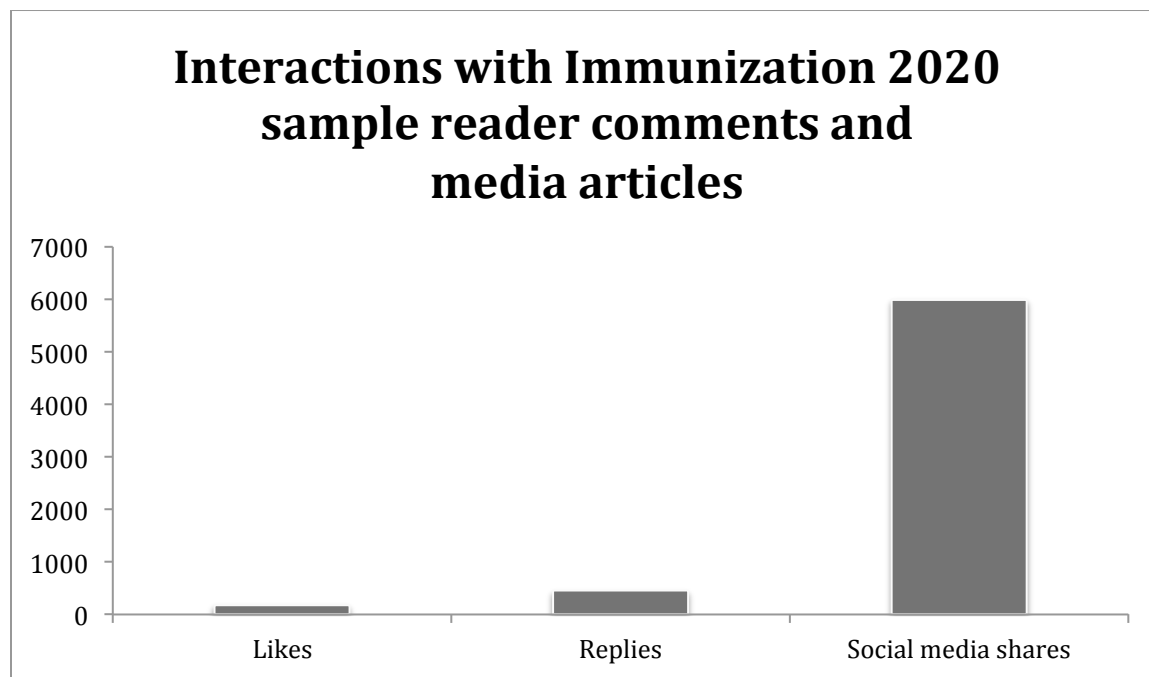


Figure 1. Frequency of likes, replies and social media shares of *Immunization 2020* reader comments and media articles

The number of comments and likes suggest that the comments sparked a chain indicative of symbolic convergence, which occurs when group member share fantasies, find common ground and begin to see the world in the same way (Bormann, 1989). Overall, four major fantasy themes emerged: *independence*, *superiority*, *living a natural life* and *educated/investigator* (see

Table 5). These fantasy themes eventually manifested as fantasy types — “stock scenarios” (Bormann, 1989, p. 451) that emerged over and over in the reader comments, each with similar heroes and villains. Bormann (1989) notes that fantasy themes eventually become fantasy types. It is important to note that the comments could have — and often did — contain overlapping fantasy themes, fantasy types and rhetorical visions (see Table 5 for a breakdown of the components a fantasy theme analysis). Rhetorical visions are addressed in Chapter Five.

Table 5. Anatomy of a fantasy theme analysis

Step 1: Collect sample of reader comments	Step 2: Content analysis	Step 3: Fantasy theme analysis	Step 4: Fantasy types	Step 5: Rhetorical visions
<p>Reader comments were collected that:</p> <ul style="list-style-type: none"> • Express vaccine hesitancy • Include dramatizing messages • Sparked a chain (i.e. at least three interactions) 	<ul style="list-style-type: none"> • Analyze comments for characters, actions and settings • Do heroes and villains emerge? 	<ul style="list-style-type: none"> • What is the content in the dramatizing message that sparked a chain? • What fantasy themes emerged? 	<ul style="list-style-type: none"> • Are there scenarios repeated over and over in the content? If so, what are they? • Do the same characters (that is, heroes and villains) emerge in those scenarios? 	<ul style="list-style-type: none"> • Analyze whether a master analogy emerges that pulls together characters, actions, settings, fantasy themes and fantasy types • Does the master analogy provide a shared script that gives the group a worldview? • What rhetorical visions emerge (i.e. how do multiple fantasies come together into a cohesive worldview that sheds light on what motivates parents to act)?

Fantasy themes. All of the major themes — *independence, superiority, living a natural life* and *educated/investigator* — overlapped. Among them, there were several symbolic cues,

that is, words, phrases, slogans or other visual cues that triggered shared fantasies (Cragan & Shields, 1992). Symbolic cues for *independence* referenced vaccine-hesitant parents not relying on the government to know what is best for their health as well as a resistance to doing things the “conventional way” (jnatural, 2015). Symbolic cues for *superiority* referenced vaccine-hesitant parents having more of an impact on their children and suggestions that they are more involved and caring parents because they have gone out of their way to inform themselves about the dangers of vaccines. There were also references to their children being “better” than other vaccinated children (see Table 6 for examples of reader comments that reflected each major fantasy theme). Symbolic cues for *living a natural life* revolved around the idea of living a clean, chemical-free life, one that does not involve the consumption of anything “processed.” The group often referenced the idea of real milk, as well as a divide between city life and rural life, where people raise their own food. Implicit in this idea is a connection between health and one’s environment and food as a “healer” or contributing factor to health and disease prevention. Symbolic cues around *educated/investigator* referenced the idea that vaccine-hesitant parents are more informed and used phrases such as “read up” and “do your homework” (Rp, 2015). This fit with other cues that “vaccine cautious” parents do not ignore the dangers around vaccines even though adverse “reactions are swept under the rug” (Cautious, 2015). Vaccine-hesitant parents know this because they have “investigated,” done their “homework” and have gathered “evidence.”

Table 6. Sample of reader comments reflecting each fantasy theme

Independence	<ul style="list-style-type: none"> • "Parents who do not vaccinate do not need education. It is the sheep who inject children with diseases that need to be educated." (JS, 2015)
Superiority	<ul style="list-style-type: none"> • "Those parents who investigate and choose not to immunize their children with certain vaccines will also give their children a better education via home schooling and probably raise their children to be better people as they will have more of an impact on them." (Eugene from AB, 2015)
Living a natural life	<ul style="list-style-type: none"> • "I selectively vaccinate. I will not rely on government to know what's best for our health, not when they allow smoking, sugar and alcohol, yet ban real milk, home butchered meats and fresh eggs." (Cautious, 2015)
Educated/ investigator	<ul style="list-style-type: none"> • "We began our investigation of vaccines when our daughter was a newborn, and were not initially opposed, just wanting to be informed . . . We delayed, perhaps indefinitely." (JesseG, 2015)

Characters, actions and setting. Part of a researcher's task when analyzing fantasy themes is also taking note of the characters, actions and settings that appeared in the dramatizing messages. In this section, I report on which characters most often appeared in vaccine-hesitant discourses, how those characters acted and the setting in which those actions took place.

Characters. I coded 103 instances among the 36 reader comments where characters appeared, some of them overlapping (see Figure 2 for frequency of characters, actions and settings across reader comments). For example, characters such as parents, children, and doctor appeared several times. Perhaps not surprisingly, the language used when describing characters related to vaccine hesitancy was sympathetic, suggesting an "us" versus "them" mentality, with "us" being the vaccine-hesitant parents trying to make the best decision for their child or children. Vaccine-hesitant parents were often described with adjectives, such as "caring," and

“informed,” while also describing other vaccine-hesitant group members in similar sympathetic language, such as “vaccine-damaged individuals,” and “those who suffered at the hands of the H1N1 vaccine” (Anne Fountain, 2015).

On the other side, “them” was often denoted in terms of larger, machine-like institutions, and parents who vaccinated were swept up in this terminology when their characters were described. Interestingly, the language used became more devoid of human characteristics. Parents who vaccinated were called “sheep” and their children were referred to as “offspring.” Pharmaceutical companies and doctors who advocated for vaccines were reduced to “chemical bankster families” (OnGuardforThee, 2015), while references were also made to big agriculture, China, “vaccine makers,” and the government, which was often referred to as “the state.”

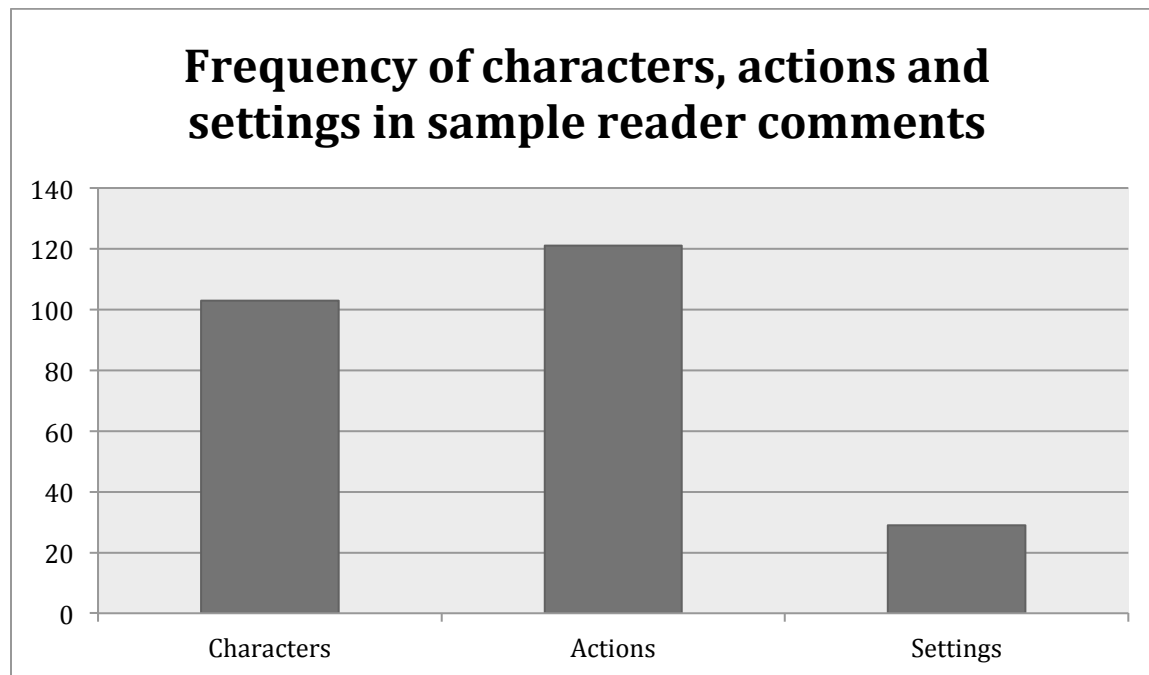


Figure 2. Frequency of characters, actions and settings in sample of reader comments

Actions. I coded 121 actions among the 36 reader comments (to see the sample of 36 reader comments, refer to Appendix 1). When commenters included actions in their dramatizing messages, they often congregated around two scenarios: first, vaccine-hesitant parents often discussed the actions they took around investigating vaccines so that they could become informed and make an educated decision about the risks they perceived were associated with immunizations. Part of this scenario included the government, specifically the provincial Liberal government at the time; politicians within that government, specifically then Minister of Health Eric Hoskins; or pharmaceutical companies as hiding something, often referred to with terms such as “lie,” or “deceitful.” Another part of this scenario included the idea that pharmaceutical companies were pushing an agenda and politicians were complicit in both lying to the public about the real risks of vaccines and pushing an agenda which vaccine-hesitant parents perceived as benefiting pharmaceutical companies alone at the expense of the public, specifically young children.

A second common scenario that the vaccine hesitant often referenced was the act of spreading disease. Specifically, when vaccine-hesitant parents discussed the spread of disease, they always did so by pinpointing vaccines themselves, waning immunity or the vaccinated as the reason why diseases such as pertussis or measles, were reappearing and spreading in Ontario and across Canada. Part of this scenario also included references to how the vaccine-hesitant community was being unfairly blamed for spreading disease.

Setting. As part of the fantasy theme analysis, I coded 29 occurrences that related to setting among the 36 reader comments. When commenters referenced a setting — a place where their actions occurred — they often did so with respect to either city or rural life; government

websites; the science classes that the Liberal government was requiring vaccine-hesitant parents to undergo before they would receive a vaccine exemption so that their child could attend a publicly-funded school, and; courts or criminal courts, often with reference to pharmaceutical companies. One setting that emerged most often among all settings was the idea of the child's body or a child's immune system as a place that vaccine-hesitant parents were trying to protect. The child's body as a setting was frequently referred to as something pure, vulnerable and in need of shielding, either from toxic substances, pharmaceutical companies or politicians. This further entrenched the idea of vaccine-hesitant parents as protectors of their child's health vis-à-vis their child's natural, intact body, free from outside interference, that is, vaccines.

Fantasy types. As Bormann (1989) notes, fantasy types are “stock scenarios” (p. 451) that emerge in a dramatizing message and help develop a culture among group members. Among reader comments, several common storylines emerged. These storylines serve to establish both common ground among vaccine-hesitant group members and build on the fantasy themes already referenced to create a rhetorical vision that guides group decision-making. Among the reader comments, four stock scenarios emerged:

Vaccines don't work and are causing disease. In this storyline, a scenario was often painted that it was vaccinated children, not the unvaccinated, who were to blame for the spread of disease. Vaccinated children and their parents were positioned as the villains because readers' believed that children who had been recently immunized were contagious and hence putting other children at risk by exposing them to disease they would not have faced otherwise. For example, one reader wrote: “You might want to read up on the fact that recipients of live

vaccines are actually contagious for a couple weeks after being vaccinated. That means that children who are being vaccinated could potentially pass on the illnesses to your child” (Ani, 2015). Vaccine-hesitant parents were often portrayed as the victims, because they and their children were being wrongly blamed for spreading disease. This manifested in comments such as:

There is a lot of misunderstanding where people think it is the unvaccinated who are the only ones capable of passing disease on to others. In the case of the pertussis vaccine, a study found that those vaccinated may not show symptoms, but can still be infected and pass it on to others. (Jane M, 2015)

Often introduced in this scenario was the idea that herd immunity is a myth. Herd immunity as a myth was often pinpointed as a reason people — largely the vaccinated — were getting sick because, as this common plotline suggests, as immunity achieved through vaccination wanes, people fall ill, further spreading disease. The reader who identified herself as Jane M (2015) noted that “herd immunity never seems to work and people who do not vaccinate get unfairly blamed.” In this storyline, it is often the vaccinated that are getting sick because the vaccine-hesitant community does not believe vaccines work. This storyline often conflates the flu vaccine with routine childhood immunizations. Commenters often noted that the flu vaccine has a low efficacy rate and suggest that if the flu vaccine is not effective, why should the public believe that childhood immunizations perform any better?

Vaccines are unnecessary. A second common scenario that emerged among reader comments was that vaccines were unnecessary if people take care of themselves with the proper diet. As an example, one commenter noted that he had never been vaccinated and pinpointed his

diet as the reason why he had never fallen ill to any of the diseases vaccines are meant to protect against:

I've never been vaccinated for Polio, the measles, the mumps, the flu, in fact, I have never been vaccinated PERIOD !!! and (sic) I have never acquired ANY of these afflictions, I just have a proper diet and allow my immune system to do the job that God meant it to do. (Burt, 2015)

In this fantasy type, the vaccine hesitant are presented as heroes because they take such good care of themselves through diet that they do not need to rely on traditional medicine. This storyline demonstrates how the fantasy theme *superiority* is organized into a common scenario that is often repeated in vaccine-hesitant discourses. The sick in this scenario are then portrayed as the villains because if their immune system is weak and they fall ill they are to blame for disrupting the natural ability of their immune system to fight off disease by subjecting it to toxins, either from vaccines or a poor diet or both. (The intersection of morality and health is addressed in Chapter Five.)

Vaccines are government propaganda. In this oft-repeated fantasy type, the government is engaging in propaganda around vaccines. This larger storyline often branches into two main threads: first, that the government launched *Immunization 2020* to “force” (Angus Young, 2015; Julia, 2015) vaccines onto the public (the notion of forced vaccines emerged as part of a reaction to Ontario’s requirement that vaccine-hesitant parents take a science class to understand how immunizations work before qualifying for an exemption so that their child can attend a publicly-funded school), and, second, that the government is promoting vaccines for profit because of secret ties to pharmaceutical companies. These two storylines connect with both the

independence fantasy theme as well as the *educated/investigator* fantasy theme. For example, one commenter who identified himself as a father of four noted that after spending more time on the subject of vaccines than he has on anything else in his entire life, he and his wife will never vaccinate their children (Iggynucks, 2015). When challenged by another commenter that the parents are putting their own children at risk, Iggynucks (2015) replied:

The only thing they're at risk of is a healthy lifestyle with their bodies free of as many harmful substances as we can prevent. As for them choosing to 'catch-up' up (sic) when their (sic) older. Its (sic) possible but we will be raising them to think for themselves, use logic and recognize propaganda when they see it.

In another comment that generated both the largest number of likes and replies, the commenter responded to *Immunization 2020* by calling it “Thoroughly Orwellian” (Essene, 2015), a reference to authoritarian governments, such as those portrayed in George Orwell’s novel *1984* (Tavlin, 2015). In a later response, the commenter who identified themselves as Essene (2015) further responded to *Immunization 2020* by writing: “Quite a relief knowing politicians are not deceitful ‘used car salesman’ or else one might question their vaccine agenda.” In all of these fantasy types, the government — more specifically politicians — is portrayed as the villain, trying to “indoctrinate” (Ken Conrad, 2015; Ani, 2015) the public by imposing immunizations and pushing a vaccine agenda. At the same time, vaccine-hesitant parents are positioned as the heroes, the independent thinkers who resist and expose an authoritarian government trying to take away the public’s rights as well as the government’s “agenda.” These storylines often raise the issue of setting. While discussions are occurring in an online setting, children’s bodies are their own setting for the dramatizing messages and storylines. In their storylines, members of the vaccine-hesitant community often raise the

question (whether implicitly or explicitly) of who has agency, or the right to control, children's bodies and what is put inside of them? This sense of agency and its storyline reflects the fantasy theme *independence*.

Vaccines are dangerous/pharmaceutical companies cannot be trusted. The final common storyline that emerged was that vaccines are dangerous and pharmaceutical companies cannot be trusted. These two fantasy types are linked because the plots often weave together under the same storyline. These common scenarios often reference the “billions” of dollars pharmaceutical companies have paid through the National Vaccine Injury Compensation Program, suggesting the compensation is “proof vaccines are not safe” (Mamba, 2015). Since its inception 30 years ago, the National Vaccine Injury Compensation Program has paid \$3.9 billion in compensation from 6,159 petitions (Health Resources and Services Administration, 2018). In this storyline, the government and pharmaceutical companies are the villains because they are not disclosing to the public the risk of being immunized. Pharmaceutical companies are portrayed as hiding something, particularly with reference to compensation through the vaccine injury program. (Indeed, one reader used the term “criminal” three times in the same comment to refer to vaccine makers.) This scenario is often manifested through comments such as, “How about including the very real risks of some of these vaccines as well” (Cautious, 2015) and suggestions that adverse reactions to vaccines are swept under the rug. One reader, whose comment attracted 22 likes, referenced the story of Angelica Black, a United States resident who at three months of age suffered a vaccine-related brain injury three days after receiving routine childhood immunizations (Garloch, 2015). Five years later, her family was awarded \$2 million in compensation from the program as well as \$250,000 a year for the rest of her life to cover

medical expenses (Garloch, 2015). While the government and pharmaceutical companies are portrayed as the villains in these fantasy types, vaccine-hesitant parents are often positioned as the heroes — the truth-tellers who expose the government and pharmaceutical companies for not disclosing the risk of vaccines. In this plotline, the vaccine-hesitant community does not refer to Black's case for what it was — a rare complication from vaccines — but rather as emblematic of the danger that vaccines pose. As a result, vaccine-hesitant parents position themselves as heroes in this storyline, speaking out for victims such as Black. They view themselves as moral beings that shed light on the risks associated with vaccination so that parents can make an informed choice.

Conclusion

Overall, vaccine-hesitant parents engaged in discourse that positioned group members as the heroes and members of the public, their children, the government and vaccine makers as the villains. The tension between the heroes and the villains emerged in fantasy themes where members of the vaccine-hesitant community viewed themselves as independent, superior, trying to live a natural life and as educated individuals who have investigated the risks of immunizations. These fantasy themes evolved into fantasy types — stock scenarios — where the divide between the heroes and the villains intensified as vaccine-hesitant group members. In the next chapter, I will address how these characters, fantasy themes and fantasy types coalesced under a shared script, creating a unified vision for vaccine-hesitant group members that maintained their vaccine hesitancy.

Chapter Five: Discussion

In this chapter, I will discuss the results of both the content analysis and fantasy theme analysis as they relate to the health initiative *Immunization 2020*. As previously mentioned, the goal of this research is to answer four central questions: (RQ1) how do key messages in *Immunization 2020* manifest in media coverage? (RQ2) How is the concept of vaccination embodied in reader comments following media coverage about *Immunization 2020*? (RQ3) What themes and stories are present within vaccine-hesitant discourse communities? (RQ4) How do themes and stories function to form a vaccine-hesitant group identity and maintain vaccine hesitancy? I have already addressed RQ1, RQ2 and RQ3 in the previous chapter, but I will also discuss the implications of each in this chapter. As well, in this chapter I will also delve into RQ4 in an attempt to provide more than just an accounting of the fantasy theme analysis, but also to provide an in-depth look at its implications as it relates to maintaining vaccine hesitancy.

Content Analysis

As noted in the previous chapter, the media plays an important role in sharing information, particularly around health initiatives and science. In reporting on science, the media's role is not just to translate information, but, by virtue of its coverage, to also increase the relevance of the science and the understanding of scientific research among a public of non-scientists (Peters, 2013). While the news media in general plays a key role in promoting health campaigns, individual journalists in particular play a crucial role in building public support for a campaign by virtue of whom they choose to interview and what information specifically they choose to report. Journalists are very aware of health problems. As such, researchers (Aldoory & Austin, 2011) have argued that health communicators should leverage journalists and turn their

awareness into action. In their work entitled “Relationship Building and Situational Publics: Theoretical Approaches Guiding Today’s Health Public Relations,” Linda Aldoory and Lucinda Austin (2011) contend that how the public reacts to key messages in health initiatives is an indicator of whether they will actually change their behaviour as it relates to a specific health problem. For example, if a parent seeks out information about how an under-vaccinated population affects terminally ill children, they are likely to change their behaviour and immunize themselves and/or their own children. Aldoory and Austin (2011) argue that there are three factors that point to whether someone will merely process information or actively research a health problem and change their behaviour: (1) their level of involvement with a health problem; (2) their awareness of a health problem; and (3) the real or perceived barriers that prevent someone from taking action about a health problem. Thus, Aldoory and Austin (2011) argue that for health campaigns to succeed, communicators must shift journalists from an aware public that simply processes information about a health problem to one that increases a journalist’s level of involvement. One way to do that is for communicators to build better relationships with the media to ensure journalists have up-to-date and accurate health information (Perez, Fedoruka, Shapiro & Rosberger, 2016). Building better relationships with journalists also means that communicators become trusted sources of information that help frame health stories to prevent misinformation from appearing in media articles (Cho, 2006; Cho & Cameron, 2007; Tanner, 2004 as cited in Aldoory & Austin, 2011). But with the introduction of user-generated content, such as reader comments following online media articles, health communicators must also move beyond the media and build trust amongst the public. The public also has a role to play in shaping how information is shared, shaped and understood, adding to published media articles about science and health initiatives, potentially influencing their reach, uptake and, ultimately,

success. As a result, it is crucial that supporters of a particular health initiative, such as *Immunization 2020* or immunizations in general, not sit silently on the sidelines supporting vaccines, but contribute to the online conversation in a visible and vocal way. One way public supporters of *Immunization 2020* can do that is by anchoring their own messages to specific campaign key messages to amplify them even more. As James (2011) noted (and as I referenced in an earlier chapter), the more often the public is exposed to a specific message, the more likely they are to believe it. In this section on the content analysis of earned media coverage about *Immunization 2020*, I will discuss the implications of the fact that the media did not share most key messages from *Immunization 2020* at least 50 per cent of the time, what the low frequency of key messages in the earned media sample may say about the government's goal in sharing the importance of *Immunization 2020*, as well as why some key messages were shared more often than others.

Since only two of the eight key messages appeared in more than half the articles, I argue the Ontario government failed to leverage the media in amplifying its messaging around *Immunization 2020*. Looking closer at the key message *evidence-informed choices* — the only key message to appear in each article — the media framed it exclusively as the government forcing vaccine-hesitant parents to take a science class at their local public health unit. While a noble attempt to inform vaccine-hesitant parents in a logical way, this translation is problematic. By asking vaccine-leery parents to take a science class, the government is assuming parents are not immunizing their children because they either do not understand the risks of not vaccinating or they do not understand how vaccines work. While that may be true, the heart of the issue boils down to parental concerns over vaccine safety. Silvio Waisbord and Heidi J. Larson (2005) argue that where vaccine safety is questioned, “it is critical to first understand the nature and scope of

the concerns” (p. 9). In a report on vaccine confidence among 28 European Union countries, researchers Heidi Larson, Alexandre de Figueiredo, Emilie Karafillakis and Mahesh Rawal (2018) noted a vaccine’s perceived importance, its safety and its effectiveness influenced vaccine confidence among those surveyed. Perhaps most importantly, the researchers concluded that younger adults were more likely to question the importance and safety of both the MMR and seasonal influenza vaccines than older adults (Larson et al., 2018). They also found that in geographic regions where general practitioners expressed high confidence in these immunizations so did the public, but in countries where general practitioners expressed low levels of confidence in these vaccines, so too, did the public (Larson et al., 2018). Therefore, the Ontario government should spend time focusing on key messages that address concerns over vaccine safety and building public trust, such as transparency and value in health care, so that they are represented in the media more frequently.

Protect/strengthen was the second most translated key message. While protecting the community by achieving herd immunity is a crucial message, I argue the most important messages to help *Immunization 2020* reach its goals — *patients first/patient-centred, innovation, health equity and shared responsibility* — were not shared often enough to stick with readers and raise awareness about the campaign in a positive way. With respect to these messages, I argue the Ontario government did not successfully leverage the ability of journalists specifically and the media generally to create awareness of and uptake for the *Immunization 2020* health initiative. James (2011) argued that the more often a message is shared, the more people pay attention to it and absorb some of it, even unintentionally. These four messages are crucial to *Immunization 2020*’s success as they address important issues such as access to vaccines and interpersonal communication between a patient and doctor, which helps build trust in the health

system. Indeed, Barbara F. Sharf (1990) notes that physician-patient communication constitutes an interpersonal rhetoric that “can significantly influence outcomes that include curing and preventing diseases” (p. 218).

The key message *patients first/patient-centred* addresses a person’s experience with the health system. The Ministry of Health and Long Term Care (MHLTC) (2015) notes that this message is key to its success. However, it appeared in only four articles. Researchers (Ozawa, Paina & Qiu, 2016; Waisbord & Larson, 2005) argue one way to build trust in vaccines is through positive experiences with the health system. Waisbord and Larson (2005) argue that someone’s negative attitudes about immunizations are often due to “poor or inadequate information-sharing by health providers” (p. 7). The key message *patients first/patient-centred* aims to change a person’s experience with the health system as a way to change their perception of immunizations. I argue building awareness about this objective is the first step in igniting a change. MHLTC should place more emphasis on — and construct talking points around — this key message should they engage in future communication with the media about *Immunization 2020*. Talking points are consistent phrases, terms and “sound bites” that key government spokespeople would use when speaking with the media about *Immunization 2020*.

Individuals and communities have both a right and a responsibility to immunize (MHLTC, 2015). This idea dovetails with what I argue are three of the most important campaign key messages: *innovation*, *health equity* and *shared responsibility*. *Innovation* and *health equity* both involve improving access to immunizations to reduce disparities in vulnerable communities (MHLTC, 2015). In looking at immunizations and the role communication plays in achieving herd immunity, Waisbord and Larson (2005) argue that a gap in access to both vaccines and information about immunizations are two of the four key challenges health communicators face.

“Children are less likely to be vaccinated when their communities don’t have access to local media or other communication platforms or access to health services” (Waisbord & Larson, 2005, p. 5). Children also are not immunized when vaccines are not available (Waisbord & Larson, 2005). Waisbord and Larson (2005) suggest underserved communities have consistently low immunization coverage rates. One way to address this is through innovative outreach strategies (Waisbord & Larson, 2005). The provincial government is doing that with *Immunization 2020* by increasing pharmacists’ immunization powers and holding immunization clinics in community centres. This is an important message, however, it did not register with the media or appear in more than 50% of earned media coverage about *Immunization 2020*, failing to garner the type of repetition James (2011) argues is so crucial to the success of a health campaign.

Finally, the key message *shared responsibility* is an important one as it raises the issue of social capital, that is the shared values among individuals and groups that enable them to trust each other and work together (Organisation for Economic Co-operation and Development, 2007), yet it only appeared six times. Though the key message *shared responsibility* appeared more often than other key messages, I argue it was still not translated often enough, that is, it did not appear in at least 50% of media articles about *Immunization 2020*. Sachiko Ozawa et al. (2016) argue social capital plays a “central role in increasing levels of trust” (p. 131). Therefore shared responsibility — an aspect of social capital — is important to building trust in immunizations. Disease outbreaks reinforce distrust, which lingers after the outbreak has ended (Ozawa et al., 2016). As such, the key message *shared responsibility* plays a crucial role in increasing immunization rates and preventing outbreaks. Since this message was referenced in

less than half the articles, the media did not sufficiently amplify this key message and its context, potentially hurting the success of *Immunization 2020*.

Health campaigns and health initiatives such as *Immunization 2020* need media attention to succeed and health communicators need to engage journalists in sharing their messages. The reality is that the media is a powerful influencer. Journalists frame stories for the public based on which angles they pursue, whom they interview and which quotes are used. Editors influence public perception of an article based on where it is published (for example on the front page or buried deep within the newspaper) or placed in a news broadcast (for example in the first five minutes or late in the newscast) as well as the headline and images that accompany the article. Denis McQuail (as cited in Perez et al., 2016) argues that how the media frames a story has powerful effects such as “informing and structuring public knowledge; forming public opinion; influencing public image; setting the public agenda of issues; and effecting changes at the level of behavior” (p. 1535). Therefore the media can influence public perception and uptake of *Immunization 2020*. If the media does not translate key messages around *health equity*, *innovation*, *shared responsibility* and *patients first/patient-centred* at least 50% of the time in its coverage of *Immunization 2020* then that lack of emphasis influences public perception of the health initiative, trust in the health system and trust in vaccines themselves. Focusing on the key message *evidence-informed choices* could be detrimental as science classes could feel like propaganda to vaccine-hesitant parents and reinforce their beliefs (Milne, Caulfield & Tepper, 2017) — the opposite goal of *Immunization 2020*.

Fantasy Theme Analysis

In this section, I will address the rhetorical visions that emerged during the analysis of reader comments that expressed vaccine hesitancy and their larger implications when situated within the rhetorical community. In order to engage in rhetorical criticism, a researcher must dissect human communication, which “works to divide and integrate communities of human beings . . . to provide self and group concepts for human beings searching for meaning in their existence and endeavours” (Bormann, 1989, p. 466). To do so, Bormann (1989) contends that a researcher engaging in rhetorical criticism generally, and fantasy theme analysis specifically, should consider several aspects of the communication, such as: how did it create a sense community; did it generate a resilient and confident group or individual self-image; how did group members create a social reality; and, how their communication provided an accounting of the world, giving meaning to their group and themselves. When group members use discourse to create a social reality that provides meaning to and frames their worldviews, they are building a rhetorical vision. Rhetorical visions build on both fantasy themes — stories that are shared among group members that account for their experiences — and fantasy types, or “stock scenarios,” that coalesce under a “master analogy,” that is, a script shared among group members (Bormann, 1989, p. 453). The master analogy serves to separate who is in the rhetorical community from who is not (Bormann, 1989). Often in a rhetorical vision, participants can elicit an emotional response from another group member simply by using a code word that forms part of the master analogy (Bormann, 1989). This shared script gives participants a broader view of things and serves as a way to organize their experiences under a cohesive social reality (Bormann, 1989). Rhetorical visions intertwine with symbolic convergence theory in that they both explain why the group functions as it does and how a group, after an exchange of stories

and discourse, over time “may come to embrace a similar social reality” (Bormann, 1989, p. 448).

According to Bormann (1989), groups develop a rhetorical vision in two ways. The first way to build a rhetorical vision is through a “we-they” divide (Bormann, 1989). This divide is created and contained through sharing fantasies that build a common worldview among participants. This serves not just as a means of persuasion to attract members to the group, but also as a way to maintain their participation in the group (Bormann, 1989). Rhetorical visions serve to create what Bormann calls a “rhetorically isolated” group (1989, p. 460). Thus when members want to break ties, the group prevents them from doing so by reminding them that their rhetorical vision still exists and is relevant (Bormann, 1989). Examples of how this manifests in the vaccine-hesitant community are addressed later in the chapter.

The second way communities develop new rhetorical visions is to “take a contemporary vision and stand it on its head” (Bormann, 1989, p. 454). For example, in vaccine-hesitant group communication, a stock scenario is often shared: That it is vaccinated people who are responsible for spreading disease — not the unvaccinated. This takes a “contemporary vision” — that it is the unvaccinated population who are endangering the public — and flips it so that the storyline suggests that it is vaccinated individuals who pose the danger. The vaccine-hesitant community erroneously suggests that the vaccinated spread disease because they are contagious after they are immunized and this is why diseases such as measles have emerged in contemporary society once more — not because vaccine hesitancy has led some parents not to immunize their children.

As previously mentioned, the objective of a fantasy-theme analysis is to find symbolic convergence, that is, the point where group conversations and discourse overlap to create a shared reality among group members so much so that their communication does not have to be

explicit. Beyond an accounting of heroes, villains, fantasy themes and fantasy types, rhetorical visions dive deeper into the social reality of the group and how it operates. In this section, I will address RQ4 (How do themes and stories function to form a vaccine-hesitant group identity and maintain vaccine hesitancy?), discussing the three rhetorical visions that emerged during the analysis of reader comments.

Rhetorical Visions

Rhetorical vision: Vaccine-hesitant parents are activists/advocates, standing up for what is right. In the backdrop of this worldview vaccine-hesitant parents are pushing back against the injustice of what they perceive to be “forced” vaccination. Part of the changes encompassed in *Immunization 2020* is for vaccine-hesitant parents to undergo a science class on how immunizations work before they receive an exemption so that their unvaccinated child can attend public school in Ontario. This particular aspect of the initiative dominated much of the discourse around vaccine hesitancy and positioned vaccine-hesitant parents as activists pushing back against what they perceived as an over-reaching government. Another aspect of this worldview is that vaccine-hesitant parents have also positioned themselves as advocates for vaccine safety. Group members often share the story of Angelica Black, an infant who suffered rare complications from vaccines and was awarded a lump sum of nearly \$2 million (USD), plus annual expenses to manage her care through a national vaccine injury compensation program in the United States (Garloch, 2015). Both the activist and advocate aspects of this rhetorical vision functions as a means of persuasion among vaccine-hesitant parents. Both positions take a moral high ground, making this rhetorical vision both compelling and persuasive. It coalesces under a master analogy that infants and children, such as Black, are (as some readers described) being

“sacrificed” for the “greater good” while complications resulting from immunizations are “swept under the rug.” This is a compelling and persuasive rhetorical vision where vaccine-hesitant parents are both defenders of human rights (and parental choice) as well as advocates (and a voice) for the vaccine injured.

Rhetorical vision: Pharmaceutical companies are more interested in making money than protecting children. The worldview that pharmaceutical companies are more interested in profits than protecting children builds off of two fantasy types previously mentioned: That vaccines are dangerous and pharmaceutical companies cannot be trusted; and that vaccines are government propaganda. In this rhetorical vision, the master analogy manifests around the funds that the U.S. National Vaccine Injury Compensation program has paid out since it was created nearly 40 years ago. Readers often referenced the program as a “vaccine court,” calling forth the image of a civil trial where a judge or jury determines whether a person or company has been negligent, leading to an injury. In fact, the program is a no-fault alternative to civil court where court-appointed arbitrators decide whether a vaccine has caused an injury according to a vaccine injury table (Health Resources and Services Administration, 2018). Anyone can file a claim through the program and, in some cases, receive compensation even though vaccines were not found to cause their injury (Health Resources and Services Administration, 2018). However, readers focused on the fact that the program has paid out nearly \$4 billion in compensation since it was created, suggesting the money was proof that pharmaceutical companies are more interested in protecting their business than protecting the public. As one reader noted: “The vaccine court has paid out over \$3billion (sic) in damage payments to people who have been harmed by vaccines . . . proof vaccines are not safe, you don't pay over \$3billion for nothing”

(Mamba, 2015). Further, because — in this rhetorical vision — pharmaceutical companies are more interested in making money than protecting the public, vaccine-hesitant group members then view the government and medical community as complicit in pushing a “vaccine agenda” that benefits pharmaceutical companies and their profits more than the public. One comment that illustrates this writes that people working at the Centers for Disease Control and Prevention “don’t even get their own kids vaccinated” because “they know full well of all the poison that goes into those very same vaccines” (Angus Young, 2015). In this comment the reader suggests that medical professionals and scientists do not trust vaccines enough to immunize their own children, but are keeping it from the public. This creates a belief that vaccine-hesitant parents cannot rely on physicians or the government to tell them the truth when it comes to vaccines and health. One comment, which generated nine “likes,” contributed to this idea: “I will not rely on the government to know what’s best for our health, not when they allow smoking, sugar and alcohol, yet ban real milk, home butchered meats and fresh eggs” (Cautious, 2015). Implicit in this rhetorical vision is the concept that the government is attacking those trying to live a healthy and clean life, while allowing “unclean” vices to exist. Another reader agreed with this comment:

I like your thinking. I remember when my mom moved to the city. Her new doctor was surprised at how healthy she was given that she had lived most of her life on the farm raising most of her own food. What does that say about what doctors know about healthy eating and living? Not much! (Eugene from AB, 2015)

This comment is interesting because it communicates a divide between city life and rural life. It also, however, demonstrates how those within the vaccine-hesitant group share a fantasy that solidifies what Duffy (2003) called a “credible interpretation of reality” (p. 293). In this reader’s comment, physicians do not understand anything about health and are “surprised” that people

who live on farms are so “healthy.” Would a physician really find it surprising that someone who raised her own food was so healthy? We cannot know for sure, but are left to rely on this commenters’ interpretation of reality that suggests physicians do not know how to live a healthy life. This furthers the worldview that physicians and the government are ill informed about health and attack those living a natural life. Thus, they cannot be trusted to know what is healthy. Therefore, when physicians or politicians share the message that vaccines keep us healthy, parents opposed to vaccination do not believe them because they do not view them as knowledgeable about health or independent from the pharmaceutical industry. Vaccine-hesitant parents believe that a physician’s expertise and the government’s knowledge are tied to the pharmaceutical industry. For the vaccine hesitant, this is embodied in the fact that the campaign’s spokesperson, Eric Hoskins, was both a politician *and* a physician. While most people would view being a physician as a qualification to be Ontario’s Health Minister, the vaccine hesitant see it as proof of a link between physicians, politicians and the pharmaceutical industry.

This rhetorical vision is persuasive in maintaining vaccine hesitancy because it positions vaccine-hesitant parents as protecting their children from an industry that is not interested in their safety. A distrust in the pharmaceutical industry along with government and the medical community interplays with another rhetorical vision, *vaccine-hesitant parents are independent thinkers* (discussed below), to persuade parents to maintain vaccine hesitancy. These two rhetorical visions are reinforced in the rhetorical community when vaccine-hesitant parents express concern about what is going into their children’s bodies — or argue that parents *should* be concerned about what is going into their children’s bodies. Further, concern over their child’s body positions vaccine-hesitant parents as moral and caring, building off of the fantasy theme

superiority that emerged in vaccine-hesitant reader comments in media articles about *Immunization 2020*.

Rhetorical vision: Vaccine-hesitant parents are independent thinkers who are educated and make their own decisions. The rhetorical vision that vaccine-hesitant parents are independent thinkers who are educated and make their own decisions is the culmination of all the fantasy themes — *independence, educated/investigator, living a natural life, and superiority*. These fantasy themes and this ensuing rhetorical vision weave together to form a master analogy where vaccine-hesitant parents take pride in the fact that they resist “propaganda” and are not “sheep” like parents who “blindly vaccinate” their children. This sense of independence and pride are reinforced in discourse following media coverage about *Immunization 2020* where vaccine-hesitant parents reference how much research they have done on the issue. The amount of research vaccine-hesitant parents have done is tied to their morality — there is a sense that they are the only people who bothered to research the truth. This is evident in comments that express outrage that the government is proposing to educate vaccine-hesitant parents on immunizations, such as: “How dare they. Parents who choose not to vaccinate their children are far, far more educated . . .” (JS, 2015) and another reader comment that referenced how vaccine-hesitant parents have “gone out of their way to make an informed choice” (Ken Conrad, 2015). Comments also referred to “investigating” — suggesting not just that vaccine-hesitant parents are informed but that they also uncovered a truth not known by many, contributing to the worldview that vaccine-hesitant parents see themselves as highly moral people. In this rhetorical vision, their decision to avoid vaccines makes sense to them. Vaccine-hesitant parents have positioned themselves as the “good guys” and this is manifested in a master analogy that uses

terms such as “criminal,” “evidence,” “interrogate,” and “lying,” which was specifically used in reference to Hoskins. The use of these terms suggests that politicians know the truth about vaccines, but refuse to disclose it. This is evident in comments that suggest *Immunization 2020* is the result of a “vaccine agenda” being pushed by “big pharmacy companies” and “chemical banksters (sic) families.” This reinforces the idea that vaccine-hesitant parents are on the right side of the truth. In this rhetorical vision, it makes sense that parents do not vaccinate their children because they have investigated and know the truth.

The rhetorical vision of independent thinking is particularly persuasive and compelling as it is part of the identity of vaccine-hesitant parents and manifests in other ways. For example, vaccine-hesitant group members note that they do not do things the “conventional way.” Repetitive fantasy types that separated vaccine-hesitant parents from “conventional” parents who behave like “sheep” generated both a group and self-image of being independent and insightful. These elements are all persuasive because they equate to emotional appeals — they tap into a parent’s fear over their child’s health and suggest that parents are harming their children vis-à-vis immunizations. How many parents want to be viewed as “sheep who inject children with diseases”? (JS, 2015). Parents who do vaccinate their children are made to appear uneducated and callous. Those who do not vaccinate are made to appear as superior parents, who care enough about protecting their children that they educate themselves on the “dangers” of immunization.

Independence and *superiority* as fantasy themes also tap into the idea that “good” parents feed their children healthy food they have raised themselves. Therefore, their children will not fall ill from disease and if they do happen to become sick, their bodies are strong enough to “fight off” the disease because they have lived the “right way.” The idea that some immune

systems are stronger than others creates what Emily Martin (1994) calls “a kind of immune machismo” (p. 236) that equates those immune systems with a “new incarnation of social Darwinism” (p. 229). Vaccine-hesitant parents feel that their children have stronger immune systems than immunized children because they have been nourished with “home butchered meats,” “real milk,” and “fresh eggs” — in other words, “real” food that is natural and superior to what is available or chosen by parents who do not grow their own food or buy organic food at a grocery store. This worldview that vaccine-hesitant parents are moral, superior parents because they feed their children superior food and so their children are unlikely to become ill is very persuasive. One of the early markers of being a “good mom” is what you feed your child, for example, breast milk over formula. Parents may correlate what they put inside their child’s body with being a good parent. Therefore, in this rhetorical vision it makes sense to group members why they do not vaccinate: They are moral parents who care about what they put inside their child’s body and so their children are healthier and do not need preventative medicine. One comment, which generated four “likes,” noted how much better children with vaccine-hesitant parents are because they have not been immunized:

Those parents who investigate and choose not to immunize their children with certain vaccines will also give their children a better education via home schooling and probably raise their children to be better people as they will have more of an impact on them.

(Eugene from AB, 2015)

As this comment illustrates, in the parenting hierarchy, vaccine-hesitant parents are at the top because they are the most concerned about their children’s overall health. Vaccine-hesitant group members raise their own food, do their own medical research, school their own children and make their own decisions, weaving together strands that form an identity that persuades

parents away from immunizations. Embedded in this identity is also a sense of nostalgia for a time when people lived simply and were more connected to each other and their environment.

What Motivates Vaccine-Hesitant Parents

Vaccine-hesitant group members find common ground in fantasy themes and fantasy types that emerge during their discourse. As fantasy themes and fantasy types form into rhetorical visions, that is, a worldview that accounts for the experiences of group members, these rhetorical visions form the basis for what motivates vaccine hesitant group members to act — or, in the case of vaccine-hesitant parents, not act. Rhetorical visions do not just explain why vaccine-hesitant parents make the decisions they do, but also function as a means of persuasion among group members themselves to maintain vaccine hesitancy. In the following section, I discuss how the fantasy themes that emerged in discourse among vaccine-hesitant group members built common ground among participants and develop into powerful and persuasive rhetorical visions that motivate vaccine-hesitant parents to maintain their vaccine hesitancy.

The fantasy theme *educated/investigator* creates meaning for the vaccine-hesitant community. The terms “investigate” or “investigator” are powerful ones and suggest that the group holds the moral high ground and speaks for the victims of vaccine injury, much like the role of a police detective or prosecutor. When another reader who is in favour of vaccines presents a story of an infant who died of whooping cough, the vaccine-hesitant community dismisses it as the result of vaccination and waning immunity, rather than the result of under vaccination in the community at large. Thus, vaccine-hesitant group members are persuaded that it was not their inaction around vaccines that caused an infant’s death, but the vaccines themselves, protecting the group’s hero status. In this way, the *educated/investigator* fantasy

theme evolved into both a fantasy type — a stock scenario that group members repeated again and again — and a rhetorical vision, a shared script that mobilized group members around a “master analogy” (Bormann, 1989, p. 453), which accounted for their behaviour.

Such a rhetorical vision gave the group’s vaccine hesitancy a sense of gravity. As investigators, vaccine-hesitant parents were seeking out the truth as well as raising awareness about vaccine safety. Therefore, every act by the government to compel vaccination is interpreted as a further link between the government and the pharmaceutical industry’s “vaccine agenda.” At the same time, vaccine-hesitant group members also saw themselves as a voice for the vaccine injured. Their very act of vaccine avoidance provides a platform to share the stories of the vaccine injured in a mainstream way — via the media and its online comment section. The group’s inaction around vaccines also forces a conversation about immunizations that may sway others to join their rhetorical community. Indeed, *Immunization 2020* is a direct response to falling immunization rates in Ontario. The initiative itself is proof that the vaccine hesitant have moved from the margins to the mainstream, attracting the attention of the Ontario government and causing it to create policy to address vaccine hesitancy in the province, while at the same time directing the mainstream media’s attention toward why some parents are avoiding vaccines, amplifying the message of vaccine-hesitant group members.

The fantasies *superiority* and *independence* are linked to lifestyle. In these fantasies, vaccine-hesitant group members live on farms, butcher their own meat, raise their own food and are self-reliant. They are able to do things by and for themselves. This self-reliance translates into independence from the government, physicians and “processed” things, such as vaccines, which are “unnatural” in their worldview. In this fantasy, group members take pride in living a “clean” life. Thus, having physicians or politicians (or both) act as spokespeople for vaccines is

like having a fast food spokesperson talk to them about healthy foods — they're incongruent. Therefore, for campaigns such as *Immunization 2020* to be persuasive, they need to use a spokesperson that is independently minded — not just a mom, but also a “mom like them.” As Shelby and Ernst (2013) suggest, this is why stories of those who were once vaccine hesitant but switched are so powerful and persuasive.

Rhetorical visions around vaccine hesitancy served to mobilize some parents to support vaccine hesitancy, unifying a group that was already experiencing distrust in the government, the medical community and pharmaceutical companies. The distrust for the medical community manifested from a belief that vaccines do not work; Andrew Wakefield's retracted study in *The Lancet* that fraudulently claimed a link between the measles, mumps and rubella vaccine and autism; and discourse connecting low flu vaccine efficacy rates with overall efficacy rates for routine childhood vaccines. The distrust for pharmaceutical companies manifested with a belief that compensation doled out via the U.S. Vaccine Injury Compensation program was an indication that pharmaceutical companies were hiding something from the public with respect to vaccine safety as well as comments from vaccine-hesitant group members about safety concerns with previous vaccines. Hence, the government's plan to introduce mandatory education sessions for vaccine-hesitant parents only fuelled distrust among group members that the government was working with the pharmaceutical industry to push a “vaccine agenda.” Mandatory science classes for vaccine-hesitant parents left group members — who felt that they were already both informed and educated about immunizations — feeling further alienated and betrayed by a government that would compel them to take a science class to understand how vaccines work. As vaccine-hesitant parents were unified and building community through distrust of politicians, medicine and the pharmaceutical industry, they were also building their identity as vaccine hesitant

parents, finding common ground among their peers that transcended a health decision about vaccines to impact other aspects of their lives — their views on eating, and their overlapping views on health and morality, their sense of superiority, their views on schooling, their sense of independence and wariness of government “propaganda.”

Discourse within the vaccine-hesitant community in this context also set out norms for community behaviour. Members expressed indignation at the government, medical community and pharmaceutical companies for trying to use the bodies of their children as a living lab and “sacrificing” infants for “the greater good” (as one reader noted when discussing the Black family daughter). At the same time, infants who had died as a result of a preventable disease, such as whooping cough, were pinned on waning immunity because of vaccinations. Group members were thus expected to defend vaccine hesitancy and continue to blame re-emerging diseases as the fault of those who vaccinate, building on the expectation that group members would feel a sense of injustice on two fronts: That children were being used as guinea pigs by profit-driven pharmaceutical companies and that the vaccine hesitant were being “unfairly blamed” for the rise of preventable diseases, such as measles and whooping cough, that had put infants at risk and in some cases caused their deaths. All of these factors served to create a social reality that vaccine-hesitant parents are justified in their decisions not to vaccinate their children. Their decision not to vaccinate provided a larger spotlight around issues with vaccine safety and further fuelled distrust for politicians, medicine and the pharmaceutical industry, thereby potentially serving to attract more members to their group by raising awareness of their cause.

The discourse certainly created a drama among vaccine-hesitant group members — the same heroes and villains emerged in stock scenarios that further cemented the social reality of group members. As well, the role of vaccine-hesitant parents as advocates for victims and

protectors of their children gave group members a strong sense of meaning. What greater role is there, after all, than being a protective parent and advocate for those who cannot speak for themselves? More than that, the discourse also raised the issue of morality and health. If you live the “right” way, raise your children the “right” way and feed them the “right” food, then their health is guaranteed. Should they fall ill and not recover, it is because of something you did as a parent — a decision you made to introduce an unnatural element, such as vaccines, into their bodies. There is a sense that parents who do not “trust” the body to do its job will be punished with illness and disease. This is reinforced through group communication. Members share stories that are false, such as the idea that it is vaccinated individuals who are spreading disease. In an online environment, where stories become wrapped into one long, twisted game of broken telephone, these fabrications are difficult to correct.

The idea that the “pure” body is capable of healing itself without outside “toxins” is an extension of the metaphors that were used to describe the immune system in the early 1980s and still persists today (Martin, 1994). In analyzing these metaphors, Martin (1994) points out that there is an enduring notion that to maintain the purity of the body is “tantamount to the maintenance of the self” (p. 53). Thus, in such metaphors of the body, anything outside the self is portrayed as foreign and hostile (Martin, 1994). Martin (1994) was not specifically discussing vaccine hesitancy, but rather immunity in American culture as it relates to AIDS, however, vaccine-hesitant parents rely on the same metaphors to maintain vaccine hesitancy. Earlier, when discussing the fantasy type that emerged in vaccine-hesitant discourse that vaccines are unnecessary, I noted that in this stock scenario, vaccine-hesitant group members shared the idea that they had never been immunized and had never been ill. As an example, I pointed to one reader comment that reflected this sentiment:

I've never been vaccinated for Polio, the measles, the mumps, the flu, in fact, I have never been vaccinated PERIOD !!! and (sic) I have never acquired ANY of these afflictions, I just have a proper diet and allow my immune system to do the job that God meant it to do. (Burt, 2015)

Although religion was not a large part of vaccine-hesitant discourse, this comment speaks to the larger idea that all the body and immune system need in order to maintain health is itself. In vaccine-hesitant discourse health is not found outside the body in immunizations or trips to the doctor's office, but rather inside oneself as if it were a state of mind.

The obsession with maintaining a "pure" body devoid of anything "unnatural" is driven by a fear of contamination, Eula Biss (2014) argues in *On Immunity: An Inoculation*. Anything that breaks the boundary of the body is viewed in vaccine-hesitant discourse as "polluting" the body and once the body is polluted, it exists that way forever:

And the pollutants we have come to fear most are the products of our own hands. Though toxicologists tend to disagree with this, many people regard natural chemicals as inherently less harmful than man-made chemicals. We seem to believe, against all evidence, that nature is entirely benevolent. (Biss, 2014, p. 39)

Indeed, Biss (2014) notes that this idea of nature as benevolent manifests in alternative medicine philosophies that include practices such as "detoxification." The belief that the body is a natural healer is perhaps one reason why vaccine-hesitant parents prefer their child to develop immunity to some diseases "naturally." This appeal, Biss (2014) contends, is based on the belief that "vaccines are inherently unnatural" (p. 41). However, vaccines are not as unnatural as vaccine-hesitant discourse would suggest (Biss, 2014). They produce antibodies that are "manufactured in the human body, not in factories" (Biss, 2014, p. 41).

How Discourse Unites Vaccine-Hesitant Parents

Fantasy themes, fantasy types and rhetorical visions all serve to both define vaccine-hesitant parents as a culture and community and also unite group members, maintaining vaccine hesitancy. Among vaccine-hesitant group members, fantasy themes provide context for discourse around vaccine hesitancy while fantasy types, or stock scenarios, build common ground among participants that converge under a rhetorical vision — at vision that unites and motivates vaccine-hesitant parents. Fantasy themes help us understand why vaccine-hesitant parents would read a media article about *Immunization 2020* and interpret it very differently from readers who do not express vaccine hesitancy. “Because fantasy themes are always slanted, ordered and interpreted, they provide a rhetorical means for people to account for and explain the same experience or the same events in different ways” (Bormann, 1989, p. 453). Rhetorical visions and symbolic convergence theory helps researchers account for the various interpretations of the same event. Where some people would read articles about *Immunization 2020* and see vaccine hesitancy as an irresponsible parenting decision, those who express vaccine hesitancy would read articles about the initiative and feel betrayed or angry at the idea that the Ontario government was forcing vaccines onto parents. As the vaccine-hesitant community reads articles about *Immunization 2020*, they assign responsibility, blame, praise, guilt, love and hate for the vaccines and immunization. Bormann (1989) argues that interpreting events in this way is one way the group organizes their experience, and this motivates their decision-making, the actions they take and how they associate cause and effect.

The fantasy themes, fantasy types and rhetorical visions that emerged in vaccine-hesitant discourses following media articles about *Immunization 2020* unified vaccine-hesitant group

members and encouraged parents to continue avoiding vaccines. The discourse and ensuing fantasy themes, fantasy types and rhetorical visions, served to build both an identity and a culture among vaccine-hesitant parents. In the stock scenarios that emerged in online reader comments that expressed vaccine hesitancy, vaccine-hesitant parents were positioned as the heroes, the truth seekers and truth tellers. This hero status is connected to how vaccine-hesitant group members live. Thus, in this rhetorical community, the decision not to vaccinate goes beyond a simple health decision. Consider the rhetorical visions and master analogies that are used to unify the vaccine hesitant and mobilize parents to support vaccine-hesitant practices, that is, sharing stories that express vaccine hesitancy and avoiding immunizations for their children. In vaccine-hesitant discourses, parents who express vaccine hesitancy do so with a sense of pride — they reference how much research they have done, they refer to vaccinating parents as “sheep” and they express a belief that because they eat wholesome food and live natural lives with little interference from modern medicine that they will not fall ill with disease. As well, vaccine-hesitant group members see themselves as advocates for the vaccine injured. They raise awareness about rare complications from immunization, such as the story of Angelica Black. They see it as their duty to raise awareness about such stories and view themselves as speaking out for the victims of vaccines. As a result, these rhetorical visions create and support a sense of community among the vaccine hesitant that maintains vaccine hesitancy.

Conclusion

This research functions not just as a content analysis of fantasy themes or fantasy types, but is also meant to serve as the basis of a critical qualitative analysis. Part of this critical qualitative analysis is to determine first whether symbolic convergence exists in vaccine-hesitant

discourse communities, which I have already determined it does, and then analyze how symbolic convergence functions rhetorically, that is, how it functions as a means of persuasion among vaccine-hesitant parents. To outsiders, vaccine-hesitant parents may seem like a group of Google doctors who value conspiracy theories and engage in selfish, callous behaviour that puts their own children and others at risk. However, inside the group, the pull not to vaccinate is a strong gravitational force. Members circulate in a community that gives meaning to their lives, offers them an identity and validates their stories and their sense of injustice in the world and its key players. This is their solar system — their beliefs about vaccines, their identity and culture circulating around their sense of belongingness in this group, spinning and spinning, but rarely breaking free.

Chapter Six: Conclusion

Vaccine hesitancy has left Canada with an immunization rate below national immunization coverage targets. As a result, a growing number of two-year-old children are under-immunized for pertussis, tetanus, measles, mumps, rubella, and diphtheria vaccines. Ontario is experiencing a similar decline as school records show immunization coverage targets also fall short. Vaccine hesitancy is not without consequence: Thousands of Ontario children have fallen ill in the last decade with vaccine-preventable diseases once thought eradicated. *Immunization 2020: Modernizing Ontario's Publicly Funded Immunization Program* is Ontario's response to the growing trend away from vaccination. In the face of growing disdain for vaccinations fuelled by influencers, such as celebrities and politicians, who publicly share misinformation about vaccines (Hadhazy, 2010), and misinformation online about vaccines and their efficacy (Kata, 2009), the campaign is part of an international strategy to increase vaccination rates around the world (WHO, 2013).

While vaccine hesitancy has created fissures in Canada's shield, there is limited literature that specifically characterizes vaccine hesitancy in this country (Wilson et al., 2015). This research is a response to the gap in Canadian research on vaccine hesitancy and adds to the limited literature using *Immunization 2020* as a case study to explain how vaccine hesitancy is manifested and maintained. My goal with this research was to address four central questions: (RQ1) How do key messages in *Immunization 2020* manifest in media coverage? (RQ2) How is the concept of vaccination embodied in reader comments following media coverage about *Immunization 2020*? (RQ3) What themes and stories are present within vaccine-hesitant discourse communities?; and, (RQ4) How do themes and stories function to form a vaccine-hesitant group identity and maintain vaccine hesitancy? By performing a content analysis of

eight key messages across 13 earned media articles that appeared in the first month of *Immunization 2020*'s launch, and also undertaking a fantasy theme analysis of 36 reader comments that followed some of those media articles and expressed vaccine hesitancy, this study addresses communication around a health initiative from a broader perspective (i.e. via media attention) as well as from a personal perspective (i.e. vaccine-hesitant discourses). Addressing these central research questions contributes to the limited Canadian literature around vaccine hesitancy as noted by Wilson et al. (2015). In using *Immunization 2020* as a case study to perform both a content analysis of key messages in earned media and a fantasy theme analysis of reader comments that expressed vaccine hesitancy, this research and its findings contribute to a health communicator's understanding of vaccine hesitancy, how it manifests in Canada and how it is maintained.

Media coverage of *Immunization 2020* amplified the initiative's broader reach in the first month after the initiative was announced. Some articles were shared widely while others were not. In all, the earned media coverage generated 5,984 social media shares (at the time the sample was collected), largely on platforms that were not specified. Among platforms that were specified, Facebook was the channel most used.

The content analysis revealed only two key messages — *evidence-informed choices* and *protect/strengthen* — appeared in more than 50 per cent of media articles. The key message *evidence-informed choices* was the only one to appear in every article in the sample of earned media coverage. *Evidence-informed choices* largely focused on the new government policy that vaccine-hesitant parents would have to take a science class in order to qualify for an exemption so that their child could attend school. I argue that focusing on the key message *evidence-informed choices* could be detrimental as science classes could feel like propaganda to vaccine-

hesitant parents and reinforce their beliefs (Milne, Caulfield & Tepper, 2017) — the opposite goal of *Immunization 2020*. Rather, my findings suggest that the government should strengthen key messages that focus on building public trust in vaccines, such as *health equity, innovation, shared responsibility* and *patients first/patient-centred*, so that they appear at least 50 per cent of the time in media coverage of *Immunization 2020*. These key messages have the potential to influence public perception of *Immunization 2020*, trust in the health system and trust in vaccines themselves.

While the Ontario government successfully leveraged earned media attention around two key messages, six others failed to register in any significant way in *Immunization 2020*'s first month. When it comes to health communication, we need to do better. Health communicators need to focus on building partnerships with journalists to ensure important key messages penetrate and appear repeatedly in media articles. It is challenging to change health behaviour but even more so without media support. Immunizations are an important public health tool and herd immunity keeps those who cannot vaccinate safe. Vaccine-hesitant sentiment has spread like a virus but *Immunization 2020* and the media can become an antidote and stop this virus before it spreads any further.

This research demonstrates that health communicators, the medical community and politicians creating government policies around immunizations should also understand that parental decisions around vaccines are more than a simple health decision. As Shelby and Ernst (2013) noted, people who are opposed to vaccines have become masterful at using stories persuasively. In a virtual world, stories become facts that drive beliefs. Thus, when it comes to vaccine hesitancy, scientific facts that extol the virtues of vaccines fail to persuade. Rather, it is the stories about vaccine hesitancy that are compelling and persuasive, resonating with anxious

parents and fuelling vaccine hesitancy. Vaccine hesitancy is an identity for parents that is embedded in cultural networks and communities that persuade parents to maintain vaccine hesitancy. This is the elephant in the room when family physicians speak to parents about immunizations and one that health communicators need to also recognize when crafting messages for health campaigns or initiatives that address vaccine hesitancy. My advice for family physicians faced with a parent questioning immunizations is this: Tell stories and tell them often because it is not business — it is personal.

Ernest Bormann (1982) developed fantasy theme analysis to examine how people use narratives within a group to form identities and a shared reality. Bormann (1982) argues that when those in a group communicate, their communication is one way they create community. Fantasy theme analysis provides scholars with a means of understanding the conditions of this community — how to become a member, how to participate and how to remain a part of this community. Among vaccine-hesitant parents, this community is a powerful influencer and goes beyond a health decision. Overall, four major fantasy themes emerged in this study: *independence, superiority, living a natural life* and *educated/investigator*. These fantasy themes eventually became fantasy types — “stock scenarios” — that emerged again and again in reader comments, each with similar heroes and villains. Vaccine-hesitant parents engaged in discourse that positioned group members as the heroes and vaccinating parents, their children, the government and vaccine makers as the villains. The tension between the heroes and the villains emerged in fantasy themes where members of the vaccine-hesitant community viewed themselves as independent, superior, trying to live a natural life and as educated individuals who have investigated the risks of immunizations. Stock scenarios that emerged during group

communication evolved into rhetorical visions, or worldviews, that served to unite vaccine-hesitant parents and maintain vaccine hesitancy.

In an online world, shared fantasies are one way of establishing yourself as part of a community. Parents who do not vaccinate their children are a rhetorical community: they share common ground, symbols and stories that create a shared identity and reality. They respond to messages that align with their community and rhetorical vision. Belonging to this community goes beyond the decision over whether or not to immunize their children. It is tangled up in two key ideas: The notion of living a ‘natural’ and ‘holistic/organic’ life and the idea of uncovering and fighting for the truth. These elements are persuasive and make it very difficult for parents to “switch sides” and immunize their children. Once they do, they are not just making a health decision, but a lifestyle one. They need to belong to another community to replace the one they are leaving behind. But, as Grant et al. (2015) found, since most pro-vaccine websites do not engage in user-generated content and community building, there is nowhere for parents who change their minds about vaccination to turn. In the absence of a new, persuasive online community that encourages immunization, vaccine-hesitant parents stick with the one that persuades them to stay by validating their stories, acknowledging their ‘natural’ lifestyle and their perceptions of health — the one with which they share an identity.

Earlier, I noted that Segal (2005) argues one reason patients are not complying with a physician’s advice is because those physicians are not persuasive. She suggests that physicians need more training in this area. While that may be true, what physicians need to first understand is what is persuading a parent *not* to act. Part of the answer for physicians who see patients that are vaccine-hesitant may be that those parents are identifying with a group more than their doctor. This research tries to shed some light on the group dynamics that are persuasive and

drive decision-making among vaccine-hesitant parents, who truly are trying to do the best for their child.

How can physicians use this research to drive change around vaccine uptake? Just as Bormann (1982) argues, stories are one way of building a community and creating a shared identity. Segal (2005) suggests that patients don't identify with their physicians because they are not patients, and vice versa. While that may be true in most cases, when it comes to addressing vaccine hesitancy, physicians may also be parents and this can be a powerful tool in persuasion. Confused and anxious parents may be seeking "in the trenches" advice in an online community because they are not getting it from their physician. A physician's own parenting stories could be one way of identifying with vaccine-hesitant parents. One way to increase a physician's persuasiveness is to increase their humanity. Relating to a parent as a parent when it comes to vaccines could be perhaps the most compelling "evidence" a physician has to offer.

Addressing vaccine hesitancy is an important public health goal. As immunization rates fall in Canada and, indeed, around the world due to vaccine hesitancy, vaccine-preventable diseases have emerged once more, infecting hundreds of Canadian children and thousands of Europeans and Americans, sometimes leading to death. Thus, increasing Canada's immunization rate to provide broader protection for those who are immunized — and those who are not — is an important part of public health policies and initiatives such as *Immunization 2020* in Ontario. Just as the Canadian Shield forms the ancient core of a large swath of North America, so too, do immunizations form the bedrock of preventative healthcare for Canadian children. As a journalist, I will leave the last word on the importance of vaccines with another journalist, Jeffrey Kluger, author of *Splendid Solution: Jonas Salk and the Conquest of Polio*, who, in a

2010 piece in *Time* magazine put it best: “Vaccines save lives; fear endangers them. It’s a simple message parents need to keep hearing.”

Limitations

There are several limitations to this research, the largest being that the reader comments used in the sample may not wholly reflect the nature of vaccine-hesitant discourses. The reader sample includes those who commented on an online media article, however, not every person who is vaccine hesitant may have seen these articles or commented on them in the online forum the newspaper provided. Thus, it is possible that some characteristics of vaccine hesitancy may not be reflected in this research or throughout the coding process.

Additionally, I should note that I was trying to fill a gap on the limited Canadian literature on the characteristics of vaccine hesitancy, however, because people create their own identities online and in user/reader forums, I have no way of confirming whether my sample contained only Canadian voices or was reflective of the population. I am unable to denote gender, age, race or whether one user has created multiple profiles under different names. Therefore, one person’s opinion may be over-represented in the sample while other vaccine-hesitant perspectives are under-represented.

Furthermore, qualitative inquiry is subjective and not generalizable and so this is a potential limitation of this research. As well, it is worth noting that this research is capturing a specific moment in time with respect to Ontario’s *Immunization 2020* initiative, but people’s experiences are fluid and may change over time. Moreover, the Internet is a transient place and more readers may comment on these articles after I have taken my purposeful sample. As such, this research only captures readers’ comments as they existed on the date of collection.

Finally, in order to gauge *Immunization 2020*'s success, I need to compare pre-campaign immunization rates with post-campaign immunization rates, which is not possible as the campaign continues. Since *Immunization 2020* is still ongoing, it is unclear whether the initiative has reached its goals and the effect the media focus on only two of eight key messages has had on its success.

Areas for Future Research

This study added to the limited Canadian literature on the characteristics of vaccine hesitancy however it focused on Ontario's *Immunization 2020* initiative as a case study. An analysis of vaccine-hesitant discourses around other similar health initiatives in other provinces would offer further insight into the Canadian characteristics of vaccine hesitancy. An element that emerged during my fantasy-theme analysis of reader comments was that vaccine-hesitant discourse communities sometimes use dehumanizing language to address those parents who vaccinate and their children. A broader study that analyzes this specific aspect of vaccine-hesitant discourses would offer additional insight into the Canadian characteristics of vaccine hesitancy. As well, it may be helpful to compare narratives between pro-vaccine discourses under online media articles and vaccine-hesitant discourses to contrast the types of stories and knowledge shared. *Immunization 2020* continues until the year 2020, however, one final area of future research would be a post-campaign analysis to examine whether the initiative reached its goals in increasing Ontario's immunization rate and changing the public's perspective of the province's immunization system and vaccines themselves.

Recommendations for Future Health Initiatives

Stories are powerful. Just as vaccine-hesitant discourse communities use stories to manifest and maintain vaccine hesitancy, so too, should future health initiatives leverage stories to share key campaign messages and build trust in immunizations. A new parent unsure about immunizations is looking for reassurance. Stories, not statistics, reassure. Future health initiatives should also focus on building trust in the immunization system and vaccines themselves, rather than focus on educating vaccine-hesitant parents. Finally, since vaccine-hesitant online communities engage in active, user-generated content and communication, health initiatives encouraging immunizations should consider creating a similar moderated online community with parenting experts and parents themselves who support immunizations and are available to engage in online discussions and share stories about vaccines with anxious new parents.

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Appendix

Reader Comments Under Earned Media Sample

Comments collected Sept. 7-11, 2018

All comments reviewed (n=1,245)

Comments in sample that meet the parameters of at least three likes/replies, expressed vaccine hesitancy, and contained dramatizing messages n=36 or 2.9 per cent of all comments

Source (CTV/CBC) if CBC, list total comments from reader	Comment (only choose those with at least three replies/likes, i.e. chain)
CBC https://www.cbc.ca/news/canada/toronto/vaccines-school-exemption-1.3361433 0 likes but led to 11 replies between poster and two other people Username: Jimbo	“My Grandmother lived 102 years, lived through 2 world wars, food shortages, poor water quality etc. etc. and was never once vaccinated in her life.”
CTV News https://www.ctvnews.ca/health/ontario-considers-tougher-rules-for-exempting-children-from-vaccines-1.2696687 9 likes Username: Cautious	How about including the very real risks of some of these vaccines as well. You know, the reactions that are swept under the rug, and deemed as "couldn't have been from 'my' vaccine". I selectively vaccinate. I will not rely on government to know what's best for our health, not when they allow smoking, sugar and alcohol, yet ban real milk, home butchered meats and fresh eggs.
CTV News 4 likes Username: Eugene from AB	I like your thinking. I remember when my mom moved to the city. Her new doctor was surprised at how healthy she was given that she had lived most of her life on the farm raising most of her own food. What does that say about what doctors know about healthy eating and living? Not much!
CTV News 6 likes, 7 replies Username: JesseG	How about disclosure of what is in vaccines? We began our investigation of vaccines when our daughter was a newborn, and were not initially opposed, just wanting to be informed. We learned that other G8 countries delay vaccination until the immune system is more developed (2 or 5 years) and that vaccines include animal products or are incubated in animal products. We delayed, perhaps indefinitely.
CTV News	You might want to read up on the fact that recipients of live vaccines are

5 likes, 4 replies Username: Ani	actually contagious for a couple weeks after being vaccinated. That means that children who are being vaccinated could potentially pass on the illnesses to your child. This info is available via the CDC website.
CTV News 4 likes, 1 reply Username: Ken Conrad	This is little more than a paternalistic scheme by the government to indoctrinate and harass parents who have gone out of their way to make an informed choice. It is certainly characteristic of this current Liberal government's ceaseless inclination to waste taxpayer's dollars for no good reason.
CTV News 4 likes, 1 reply Username: Eugene from AB	This could be a good thing. Those parents who investigate and choose not to immunize their children with certain vaccines will also give their children a better education via home schooling and probably raise their children to be better people as they will have more of an impact on them.
CTV News 4 likes, 8 replies Username: Ani	I would happily attend a publically-funded vaccine-indoctrination class ... if it means that I am still allowed to make decisions about what is best for my own children.
CTV News 3 likes, 1 reply Username: Rp	Okay fokes do your homework, get your facts straight and your peer reviews in order put forth the medical proof and make our wonderful medical community give you their answers Don't settle for propaganda make them provide evidence of their claims then make sure their evidence is correct and backed up by medical reviews and not pharmaceutical corporate reports or testing Then make it public
CBC News 1 like, 6 replies Username: Julia	There are 5 classes of retroviruses. The first discovered was the SV40 which causes cancers. It came from rhesus monkey kidney cells. All these retroviruses are the result of foreign tissue cultures used in conjunction with viruses in the vaccine labs creating new retrostrains. Anyone vaccinated now carries these dormant retroviruses. Once the immune system can no longer handle the overburden of multiple vaccinations, any one of these retroviruses can become active. Health Canada is aware of the situation which has also now contaminated the blood supply. I am not going to bother going into the other risks of the adjuvants, lack of efficacy, zero control of whether the live content has been killed off causing an increase in nagalase (a marker used to determine cancer) or the proof that all the European research shows outbreaks are related to vaccine strains and those recently vaccinated can carry the active virus up to 6 months following vaccination. Studies also show that the death rates recorded in outbreaks are in the vaccinated groups, not the unvaccinated groups. Or the fact that 50% of the population have a defect in either side of the immune system or are immunodeficient and that anyone over the age of 25 is likely to no longer carry any antibodies to any of their childhood vaccines as their antibodies (not immunity) last between 6 months and 7 years. Forced vaccines are a crime against humanity. So for those who pretend to have a clue about the risks of vaccines, you go ahead and figure that out for yourself. I am not interested in a debate with anyone who has nothing useful to say!
CBC News	Quite relief knowing politicians are not deceitful " used car salesmen", or else one might question their vaccine agenda.

2 likes, 1 reply Username: Essene	
CBC News Jimbo (see above, part of 11-reply chain)	How many had a poor diet ? diet is the key to a strong immune system, not a mega corporate elixer. If someone is anemic, then by all means get vaccinated, but I prefer to control my own destiny.
CBC News 1 like, 10 replies Username: Mamba	The vaccine court has paid out over \$3billion in damage payments to people who have been harmed by vaccines, as this Govt website shows http://www.hrsa.gov/vaccinecompensation/statisticsreport.pdf proof vaccines are not safe, you don't pay over \$3billion for nothing. Putting aside the harmful side effects most vaccines have a poor success rate anyway, like last years flu vaccine had a 13% success rate.
CBC News 0 likes, 17 replies Username: Anne Fountain	I think it's important that when learning, that individuals are reminded of the Respidol epidemic caused by a large Pharmaceutical company who lied. OR the comeback of Polio due to the oral polio vaccine or the those who suffered to the hands of the H1N1 vaccine or to the young girls who have been guinea pigs to Garadsil or the warning of the MMR vaccine that it may cause Autism or how after years of children having seizures due to cough medicines all which are now pulled from the shelves....then they can make an informed decision. Not an anti-vaccer just an informed one.
CBC News 0 likes, 3 replies Username: Concerned Parent	Can people stop accusing anti-vaxers for not taking care or caring enough for their children and others or being selfish? By people being on here, they clearly care. I can tell you that I care a hell of a lot and am trying my best. Some people are concerned about what is going into peoples bodies. Unfortunately, everyone is in the dark about this issue. No-one really knows the "truth" about vaccines. This topic isn't black and white. Things are usually grey.
CBC News 0 likes, 11 replies Username: Ant	Interesting that as the rate of vaccinations have spread, so has disease.
CBC News 1 like, 2 replies Username: The Scarlet Pimpernel	It is amazing how humanity managed to survive without vaccines.
CBC News	There are three exemptions to NOT taking vaccines. First is for medical reasons, because your doctor says so. Secondly, Religious Affiliation, and thirdly, a personal choice which gets interpreted as a "conscientious objector". The last one is a matter of human rights. If I choose to not have my children vaccinated I am not required to demonstrate that under duress. Singling me out for my personal choice and forcing me to be "educated" is a violation of my human rights. There is too much fear and superstition being taken advantage of here and I still would not vaccinate my children the conventional way. Medicine has become a study of statistics and ignores people, and anything

<p>2 likes, 19 replies Username: jnatural</p>	<p>that reduces people to a number is criminal. It is nonsense to think that there are pathogens lurking around every corner ready to pounce. It is not true because it violates a basic rule in microbiology and nature, the medium has to be right for the microbe to flourish on it which is why some get it and some do not.</p>
<p>CBC News 4 likes, 24 replies Username: Inconvenient Facts</p>	<p>If your kids are vaccinated, what are you afraid of? Does this mean you think the vaccines don't work and therefore your children are at risk. If that is true, why are you vaccinating your children?</p> <p>Really people, it is the big pharmacy companies that are pushing this agenda. Just another freedom taken away from us using fear tactics.</p>
<p>CBC News 1 like, 3 replies Username: Jane M</p>	<p>@Canadianfirst Many parents who choose not to vaccinate do so based on many hours of research - and by this I mean reading peer reviewed studies, not unreliable websites. In many cases they are much more informed on both sides of the complex vaccine debate than those who blindly vaccinate. Whatever a parent chooses, they choose based on what they truly believe is best for their family. Just because they have made a choice different than you, doesn't make them criminal.</p> <p>There is a lot of misunderstanding where people think it is the unvaccinated who are the only ones capable of passing disease on to others. In the case of the pertussis vaccine, a study found that those vaccinated may not show symptoms, but can still be infected and pass it on to others. http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm376937.htm#</p> <p>There has also been evolution so there is now a pertactin negative strain of pertussis, which the vaccine does not cover. In many of the recent outbreaks, this is the strain that is to blame, and in many cases has affected more vaccinated individuals than unvaccinated.</p> <p>Also, when children are given live vaccines such as MMR, they are capable of transmitting the disease for others for up to 28 days. Also, the theory of herd immunity that everyone uses as an argument for vaccinating was actually created based on naturally acquired immunity, which means once you get the disease once, you are immune for life. In many cases with vaccination you are only immune for a few years before you need a booster shot. This is why herd immunity never seems to work and people who do not vaccinate get unfairly blamed; the theory was not created based on a population of vaccinated people.</p>
<p>CBC News 4 likes, 3 replies</p>	<p>How dare they. Parents who choose not to vaccinate their children are far, far more educated on the dangers of vaccines than those who vaccinate their kids without asking questions. Parents who do not vaccinate do not need education. It is the sheep who inject children with diseases that need to be educated. This is nothing more than an attempt to frighten parents into complying. If they are going to order thinking, educated parents into mandatory "education" sessions, then perhaps people like me who are vaccine damaged should attend so we</p>

Username: JS	can tell people about the dangers of this insanity.
CBC News 2 likes, 3 replies Username: Silkhead44	the only real risk is the threat of violence from government for non conformity...my generation survived without all these shots or "safeguards" the course is pure propaganda
CBC News 5 likes, 18 replies Username: Iggynucks	I have never spent as much time on this subject as anything in my entire life and I've never been more sure of anything in my entire life. I'm just throwing this out there. I'm a father of four children and my wife or I will never vaccinate our children. Ever.
CBC News 1 like, 4 replies Username: Iggynucks	The only thing they're at risk of is a healthy lifestyle with their bodies free of as many harmful substances as we can prevent. As for them choosing to "catch-up" up when their older. Its possible but we will be raising them to think for themselves, use logic and recognize propaganda when they see it.
CBC News 7 likes, 30 replies Username: Max Stirner	I have not been vaccinated for 20 years. I have not had the flu for over 20 years. Mandatory, enforced vaccinations? Just so you know, you are going too far.
CBC News 2 likes, 10 replies Username: Questionmarks	Just look at the Billions of dollars the vaccine makers and pharmaceutical companies pay in fines in criminal court. These companies are criminal companies and have been caught many times in criminal activities. And we still trust them???
CBC News 2 likes, 20 replies Username: Brimley	As a parent with a child with autism, it had been my wish that someone told this vaccine problem 15 years ago. Go ahead to vaccinate your children. But i swore my grandchildren will never be vaccinated. Although i cannot go to court to sue the government, i believe one day the truth will come out. As a parent, we know exactly how our kid changed. Congratulation to all the children without this problem. God blessed!
CBC News 1 like, 6 replies Username: Angus Young	Did you know that most of the people working at the center for disease control don't even get their own kids vaccinated? And can you guess why? Of course it is because they know full well of all the poison that goes into those very same vaccines..!! That should tell you everything you need to know..!! Get Stuffed Liberals, you won't force us to do ANYTHING!
CBC News 4 likes, 7 replies Username: Doors of perception	A state controlled innoculation, followed by state controlled brainwashing interesting world.
CBC News	BS! What about allergies!

Why are allergies, Ms, cancer, autism, etc etc ...growing through the roof ?

....chemical poisoning from big ag, pharma, GMOs, fracking, China, etc

....but most of all ...its the toxic adjuvants in immune shots like aluminum, mercury, foreign dna, MSG, viruses and bacteria like SV40 cancer virus! Some adjuvants are derivative isolated chemicals to aggravate the immune system are made of common allergens...e.g. soy, peanuts, legumes,

<http://therefusers.com/refusers-newsroom/vaccines-cause-allergies-dr-dave-mihalovic/#.VgBsHLfluUk>

http://www.smartvax.com/index.php?option=com_content&view=article&id=73:vaccine-induced-allergies

<http://www.cdc.gov/vaccines/vpd-vac/should-not-vacc.htm>

<http://vran.org/about-vaccines/vaccine-ingredients/oil-based-adjuvants/a-glimpse-into-vaccine-adjuvants/>

<http://educate-yourself.org/vcd/allvaccinescontaminated29nov11.shtml>

<http://www.jeffereyjaxen.com/blog/new-jama-study-confirms-nurse-whistleblowing-routine-hospital-vaccine-damage-happening-to-infants>

<http://www.globalresearch.ca/vaccine-mccarthyism-what-if-the-vaccine-paradigm-itself-is-deliberately-flawed/5427768>

<http://articles.mercola.com/sites/articles/archive/2012/08/02/merck-flu-vaccine-conflicts.aspx>

http://www.naturalnews.com/024534_europe_health_who.html

<http://www.naturalnews.com/Nazi.html>

<http://www.ctvnews.ca/baxter-admits-flu-product-contained-live-bird-flu-virus-1.374503>

<http://www.storyleak.com/pharmaceutical-giant-dumps-live-polio-virus-into-belgian-water/>

We need a democratic and financial upgrade! We are gamed from our science research, to our govts, media (Harper plants) and financial markets for the profit of a few chemical banksters families. Go get your dividend cheq minister minion!

5 likes, 4 replies

Username: OnGuardforThee	Oh Canada
CBC News 4 likes, 15 replies Username: Burt	I've never been vaccinated for Polio, the measles, the mumps, the flu, in fact, I have never been vaccinated PERIOD !!! and I have never acquired ANY of these afflictions, I just have a proper diet and allow my immune system to do the job that God meant it to do .
CBC News 5 likes, 11 replies Username: "You have been banned"	Government mandated vaccinations like a Spielberg, Kubrick hybrid film.
CBC News 4 likes; 12 direct replies (this comment is a statement reply to a primary that sparked 18 total replies) Username: Dobyblue	If you want to force someone to vaccinate their offspring in order to protect someone else's, don't you think you should be able to provide a study comparing overall health outcomes between fully vaccinated and never vaccinated individuals followed into adulthood showing the fully vaccinated are no less healthy? You can't do that, so why should parents put their children at risk by vaccinating when you can't demonstrate it results in their children becoming overall healthier adults?
CBC News 46 likes, 94 replies Username: Essene	Thoroughly Orwellian
CBC News 16 likes, 40 replies Username: Opinion 234	<p>Have you noticed they are not pushing the flu shot this year, as much as they have in previous years? That's because scientists are now admitting that flu shots make you more susceptible to getting the flu Plus, evidence shows that the flu vaccine is hardly effective at all. As much as they pushed the flu vaccine (or we were all going to die) we are finding out that the medical flu vaccine pushers were wrong.</p> <p>http://personalliberty.com/vaccine-promoting-scientists-admit-more-flu-shots-make-you-more-susceptible-to-flu-yet-still-encourage-you-to-get-more/</p> <p>Perhaps, they are also wrong that the current CDC schedule that recommends over 25 vaccines by the time a child reaches two years of age is not right for every child.</p>
CBC News	<p>I take it these propaganda courses will not include telling parents of the "very real risks" their children face if they ARE immunized no matter how rare they may be, like the case of the Black family whose daughter suffered a vaccine-encephalopathy (confirmed by a neurologist and occurring in the time frame the CDC/NIH's vaccine injury table dictates) resulting in permanent brain damage.</p> <p>The Black family received over \$2 million in compensation from the US' Vaccine Injury Compensation Program plus \$250,000/annually for the lifetime of round the clock care their daughter now requires. Of course she's not</p>

<p>22 likes, 38 replies Username: Dobyblue</p>	<p>important because she was sacrificed for "the greater good" but we can clearly see the lack of informed consent Hoskins is a fan of.</p> <p>Should the full story be painted for parents, will Hoskins also allow parents to be informed that two months ago the Canadian Medical Association voted 70% against establishing a vaccine injury compensation fund in Canada? So had the Black family been living in Ontario and not the USA, they would have been \$250,000/year out of pocket for their daughter's care.</p> <p>When are we going to have an honest discussion on vaccination in the mainstream media or with parents?</p>
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