### Chapter 2

# Public Engagement and Policy Entrepreneurship on Social Media in the Time of Anti-Vaccination Movements

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#### **ABSTRACT**

North America has experienced a resurgence of measles outbreak due to an unprecedentedly low Mumps-Measles and Rubella vaccination coverage rates facilitated by the anti-vaccination movement. The objective of this chapter is to explore the new online public space and public discourse using Web 2.0 in the public health arena to answer the question 'What is driving public acceptance of or hesitancy towards the MMR vaccine?' More specifically, typologies of online public engagement will be examined using MMR vaccine hesitancy as a case study to illustrate the different approaches used by pro- and anti-vaccine groups to inform, consult with and engage the public on a public health issue that has been the subject of long-standing public debate and confusion. This chapter provides an overview of the cyclical discourse of anti-vaccination movements. The authors hypothesize that anti-vaccination, vaccine hesitant, and pro-vaccination representations on the online public sphere is reflective of competing values (e.g., modernism, post-modernism) in contemporary society.

#### INTRODUCTION

2014-2015 marked the largest measles outbreak in North America in the 21st century, with 900 identified cases in the US and 322 cases in Canada (CDC.gov, 2015; PHAC, 2015). This infamous public health milestone is noteworthy given the conclusion of the Working Group on Measles Elimination in Canada that the endemic transmission of measles have been mostly eradicated between 1998 and 2001 (Katz et

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al., 2004). A highly contagious disease, measles claimed about 145,700 lives around the world in 2013 alone. Most deaths occurred in countries with low measles, mumps and rubella (MMR) vaccination coverage rate, with children under the age of 5 taking the hardest toll (WHO, 2014). In most OECD countries, the MMR vaccine is highly accessible, provided for free by the state or provincial government. Despite this, the rate of unvaccinated children is rising (Larson, Jarrett, Caitlin, Eckersberg, Smith & Patterson, 2014). The most common reason for refusing to vaccinate children is due to concerns about the links between MMR vaccines and autism, a claim erroneously put forward in a publication in the reputable journal - The Lancet – in 1998 (Wakefield et al., 1998). Although The Lancet retracted the article in 2010, the damage was done. The paper has endured 12 years in media, in press, on the internet, and has been cited by thousands. In England where the author resides, MMR vaccine coverage in school-aged children decreased from 91.8% in 1995 to 80% in the 2000's (Baxter, 2014).

Wakefield's fraudulent paper was the match that ignited the fiery skepticism to MMR vaccination. Powerful international and national advocacy groups such as the National Vaccine Information Center Advocacy Portal and the Californian Coalition for Vaccination Choice (CCVC) have signed petitions against all types of vaccines, calling for looser restrictions on vaccine exemption (CCVC, 2015). Wakefield's paper has also ignited the interest of many researchers in the fields of medicine, public health, communication, mass media, computer science and informatics boggled by the resistance to 'the safest medical products available' (US Department of Health and Human Services, 2014). These researchers ask the same question from various angles in hopes of finding out 'What drives some segments of society to accept the MMR vaccine while others are hesitant about taking the vaccine?'

We use the case of vaccine hesitancy to explore public health discourse using online media to answer our question of interest. Typologies of online public engagement will be examined to illustrate the different approaches used by pro- and anti-vaccine groups to inform, consult with and engage with the public on public health issues that has been the subject of long-standing debate and confusion. The parallel narratives of two existing paradigms (modernism and post-modernism) are used to explain how different perceptions of vaccination have been shaped by vaccination proponents and opponents. In the first section, we provide a brief account of anti-vaccination movements in the West starting with resistance of the smallpox vaccine in the UK in the 19<sup>th</sup> century. In the second section, we propose that an ideological clash between practitioners of modernism and the postmodernists is the overarching reason for anti-vaccination movements to persist. The third section touches on the typologies of public engagement online and compare and contrast the different methods of online engagement tactics employed by pro- and anti-vaccine agencies. Finally, we draw on the psychological and political frameworks on issue framing to discuss the plausible reasons for the persistence of anti-vaccination movements on a micro-level.

#### **BACKGROUND**

#### The Cyclical Discourse of Anti-Vaccination Movements in the West

Since the first commercially available vaccination was developed in 1796 by Edward Jenner to create immunity to smallpox, vaccine hesitancy has been a prevailing conversation in the public sphere. Hesitancy towards new technology – in this case, a procedure that eliminates the possibility of getting deadly diseases such as the chicken pox, exists as long as technocultural strife in the public sphere continues to be regurgitated and discussed.

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