

The History Department thesis “A Matter of Medical Faith: The Anti-Vaccination Debate from 1880 to 1910,” explores the first anti-vaccination movement in the United States, and its eventual culmination in the 1905 Supreme Court case *Jacobson v Massachusetts*. Beginning in the second half of the nineteenth century, the anti-vaccination movement was a diverse group of activists, ranging from alternative medical practitioners, to concerned parents who feared for their children’s safety. These grassroots anti-vaccination groups contended with a rising public health movement over issues of vaccine safety, scientific beliefs, and the boundaries of state authority.

Through “scientific evidence,” public challenges, and court battles, both sides of the anti-vaccination debate fought to convince a hesitant and suspicious public of their own medical beliefs. As both sides grappled for power and legitimacy in a changing medical world, the argument over vaccination helped to redefine the place of government in health, and the balance between the needs of society and individual rights.

**A Matter of Medical Faith: The Anti-Vaccination  
Debate from 1880 to 1910**

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## Introduction

In 2004, ten of the thirteen scientists involved with Dr. Andrew Wakefield's 1998 study in the *Lancet* that linked the measles, mumps and rubella vaccine to autism retracted their conclusion. They stated that they "did not have enough evidence" to tie the MMR vaccine definitively with autism.<sup>1</sup> Not only was the data insufficient, but the *Lancet's* editor had learned that Dr. Wakefield, the senior researcher for the article, had failed to disclose he was simultaneously gathering information for lawyers representing families who believed vaccinations had caused their children's autism.<sup>2</sup>

Wakefield's paper has been a source of controversy since its publication, other scientists unable to find links to autism in their own studies, and the scientific community critical of the general lack of scientific and ethical standards Wakefield used in the design of his research.<sup>3</sup> The *Lancet* ultimately retracted Dr. Wakefield's paper in 2010, and following an investigation by the General Medical Council in the UK, Wakefield lost his medical license the same year.<sup>4</sup>

Wakefield viewed the loss of his licensure and retraction of his paper as a "small bump in the road" in comparison with the growing movement he had

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<sup>1</sup> Anahad O'Connor, "Researchers Retract a Study Linking Autism to Vaccination," *New York Times*, March 4, 2004.

<sup>2</sup> O'Connor, "Researchers Retract a Study Linking Autism to Vaccination."

<sup>3</sup> Gardiner Harris, "Journal Retracts 1998 Paper Linking Autism to Vaccines," *New York Times*, February 3, 2010.

<sup>4</sup> John F. Burns, "British Medical Council Bars Doctor Who Linked Vaccine with Autism," *New York Times*, March 4, 2004.

created. “These parents are not going away. The children are not going away. And I am most certainly not going away.”<sup>5</sup> Wakefield’s paper had done what he had intended. Hundreds of parents and activists came to Wakefield’s support, and have provoked new interest in questions concerning vaccine safety and necessity. Parents sought exemptions, in some cases suing their state governments over school vaccination requirements, claiming they were unconstitutional. The number of MMR vaccinations also dropped.<sup>6</sup> Wakefield was a martyr for the anti-vaccination cause, and both he and his research became a focal point for the movement’s spread to this day.

“Anti-vaxxers,” or those against vaccination, are not a new phenomenon. In the modern era, vaccines are a well-established and accepted medical procedure, with significant scientific research backing their production and use. Vaccines also have a history of success. The Center for Disease Control and Prevention (CDC) estimates that from 1994 to 2013, immunizations prevented 732,000 early deaths, as well as 21 million hospitalizations.<sup>7</sup> The original vaccine for smallpox was so effective, the disease was eradicated in the early 1980s after nearly two centuries of vaccination campaigns. But vaccines have not always held a place of prominence within the medical field.

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<sup>5</sup> Burns, “British Medical Council Bars Doctor Who Linked Vaccine With Autism.”

<sup>6</sup> James Colgrove, *State of Immunity: The Politics of Vaccination in Twentieth-Century America* (Berkeley: University of California Press, 2006), 248-250.

<sup>7</sup> Nicholas Bakalar “732,000: American Lives Saved by Vaccination,” *New York Times*, September 14, 2015.

During a time of great medical change during the second half of the nineteenth century, the United States was embroiled in a similar debate regarding the safety of vaccines. From 1880 through the late 1910s, grassroots anti-vaccination movements were rife throughout the country, and in many ways mirror today's controversy. Anti-vaccinationists were alternative medical practitioners, often those ostracized from the mainstream community or concerned parents and community members. Like their modern-day counterparts, anti-vaccinationists of the day feared vaccine's medical consequences, questioned medical expertise, and refuted the government's power to violate their bodily rights.

The anti-vaccination debate at the turn of the twentieth century was a turning point in American medicine. Within the debate, two differing medical beliefs – pro-vaccination's interventionist, progressive germ theory, and anti-vaccination's populist, alternative medicine – contended on a public stage. The argument occurred in a period of medical uncertainty and helped to redefine what science and healthcare were on a national level. Vaccination's role as “dubious science,” ahead of its time, and initially outside the realm of medical and public understanding, changed notions of state authority and the limits of personal liberty in health.

In chapter one, I describe the history behind vaccination and the changing medical theories of the day, as well as analyze the major players within the anti-vaccination debate itself. Vaccines were part of a new scientific scheme of

thought that contagions like bacteria and viruses cause disease, in what we know today as germ theory. Vaccination itself, however, was instituted with little understanding of how the procedure actually worked, and little regulation towards its manufacture and application. The dubious nature of vaccination's scientific grounding and safety spurred the divisiveness of the initial debate, pitting vaccine advocates and health authorities against a diverse group of protesters who sought to expose the "truth" regarding vaccination's safety and the evils of the public health agenda.

In chapter two, I investigate the ways both sides tried to educate the public regarding their differing medical beliefs, as well as how they interacted with each other, mainly through the use of literature, publicity stunts, and scientific evidence, drawing into question what health and science really were. Both sides escalated their actions as the nineteenth century drew to a close, anti-vaccinationists taking more aggressive tactics to "defy" health officials, as well as establish their own legitimacy in the public's eye. In response, frustrated health officials instituted more daring incursions on personal liberty to curtail epidemics in the name of progressive, paternalistic health. These escalations brought vaccination to court, and in chapter three, I examine vaccination as a question of individual liberty and medical authority. I also address the culmination of the debate between the two sides, and the consequences the 1905 Supreme Court decision *Jacobson v Massachusetts* had on American medicine and the boundary of state authority in personal health.

Finally, I conclude my study with a brief look at the trajectory of anti-vaccination after the *Jacobson* decision. I address possible reasons for its disappearance and absence until the latter half of the twentieth century, a result of public acceptance, medical advances, and elimination of diseases that solidified vaccination's place within our current medical practice.

## **Chapter One**

### **Medical Tyrants and Serum Foes: Those on Either Side of the Debate**

On the tenth of October 1879, William Tebb spoke to a gathering of “medical gentlemen” in the Manhattan lecture-room of the United States Medical College. Vaccines, he asserted, were slaughtering 25,000 children each year, and offered no protection against smallpox itself. Tebb, an English anti-vaccinationist, had gained notoriety for being prosecuted thirteen times by London officials for refusing to vaccinate his daughter, as well as for his later anti-vaccination publications, which he sought to circulate to a wider international audience. A merchant by trade, Tebb’s goal was to stir the same anti-vaccination sentiments as had swept through Britain since vaccination’s discovery at the turn of the century. He hoped, through his appearance, to spur Americans to action, stopping the spread of compulsory vaccination, and find “some legislative expression” in the anti-vaccine movement’s favor. As he spoke to the crowd about the dangers of vaccines, samples of his literature were distributed among the crowd. On the cover was a drawing of an English policeman forcing a woman to vaccinate her child. “Grim Death, in skeletal shape, was applying the lancet to the babe’s arm.”<sup>8</sup>

The men Tebb addressed were a sympathetic audience; many were homeopathic doctors who had felt increasingly persecuted, both by the imposition of compulsory vaccination itself, and the growing power of allopathic medicine.

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<sup>8</sup> “Opposed to Vaccination: Doctors Who Condemn It—An Englishman’s Views on the Subject,” *New York Times*, Oct 11, 1879.

The United States Medical College, where the meeting itself was held, was itself soon to be under threat. The New York State County Medical Society and the State Attorney-General targeted the facility as part of a campaign against unlicensed or “fraudulent” medical schools run by physicians who practiced alternative medicine.<sup>9</sup>

As Tebb finished his speech, there was a call from one of the medical college’s leading doctors, Dr. Robert A. Gunn, to form the “First Anti-Vaccination League of America.” The new members stated that the society’s mission would be “to awaken public sentiment to the evils and inutility of vaccination, to put an end to the practice, and to oppose all legislation for its enforcement.”<sup>10</sup> The group early on held regular meetings, including a public gathering in 1882 that garnered a “long list of names” to be added to the membership roster, but floundered as records were lost, and important officers left suddenly. It would take until 1885 for the organization to re-establish itself, incorporating under the name “The Anti-Vaccination Society of America,” for the group to regain its initial momentum.

Although the Society often saw itself as the “first” League in the United States, they were only one of many anti-vaccination organizations springing up across the country in the late nineteenth century, groups whose members often came from a variety of occupations and experiences in terms of medical practice,

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<sup>9</sup> “Doctors Who Disagree,” *New York Times*, April 24, 1882.

<sup>10</sup> “Opposed to Vaccination: Doctors Who Condemn It—An Englishman’s Views on the Subject,” *New York Times*, Oct 11, 1879.

but who were united in the idea that vaccination, particularly compulsory vaccination, posed a serious public threat. They feared not only the medical risks vaccination brought, but the growing power and intervention into personal health the rising public health movement presented. These anti-vaccination organizations, embodying minority beliefs and voices, faced off against a changing medical and political landscape in order to preserve what they viewed to be their constitutional rights to medical freedom.

### **“The Speckled Monster” – Smallpox**

Variola virus, or smallpox as it was more commonly known, had plagued communities for thousands of years, the first recorded reference to the disease appearing in fourth century Chinese inscriptions.<sup>11</sup> George W. Stoner, in his *Handbook for the Ship’s Medicine Chest*, described smallpox as “an acute, contagious, self-limited disease” marked by a high fever, severe body pains, and characteristic skin eruption and scarring. Spread “by breath, by exhalations from the skin, by clothing,” or any sort of contact with sick individuals, the disease typically ran its course over a period of a few weeks.<sup>12</sup> Mortality rates could range from as little as 10% to as high as 60% depending on the severity of the strain, while the average case-fatality fell around 25%.<sup>13</sup>

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<sup>11</sup> Michael Willrich, *Pox: An American History* (New York: Penguin Press, 2011), 23.

<sup>12</sup> George W. Stoner, *Handbook for the Ship’s Medicine Cabinet*. (Washington: Government Print Office, 1904), 21-23.

<sup>13</sup> Willrich, *Pox: An American History*, 31.

Only infecting humans, smallpox did best in large populations. Already endemic in England and Europe, smallpox came to the Americas with early European explorers, quickly spreading to the “virgin populations” the explorers encountered. With no natural immunity, mortality rates ran from 50-80%, decimating up to 90% of the native populations. Although not as successful in rural colonial settlements, smallpox soon gained a foothold in the cities of the New World.<sup>14</sup>

Once an individual had survived the disease, they obtained permanent immunity against future infection. This meant that smallpox often more heavily affected children, leading to its association as a childhood disease. Smallpox also required larger populations to reach epidemic scale. Part of what made smallpox so deadly was its cyclical nature; years would pass without a severe outbreak, and the population of susceptible individuals would increase as more children were born into the community. Once this vulnerable population built up, smallpox would erupt into widespread and deadly epidemics that would infect thousands. These epidemics could last for months at a time before the disease went dormant again. Smallpox was so prevalent that, in London, most children could expect to get the disease by their seventh birthday.<sup>15</sup>

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<sup>14</sup> Willrich, *Pox: An American History*, 23.

<sup>15</sup> Willrich, *Pox: An American History*, 22-24, *Vaccination*. (New York: New York State Department of Health, 1908), 4.

**“The Jennerian Blunder” – Edward Jenner and Vaccination**

For all the damage it did, smallpox’s cause was not officially identified under a microscope until 1947, but preventative measures did exist before vaccination. Inoculation, a procedure that pre-dated vaccination, transferred smallpox from individuals who appeared to have weak strains of the disease to healthy patients. This would artificially induce a milder form of the disease, and provide life-long immunity. Inoculation had been practiced for centuries in China and India, and Lady Montagu, a British noblewoman, introduced inoculation to western Europe after her return from Turkey.<sup>16</sup> Brought to the colonies, George Washington required variolation of all new troops in the Continental Army.<sup>17</sup>

By the eighteenth century, inoculation was a regular practice in North America, although it did have its own drawbacks. Occasionally, the transferred smallpox virus would prove to be severe and potentially lethal to the healthy individual. Also problematic was the possibility of spreading smallpox from inoculated persons to their previously unexposed neighbors. Still, inoculation began to curb smallpox death rates as the practice gained traction in the late eighteenth, early nineteenth century.<sup>18</sup>

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<sup>16</sup> Arthur Allen, *Vaccine: The Controversial Story of Medicine’s Greatest Lifesaver* (New York: W.W. Norton & Company, Inc., 2007), 38.

<sup>17</sup> Willrich, *Pox: An American History*, 35; Colgrove, *State of Immunity*, 6.

<sup>18</sup> Karen L Walloch, *The Antivaccine Heresy: Jacobson v. Massachusetts and the Troubled History of Compulsory Vaccination in the United States*. (Rochester: University of Rochester, 2015), 13.

In 1798, Edward Jenner, an English physician, announced a new form of inoculation. Instead of using real variola virus to induce a mild case of smallpox, his new method utilized cowpox, a similar, yet milder virus, which would also confer immunity to smallpox itself.<sup>19</sup> Additionally, because the procedure did not actually involve smallpox virus, vaccination posed no risk of spreading smallpox to unvaccinated or inoculated individuals. He called the new technique “vaccination,” from the Latin root for cow. His discovery quickly won him notoriety, including a \$150,000 reward from Parliament, as well as accolades across the continent, from the Russian Dowager Empress, to Napoleon, who instituted vaccination across his armies.<sup>20</sup> It did not matter that Jenner had no explanation as to *why* vaccination worked, the benefits vaccines seemed to offer were enough to convince physicians across Europe of its use.<sup>21</sup>

It was only a few years later, in 1800, when Benjamin Waterhouse, a professor at Harvard Medical School, introduced vaccination to the United States by vaccinating his son. Only two years later, he had convinced the Boston Board of Health to conduct its own vaccination trial, vaccinating nineteen boys, and then inoculating them with smallpox virus. When none of the children showed any sign of the disease, Waterhouse claimed vaccination a success, cementing its place in the States.<sup>22</sup>

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<sup>19</sup> Walloch, *The Antivaccine Heresy*, 13.

<sup>20</sup> Joan Retsinas, “Smallpox Vaccination: Leap of Faith,” *Rhode Island History* 38:4 (1979) 113.

<sup>21</sup> Joan Retsinas, “Smallpox Vaccination: Leap of Faith,” 118.

<sup>22</sup> Walloch, *The Antivaccine Heresy*, 14.

Health officials saw vaccination as the answer to their smallpox problem. The main issue was getting people vaccinated. The earliest nations to pass vaccination legislation were central European countries, including Bavaria (1807), Denmark (1810), Sweden (1814), and Prussia (1835). Great Britain, where vaccination was discovered (and where the anti-vaccination movement was strong) did not have an official statute until 1853, and even then only applied to children.<sup>23</sup>

In the United States, vaccination legislation was under state jurisdiction, and requirements differed from state to state. The first vaccination laws were put into effect in local municipalities, often by local county governments or health boards. Compulsory vaccination laws went hand in hand with compulsory education laws, as the gathering of large groups of children left the new and expanding public school system vulnerable to smallpox outbreaks. Starting with the city of Boston in 1827, public schools began to require all enrolled students to provide evidence of vaccination.<sup>24</sup> In 1855, Massachusetts also became the first state to adopt a statewide law concerning school vaccination, New York (1862), Connecticut (1872), and several other states following suit.<sup>25</sup> Some states did not have explicit laws, but in the period following the Civil War, health officials and

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<sup>23</sup> James A. Tobey, *Public Health Law* (New York: The Commonwealth Fund, 1947), 236.

<sup>24</sup> James G Hodge and Lawrence O. Gostin, "School Vaccination Requirements: Historical, Social, and Legal Perspectives," *Kentucky Law Journal* 90, no. 831, (2001-2002): 850.

<sup>25</sup> *Ibid*, 850.

lawmakers began to push vaccination even without legislation. Immigrants were screened upon entering the country, many states and school districts required vaccination for schoolchildren, and local courts, health officials and city councils issued vaccination orders during epidemics.<sup>26</sup>

Promoting vaccination made sense to many health officials; the procedure was touted as the height of scientific achievement, and was a more cost-effective investment towards a community's health. Quarantine remained the typical approach to disease containment and prevention, and was notoriously expensive, requiring health departments to pay not only for guards to enforce isolation, but supply food and supplies as well.<sup>27</sup> Quarantines were also problematic for the affected individuals, who were forcibly confined to their homes or other designated areas for weeks at a time, endangering their livelihoods. The stigma of disease also took its toll; as the disease could be transmitted through clothing, smallpox scares proved especially difficult for seamstresses and laundry women who lived or worked in outbreak areas. "People who have employed women... where the disease has appeared are afraid to have them come to their houses to work or to give them laundry work to take home."<sup>28</sup> Even for quarantined individuals who worked outside of the domestic sphere, being unable to work for even a few weeks likely meant lost income or unemployment.

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<sup>26</sup> Willrich, *Pox: An American History*, 37-38.

<sup>27</sup> Walloch, *The Antivaccine Heresy*, 69.

<sup>28</sup> "Smallpox Scare's Hardships," *New York Times*, December 29, 1900.

Not only economically taxing in terms of containment, smallpox was costly in terms of healthcare and loss of life. One historian estimates that smallpox claimed 300 million lives during the course of the twentieth century, over a century after Jenner's discovery.<sup>29</sup> Smallpox and other childhood diseases enacted a yearly cost of \$200,000,000 in medical costs and lost parental income, according to a MetLife statistician in 1927.<sup>30</sup> For public health officials, vaccination seemed like a responsible and agreeable answer to the physical and fiscal scourge smallpox presented, and quickly adopted its practice at all levels.

Making vaccination compulsory did not end health officials' vaccine woes. By the mid-nineteenth century, the public was aware of the health risks vaccines posed, and the implementation of legislation *requiring* vaccination drew opposition from a rising anti-vaccination movement. These groups had a myriad of concerns against compulsory vaccination; they saw vaccination laws as coercive and undemocratic, while the procedure itself was unsafe, going against their personal and religious beliefs.<sup>31</sup> The public, on the other hand, was mostly apathetic to vaccination, eventually coming to see it as more a nuisance than a life-saving tool.

Health departments also struggled to enforce these laws under limited support, particularly in the rural south. Still early in their development, most

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<sup>29</sup> Richard Preston, "Demon in the Freezer," *New Yorker*, July, 12, 1999.

<sup>30</sup> Colgrove, *State of Immunity*, 89.

<sup>31</sup> Walloch, *The Antivaccine Heresy*, 102; Willrich, *Pox: An American History*, 39.

health departments were locally based and resourced, making their actions mostly reactive, vaccination only enforced in times of active smallpox outbreaks.<sup>32</sup>

Larger city health boards tried to promote free vaccination by setting up dispensaries around town; Manhattan residents in 1867 could choose between eight different locations to receive their mandatory immunization.<sup>33</sup> Yet, for many citizens, even free vaccination was not enough to make them comply.

### **“The Least Safe Vaccine Available”**

Vaccination seemed to be a miraculous solution to both smallpox and the failures of inoculation, and health officials and governments were quick to implement laws requiring compulsory vaccination laws. But in their rush to act against smallpox, health officials did not account for all the ways in which vaccination could go wrong. Some vaccines, whether through fraudulent manufacture, or weakened strains, simply did not work. It mattered where vaccine producers found their culture or strain of virus. Initially vaccine material was taken from cattle that spontaneously contracted cowpox, a relatively rare disease not seen in the Americas. Another, easier way of obtaining “lymph” consisted of taking samples from vaccination sores on human patients.

One of the main risks vaccinators ran into when vaccinating individuals with human lymph was the danger of transferring other diseases besides the

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<sup>32</sup> Willrich, *Pox: An American History*, 106.

<sup>33</sup> “Public Notices,” *New York Times*, March 22, 1867.

cowpox. One such case occurred in 1863, during the battle of Chancellorsville. Five thousand confederate soldiers were vaccinated against smallpox using material taken from a soldier who unknowingly had syphilis, leaving them unfit for duty.<sup>34</sup> The same situation had happened in Italy two years before, in 1861, when 46 children contracted syphilis from a vaccine derived from a seemingly healthy infant.<sup>35</sup> Improper vaccination could spread other diseases like erysipelas or tuberculosis, but it was syphilis that terrified parents, due to its nature as a venereal disease.<sup>36</sup>

As a solution to this unwanted disease transmission, many vaccinators began to use bovine derived vaccines, taken from cattle who had been artificially exposed to cowpox. These cattle could be carefully monitored, and could produce enough vaccine for thousands of people.<sup>37</sup> Vaccine farms came into operation to meet demands, with large national pharmaceutical companies and small home grown operations alike providing vaccines to physicians and health departments. Vaccines had become a booming commercial market, with little to regulate their activity.<sup>38</sup> Health officials and the public alike began to question the purity of the samples within the vaccines, especially as more and more patients had negative reactions. “The preparation of animal vaccine is in itself simple enough,” Dr.

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<sup>34</sup> Willrich, *Pox: An American History*, 94.

<sup>35</sup> *Ibid*, 181.

<sup>36</sup> Walloch, *The Antivaccine Heresy*, 42, Theobald Smith, “Preparation of Animal Vaccine,” *Massachusetts Medical Society*, January 1, 1902.

<sup>37</sup> Walloch, *The Antivaccine Heresy*, 43.

<sup>38</sup> Willrich, *Pox: An American History*, 167.

Theobald Smith wrote in a Massachusetts health report, “and this very simplicity is a source of danger, because the production may be undertaken by such as are not sufficiently trained in scientific methods...to anticipate and guard against the dangers due to altering conditions.”<sup>39</sup> People with little to no scientific background were producing vaccines in order to cash in on the lucrative vaccine business, with little to no consequences for bad practices.<sup>40</sup>

Some manufacturers added glycerin to their vaccines as a germicide to kill off bacteria colonies within the lymph, which later studies showed did cut the number of colonies present. Yet vaccinations continued to be plagued by illness and the occasional fatality. Lockjaw (today called tetanus) was most common, either individual cases, or in large outbreaks, causing numerous deaths, as happened in Camden, New Jersey (see chapter 2), Philadelphia, and Cleveland all within the span of a year in 1901.<sup>41</sup>

Due to increasing publicity as well as the urging of health officials, governments began to investigate vaccine farms and manufacturers to determine whether regulations should be put in place. Massachusetts held a hearing, where Dr. Caroline B. Hastings presented her analysis of various vaccine needlepoints. All of the samples had contained bacterial colonies, ranging from 43 to 1380, but that she had seen some cases outside the study with up to 89,000 colonies in a

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<sup>39</sup> Smith, “Preparation of Animal Vaccine” *Massachusetts Medical Society*, January 1, 1902.

<sup>40</sup> Willrich, *Pox: An American History*, 188.

<sup>41</sup> Walloch, *The Antivaccine Heresy*, 47, 90.

single needle point. There was no way to obtain absolutely pure lymph, she argued.<sup>42</sup> Not only that, but many of the vaccines did not even list the date which they had been packaged. In light of the appalling circumstances in which vaccines were manufactured, health officials called for state run vaccine production, or at least some level of supervision over private companies to ensure proper protocol.<sup>43</sup>

In the end, the federal government did both. The National Hygienic Laboratory (now known as the National Institutes of Health) began to oversee its own production of vaccines in 1902. Congress also gave the U.S. Public Health and Marine Hospital Service greater power in creating a more uniform system to fighting infectious diseases locally and nationally.<sup>44</sup> While government intervention initially was controversial, its impact was solidified in the 1902 passage of the Biologics Control Act, which not only required companies to have licenses to produce and sell vaccines, but label their goods as well. Also now in place were consequences for those found to be selling inadequate vaccines: fines of up to \$500 and up to a year's jail time.

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<sup>42</sup> "Hearing Over," *Boston Daily Globe*, February 5, 1902.

<sup>43</sup> Smith, "Preparation of Animal Vaccine" *Massachusetts Medical Society*, January 1, 1902.

<sup>44</sup> Willrich, *Pox: An American History*, 115, 208.

### **“The Microbe and Its Work” - A Changing Medical Landscape**

Many issues health officials had with the implementation of vaccination stemmed from the newness of the procedure and the science behind it.

Vaccination arose during a turbulent time in medical science. The medical profession, composed of both orthodox or “regular” physicians, and alternative, “irregular” practitioners, had operated under a number of scientific theories at the start of the nineteenth century.<sup>45</sup> Physicians held beliefs that anything from “miasmas” in the air, to unsanitary environmental conditions, particularly dirt, caused disease.<sup>46</sup> Early public health measures reflected these ideas, “sanitizing” cities to ward off diseases brought on by filth and impurities, often in the form of environmental and housing reform.<sup>47</sup>

Vaccination seemed to lie outside of these theories. If unsanitary environmental conditions like dirt and filth caused disease, exposing someone to material taken from a cowpox or vaccine sore was the anti-thesis of disease prevention. Also at issue was the fact that physicians did not fully understand how vaccination worked; neither Jenner nor the medical community was able to explain why cow lymph could protect humans against smallpox. They had, instead, taken what historian Joan Retsinas termed “a leap of faith.” Evidence

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<sup>45</sup> John Duffy, *A History of Public Health in New York City: 1866-1966*. (New York: Russell Sage Foundation, 1974), 91.

<sup>46</sup> Willrich, *Pox: An American History*, 34; George Rosen, *A History of Public Health* (Baltimore: Johns Hopkins University Press, 1993), 222.

<sup>47</sup> Paul Starr, *The Social Transformation of American Medicine*. (New York: Basic Books, 1982), 181.

showed vaccination's efficacy, so medical officials were willing to embrace the procedure without the science to fully explain its use.<sup>48</sup>

As the nineteenth century wore on, however, growing evidence suggested a new scientific explanation for disease. Scientists like Louis Pasteur and Robert Koch in Europe began in the 1860s and 1870s to identify microbes responsible for particular illnesses, in what eventually would be known as germ theory, the idea that contagions like bacteria and viruses cause disease.<sup>49</sup> Germ theory, along with bacteriology, the study of bacteria, also led to advancements in surgery, introducing antiseptic techniques that greatly reduced mortality, and allowed a greater variety of surgical procedures.<sup>50</sup> These advancements appeared so promising that a New York City physician in 1888 remarked:

“The science and practice of medicine and surgery are undergoing a revolution of such magnitude and importance that its limits can hardly be conceived. Looking into the future in the light of recent discoveries, it does not seem impossible that a time may come when the cause of every infectious disease will be known; when all such diseases will be preventable or easily curable...”<sup>51</sup>

Bacteriology provided extra support to vaccination, showing that diseases could be spread from person to person, through contaminated water and food, as well as through animals.<sup>52</sup> Although not widely accepted among the public in the late

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<sup>48</sup> Retsinas, “Leap of Faith,” 118.

<sup>49</sup> Willrich, *Pox: An American History*, 34.

<sup>50</sup> Starr, *The Social Transformation of American Medicine*, 135.

<sup>51</sup> “The Microbe and Its Work,” *New York Times*, November 27, 1888.

<sup>52</sup> Willrich, *Pox: An American History*, 34.

nineteenth century, germ theory and related medical fields like bacteriology were making considerable headway in changing the way physicians viewed medicine.

Germ theory, and the role contagions played in spreading disease also changed the way public health functioned. While early efforts focused on sanitation, public health shifted its focus to the health of the community; after all, if diseases like smallpox spread from contact and close proximity, individual hygiene and protection had an impact on the health of society.<sup>53</sup> Focusing on individual health, however, required a more interventionist approach than public health had previously occupied within American society.

After years of political turmoil and lobbying against its creation, the New York City Metropolitan Board of Health was finally established in 1866, evolving into the first permanent health department in the United States. The New York State legislature granted the fledgling department with radical new powers to enforce sanitation, decent housing conditions, and quarantine sick individuals, enabling it to either call upon the police or its own officers to ensure enforcement. The Board's mandate was broad "for the purpose of preserving or protecting life or health, or preventing disease."<sup>54</sup> The Board of Health quickly grasped at its new powers, pushing the boundaries of the law and coming into conflict with both private enterprise and personal belief.<sup>55</sup> Quarantines were economically disruptive for business owners, and housing reform to improve sanitation and living

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<sup>53</sup> Rosen, *A History of Public Health*, 223.

<sup>54</sup> Duffy *A History of Public Health in New York City: 1866-1966*, 1.

<sup>55</sup> Starr, *The Social Transformation of American Medicine*, 181.

conditions impeded construction for tenement owners.<sup>56</sup> While careful not to encroach in areas typically occupied by private practice physicians, public health, particularly in cities like New York, expanded its control over the communities it oversaw, and asserted the power of government in previously untouched areas of American life.<sup>57</sup>

### **“Ignorantly and Wickedly” – Anti-Vaccination as a War by Proxy**

Just as medical theory was changing in the nineteenth century, the medical profession was changing as well. Medicine in the 1800s was a more diverse group of traditional or orthodox physicians, as well as those who subscribed to alternative, holistic theories of health, often through non-invasive treatments. Homeopaths, the largest group of alternative physicians, believed in the idea of treating “like with like,” recreating symptoms of a particular disease through small doses of remedies in order to promote healing.<sup>58</sup> They, along with eclectics, who specialized in botanical cures, and osteopaths and chiropractors, who utilized bodily exercises to cure diseases, often presented a gentler, less aggressive approach to medicine than orthodox or “allopathic” physicians, relying on “common sense” treatments that promoted physical fitness and healthy diets over dubious drugs and dangerous surgical procedures.

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<sup>56</sup> Starr, *The Social Transformation of American Medicine*, 189; “Tenement-house reform: A builder compelled to comply with the health laws,” *New York Times*, November 19, 1879.

<sup>57</sup> Starr, *The Social Transformation of American Medicine*, 185.

<sup>58</sup> Willrich, *Pox: An American History*, 257, 259.

Orthodox and alternative medicines had existed side-by-side since colonial times, although allopathic physicians grew increasingly dominate in government affairs, referring to themselves as “regular” practitioners. “Irregular” physicians like homeopaths and eclectics, they argued, were only calling themselves “doctors” with little credibility to support their claims.<sup>59</sup> To preserve their hold on the medical system, allopathic doctors pushed for licensure to ensure that all practicing physicians were “more respected, more highly educated” than the odd alternative healer. Laws, like one 1818 Massachusetts statute, stated that “No person, entering the practice of physic, or surgery, shall be entitled to the benefit of law...unless he shall, previously to rendering those services, have been licensed by the officers of the Massachusetts Medical Society, or have been graduated a doctor of medicine in Harvard University.”<sup>60</sup> These laws, however, were short-lived, repealed in the 1830s and 40s in the name of intellectual freedom, and numerous states during the mid-nineteenth century had no rules regarding medical education.<sup>61</sup> This freedom to practice “ignorantly and wickedly,” the Massachusetts Sanitary Commission ruled in 1850, would allow anyone, “male or female, learned or ignorant” to “assume the name of a physician, and ‘practice’ upon everyone,” with little accountability for their actions.<sup>62</sup>

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<sup>59</sup> Willrich, *Pox: An American History*, 257.

<sup>60</sup> Lemuel Shattuck, *Report of the Sanitary Commission of Massachusetts 1850* (Boston: Dutton & Wentworth, 1850), 33.

<sup>61</sup> Willrich, *Pox: An American History*, 257.

<sup>62</sup> Shattuck, *Report of the Sanitary Commission of Massachusetts 1850*, 33-34.

The fight for an allopathic monopoly continued, particularly as medicine grew more sophisticated. Alternative medicine generally eschewed surgical procedures, which in an age before sterilization and sanitation, were often the last resort. Alternative medicine, as its name suggests, offered less invasive options. As germ theory rose to prominence during and after the Civil War, doctors became more aware of aseptic practices, and began to use more sterile procedures and implements, rather than dig out bullets with unwashed fingers.<sup>63</sup> Surgeries began to increase in popularity as they became safer, and mortality rates from infection decreased.

The adoption of germ theory marked an even greater divide between alternative practitioners and mainstream medicine. Alfred Booth, a professor at Excelsior Medical College in Massachusetts, a short lived eclectic medical school, stated that “sickness...[is] a disordered physical condition, not an entity, not a material something transmissible by contact of person or clothing; hence all talk about ‘germs’ is imaginary.”<sup>64</sup> The AVSA took a similar stance, stating in one publication that germ theory was a “cult” with “no scientific basis.”<sup>65</sup> Germ theory was, in their eyes, fundamentally wrong, and not supported by scientific evidence.

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<sup>63</sup> Willrich, *Pox: An American History*, 125, 258.

<sup>64</sup> *Vaccination* 8, no.1 (1905): 4, Shelf XX (135908.1), Historical Medical Library of the College of Physicians of Philadelphia, Philadelphia, PA. Note: Hence Forth Historical Medical Library of the College of Physicians of Philadelphia will be abbreviated “CPP.”

<sup>65</sup> *Vaccination* 7, no. 5 (1904), n.p., Shelf XX (135908.1), CPP.

Improved practices and domination in the field of surgery and germ theory gave allopathic doctors a growing respectability, which they used to re-establish state licensing laws. Organized under the American Medical Association, founded in 1847, as well as local medical organizations, orthodox practitioners sought to drive out irregular physicians, especially homeopaths, with ferocity. The AMA forbid any of its members from consulting with homeopaths, a move the public thought “petty and dangerous.”<sup>66</sup> One writer for the *New York Times* compared the disagreement to conflicts between Christian sects, stating that just as an Episcopalian would not recognize a Baptist or Presbyterian minister, so too would allopathic physicians ignore their brothers, even as they were all cut from the same cloth—an act, he asserts, was truly unfair.<sup>67</sup>

Isolated from allopathic communities, “irregular” physicians began to run into licensure laws with increasing trouble. The AMA and local medical organizations targeted alternative medical schools for being fraudulent, conferring “illegal diplomas” to improperly trained graduates. These schools, they claimed, were not meeting the ethical standards required to gain licensure, and would inflict harm on the nation in the process. Alfred Booth, who had decried germ theory, was later convicted and imprisoned in 1893 for running fraudulent medical colleges, in one instance reportedly selling a medical diploma to a New

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<sup>66</sup> Willrich, *Pox: An American History*, 258.

<sup>67</sup> “Forced Fraternity,” *New York Times*, April 8, 1880.

York Herald journalist. “Practise without fear. It is easy. You will get a profitable living from your dupes.”<sup>68</sup>

In the early 1880s, the United States Medical College, deemed an “eclectic concern,” faced a similar fate. The medical school was reported to New York State officials by the New York County Medical Society for continuously violating regulations put into place by the State Board of Regents.<sup>69</sup> The college had previously come under fire in 1879 for procuring cadavers for dissection, even though their charter did not align with Board of Health standards, giving them no authority to purchase the corpses. The reporter who covered the dissection scandal noted the school’s lack of resources and dignity: “[The College was] situated in the third story of a public hall and dancing-room, and a small tin sign alone tells the stranger of the medical college so far up stairs.”<sup>70</sup>

Not only was the medical college known to teach alternative medicine, but its founders (members of the Anti-Vaccination Society of America) were known to be a part of the anti-vaccination movement, “if that may be called a movement in medical science which has no scientific following,” in the words of one reporter.<sup>71</sup> The medical school’s stance on both medicine and vaccination doomed its chances for survival. The New York City Board of Health went on to

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<sup>68</sup> *Documents of the Senate of the State of New York, One Hundred and Seventeenth Session*, (Albany: James B. Lyon, State Printer, vol 6, no. 56, 1894) r100-111.

<sup>69</sup> “Article 4,” *New York Times*, May 16, 1882.

<sup>70</sup> “Bodies for Dissection,” *New York Times*, February 12, 1879.

<sup>71</sup> “Article 4,” *New York Times*, May 16, 1882.

declare that “no diploma issued by the college would be received by the board, or a physician acting under it be allowed to practice.” Although school officials claimed that the college was only being targeted due to its homeopathic nature, a suit from the New York Attorney General forced its closure in 1884.<sup>72</sup> The AMA forced closures on other schools that did not hold up to their standards, or threatened their medical dominance; similar tactics were used to shut down African American medical schools in the early 1900s under the same reasoning.<sup>73</sup>

Although targeted for their differing medical beliefs and “improper” medical training, many homeopaths and irregular physicians were well educated and respected by members of the orthodox medical community.<sup>74</sup> By the 1880s, many allopathic doctors were calling for an end to the ban regarding consultations with homeopaths: “the medical profession of the State of New York has placed itself on the record as no longer willing to exclude competent men from the consulting room because of differences of opinion on therapeutics.”<sup>75</sup> While this idea of “competency” did not apply to all areas of alternative medicine, it reinforced the fact that most of the AMA’s actions against irregular physicians were political, rather than of a purely medical concern.

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<sup>72</sup> “Doctors Who Disagree,” *New York Times*, April 24, 1882; “Article 5,” *New York Times*, July 23, 1884.

<sup>73</sup> Harriet A. Washington, “Apology Shines Light on Racial Schism in Medicine,” *New York Times*, July, 29, 2008.

<sup>74</sup> Willrich, *Pox: An American History*, 259.

<sup>75</sup> “The Ethics of Medicine,” *New York Times*, February 14, 1882.

Similarly, while many homeopaths were involved with anti-vaccination movements, not all were against vaccination. Some did perceive compulsory vaccination as an action against alternative medicine, and believed the practice of vaccination to be tantamount to blood poisoning. Many homeopaths, however, found the procedure similar to their own medical beliefs. Vaccines produced symptoms in patients that mimicked the disease it granted immunity against, following the homeopathic idea of “like cured by like.”

Towards the early twentieth century, organized homeopathy organizations also recognized the need to assimilate with orthodox medicine in order to maintain their status in society. Thus, the majority of homeopaths adopted pro-vaccination stances to bring their organizations closer in line with regular medicine.<sup>76</sup> This also meant that by the early 1900s, homeopathic societies distanced themselves from the “handful” of homeopaths who remained opposed to vaccination. Anti-vaccination brought with it ridicule not only from the AMA, but fared equally poorly in the news, further diminishing the reputation alternative medicine was struggling to retain in the public view. Eventually, anti-vaccination irregulars were considered to be members of the “least legitimate” alternative practices like chiropractors.<sup>77</sup>

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<sup>76</sup> Walloch, *The Antivaccine Heresy*, 115.

<sup>77</sup> Willrich, *Pox: An American History*, 259-60

### **Serum Foes – The Other Side to Anti-Vaccination**

Not all homeopaths were against vaccination, and not all anti-vaccinationists were doctors, let alone practitioners of alternative medicine. Like Tebb, many involved in the movement were not physicians, but were concerned citizens and rebels alike. Unlike the British movement, however, which relied on the power of the working class and various labor movements, the American anti-vaccination movement was supported mainly by an educated middle-class.<sup>78</sup>

Alongside homeopaths who felt their livelihoods threatened were bankers, businessmen, and the odd housewife. Louis H. Piehn, president of the First National Bank of Iowa, also acted as President of the Anti-Vaccination Society of America in the late 1890s, while Frank Blue, a stenographer from Terre Haute, Indiana, acted as the organization's secretary, and was the editor of the society's publication *Vaccination* for the duration of its run. John Pitcairn, a wealthy industrialist who founded a lucrative plate glass manufacturing company, founded his own anti-vaccination league in 1908, and became influential in local politics against vaccination's implementation in Pennsylvania and New York.<sup>79</sup>

Many got involved in anti-vaccination groups out of concern, namely for their children. Some, like Louis H. Piehn, were spurred to action against vaccination after the death of a child. Alma Piehn died at the age of six in 1894,

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<sup>78</sup> Ibid, 256.

<sup>79</sup> Walloch, *The Antivaccine Heresy*, 4; Michael Willrich, *Pox: An American History*, 308

her arm swelling at the point of vaccination. Her father, a member of the local board of health, felt betrayed by the health officials he had once trusted, and vowed that justice would be carried out.<sup>80</sup> As historian Michael Willrich writes, “behind every antivaccination leader lay a family horror story.” Even when deaths did not occur, vaccinations that failed to work also called people to action; the president of a St. Paul anti-vaccination society claimed to have “lost faith” after his daughter contracted smallpox after two previous vaccinations.<sup>81</sup> Others, like Frank Blue, took a proactive approach; Blue refused to vaccinate his son, eventually leading to the Indiana Supreme Court Case *Blue v Beach* (1900) where the Court ruled to exclude his son from school during a smallpox epidemic.<sup>82</sup> For every parent that became involved in anti-vaccination societies, there were numerous others who continued to be uninvolved, but equally concerned about vaccination’s risks, and had to choose between the scalpel and their child’s education.

Some were against vaccination for religious reasons, abstaining from vaccines to maintain bodily purity. Utah, due to Mormon influence, actually passed legislation prohibiting compulsory vaccination all together. The rationale for this decision, in the words of one Salt Lake City resident, was that “the great majority of Mormons do not use tobacco nor intoxicants, nor tea and coffee, nor

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<sup>80</sup> “Alma Piehn,” n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 1, CPP.

<sup>81</sup> Willrich, *Pox: An American History*, 261

<sup>82</sup> Walloch, *The Antivaccine Heresy*, 5.

are they great meat-eaters. They therefore decidedly object to having themselves or children poisoned with anti-toxin or other disease matter.”<sup>83</sup> Their stance was similar to that of faith healers, who believed in the power of prayer to cure illness. These communities banned “alcohol, smoking, dance halls, and medical doctors” in an effort to maintain spiritual and material purity.<sup>84</sup> Christian Scientists were the most successful at fighting off vaccination’s advances, denouncing compulsory laws as violations of their religious freedom, eventually winning religious exemptions in Wisconsin in the late 1890s.<sup>85</sup>

Some anti-vaccinationists were focused on a different form of freedom: bodily rights. Most anti-vaccinationists, medical practitioner or not, had agreed with early public health measures relating to sanitation. Improving the environment through measures like street cleaning and sewer systems correlated with ideas of personal hygiene, healthy diets, and sanitary living conditions that dominated “common sense” ideas of health and well-being. As, however, government officials, along with the AMA, tried to impose “new” public health measures like vaccination, people disagreed with this new “individual” based approach. Some, like John Pitcairn, the wealthy industrialist president of the Anti-Vaccination League of America, balked at what he considered a gross restraint on personal freedom:

Shall we witness unmoved the establishment by that government of a practice that deprives us of freedom in matters of medical faith? We have

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<sup>83</sup> Ibid, 5.

<sup>84</sup> Willrich, *Pox: An American History*, 260

<sup>85</sup> Willrich, *Pox: An American History* 260

repudiated religious tyranny; we have rejected political tyranny; shall we now submit to medical tyranny?<sup>86</sup>

Pitcairn, along with fellow anti-vaccinationist and noted member of the Citizens Medical Reference Bureau, H. B. Anderson, saw compulsory vaccination as just one part of “a well-laid plan to medically enslave the nation,”<sup>87</sup> and allow the government to invade the ordinary citizen’s private life. Members of the Anti-Vaccination Society of America expressed similar outrage, Dr. Alexander Wilder stating in a short speech that “the attempt to vaccinate one against his own will is the most outrageous violation of liberty since the Stamp act in England...”<sup>88</sup> Compulsory vaccination was against their Constitutional rights as American citizens, and unjustly forced upon them. For individuals like Dr. Alice Campbell, a New York homeopathic physician and member of the Anti-Compulsory Vaccination League of Brooklyn, it was not even the act of vaccination itself that was the issue at hand: “the efficacy of vaccination as a disease preventative is a matter of individual opinion...we believe that any one desiring vaccination should be vaccinated.” It was the coercive nature that was “opposed to the principles of the American Constitution,” and the true target of their campaigns against health officials who dared to impose compulsory legislation on an unwilling public.<sup>89</sup>

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<sup>86</sup> John Pitcairn, *Vaccination* (Anti-Vaccination League of Pennsylvania, 1907), 1.

<sup>87</sup> H.B. Anderson, *State Medicine: A Menace to Democracy* (New York: Citizens Medical Reference Bureau, 1920), 49.

<sup>88</sup> “Opposed to Vaccination: Society Formed Which Would Do Away with Compulsory Laws,” *New York Times*, June 6, 1895.

<sup>89</sup> “Opposed to Vaccination: Anti-Compulsory League Questions Power of Brooklyn Board of Health,” *New York Times*, April 24, 1894.

Vaccination was indeed a part of a greater public health plan. Around the same period that compulsory vaccination began to be more readily enforced in the later 1800s, physicians began to promote yearly physical examinations as part of a shift towards preventative, rather than responsive, medicine. S. S. Goldwater, a New York Commissioner of Health in the early 1900s, acknowledged the possible gains these examinations could bring: “an additional gain of from two to five years can be made if our knowledge of disease and of the premonitory sign of disease is universally applied in an intelligent way.”<sup>90</sup> These examinations, health officials argued, would guard against chronic and contagious diseases alike, adding years to people’s lives and preventing epidemics from occurring. “The department must assume the leadership in this great movement for the preservation of health and the prolongation of life.”<sup>91</sup> Health departments seemed to have their work cut out for them. One study of garment factory workers found that sixty-two percent of the eight hundred employees were determined to be on their way to future health issues if no intervention took place. Even among white collar workers like those working in New York banks, all were found to “be abnormal and on the sure road to diseases of heart, lungs, kidneys or blood vessels.”<sup>92</sup> Preventative measures, including vaccination, appeared to be the answer to problematic health trends existing at every level of city life.

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<sup>90</sup> S.S. Goldwater, “Wants Every New Yorker Physically Examined Yearly,” *New York Times*, May 10, 1914.

<sup>91</sup> *Ibid.*

<sup>92</sup> *Ibid.*

Anti-vaccinationists believed that health departments had more sinister reasons behind their increased scrutiny on the public's health: monetary gain. "Preventative" measures were little more than excuses for additional physician's fees. Similarly, many anti-vaccinationists believed that while doctors might not fully agree with vaccination, they enjoyed the fees that came with administering them:

There is only one chance in twenty-four of catching smallpox. Why should the twenty-four be poisoned to save one? But there is money in it—money for the vaccine maker, seller, and the vaccinator.<sup>93</sup>

The monetary motive behind vaccination legislation permeated most vaccination literature. Why else would allopathic physicians, working closely with the government, be so quick to endorse such a potentially dangerous procedure? While it had been true that many physicians had initially charged for vaccines, most cities had dispensaries for poor citizens, offering vaccines free of charge outside of private practices, something some physicians saw as "ill-considered charity to the unworthy."<sup>94</sup> Anti-vaccinationists were clear that their own motives were in response to concerns about personal liberties and vaccine safety: "We *seek* discussion, for we wish to show the *truth* concerning vaccination. There is no *money* in the cause we represent; it is the cause of truth, the cause of freedom, the

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<sup>93</sup> "Opposed to Vaccination: Society Formed Which Would Do Away with Compulsory Laws," *New York Times*, June 6, 1895.

<sup>94</sup> Willrich, *Pox: An American History*, 25.

cause of humanity; but it is said that there are twenty million dollars invested in vaccine farms in this country.”<sup>95</sup>

### **And Those In-between – A Hesitant and Concerned Public**

While most government officials and medical professionals favored vaccination, much of the general public was hesitant or resistant to getting immunized. For many, the vaccine did not seem necessary. During the last decades of the nineteenth century, around the same time that medical communities began to heavily advocate for vaccination, a different type of smallpox arrived in the south: the “mild type.” While the original, more severe form of smallpox (“variola major”) had devastated populations, killing up to 60% of its victims and leaving many of its survivors heavily scarred, this new type (“variola minor”) proved rarely fatal or scarring. In many cases, individuals did not realize they had smallpox, and went about their lives as normal, very different from the bed bound, fever-ridden individual typically associated with smallpox. Doctors, unaccustomed to this form of smallpox, would themselves mistake the disease as chicken pox, measles, or some other rash.<sup>96</sup> It seemed that there was little to fear from this new, more prevalent form of the virus.

But while the mild type appeared to be more prevalent, the classic form of smallpox did still exist, hitting a number of cities in 1900. Not only that, but the

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<sup>95</sup> John Pitcairn, *Vaccination* (Anti-Vaccination League of Pennsylvania, 1907), 8.

<sup>96</sup> Willrich, *Pox: An American History*, 41.

mild type could also develop into more severe, confluent forms of the virus, especially in susceptible individuals. “Confluent cases and even deaths have occurred among large series of mild cases, tho perhaps it has less commonly happened in the last few years than formerly,” Charles Chaplin, a prominent health official for the Providence Health Department, would go on to write in 1913.<sup>97</sup> He was correct; while classic smallpox would continue to spread in the United States, the mild type became the more prevalent form of the virus after the turn of the century.<sup>98</sup>

Mild smallpox nevertheless made vaccination efforts more difficult to enforce. There was a common misconception that for a vaccine to “take,” the vaccinated arm should feel sore, a common, sometimes deadly side effect of vaccination in the pre-antiseptic era.<sup>99</sup> *Puck*, a popular humor magazine, ran a cartoon in 1882 showing people with signs on their arms reading “Be careful! Just been vaccinated!”<sup>100</sup> For many members of the public, vaccination posed the risk of disrupting their lives, and possibly their livelihood. A laborer put out of work due to a sore arm could face weeks of lost wages, or their job.<sup>101</sup> For many non-medical people, if there was not an active epidemic happening, vaccination

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<sup>97</sup> Charles V. Chaplin, “Variation in Type of Infectious Disease as Shown by History in the United States 1895-1912,” *The Journal of Infectious Diseases*, 1913, 13, no. 2, 195.

<sup>98</sup> Willrich, *Pox: An American History*, 45.

<sup>99</sup> Walloch, *The Antivaccine Heresy*, 82.

<sup>100</sup> Colgrove, *State of Immunity*, 20; “Hands Off!” *Puck* 10 no. 255 (Jan 25, 1882): 360.

<sup>101</sup> Willrich, *Pox: An American History*, 111.

seemed to be more risk than its protection was worth. Public indifference to vaccination often hindered public health goals of widespread protection.

There was also the issue of trust. The public was wary about the new system of public health, particularly in its new powers to intrude in personal health. Hearing about issues involved with the safety of vaccines, some called on health departments to offer guarantees of safety for mandatory procedures like vaccination. “It is not surprising that people should refuse to submit to vaccination,” wrote Edmond Esquerre to the *New York Times* in 1901, “unless they can be given the positive assurance that no bad effects will follow its administration. It seems quite obvious that since the authorities, in order to protect the majority, make vaccination compulsory, they should also afford entire protection from harmful results to every law-abiding individual.”<sup>102</sup> The state could violate personal liberty for the good of the community, that he had no qualms with, but the state also had a responsibility to regulate and oversee vaccine administration in return.

These concerns surrounding the implementation and regulation of new public health powers extended beyond compulsory vaccination. The creation and use of isolation or contagion hospitals, particularly during epidemics, as a new power of the public health movement stirred up old fears of hospitals. Much like surgery’s high mortality rates, hospitals were seen as “houses of death,” with poor

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<sup>102</sup> Edmond Esquerre, “Safeguards in Virus and Antitoxins,” *New York Times*, November 24, 1901.

conditions and high risks of infection, what Benjamin Rush termed “the sinks of human life.”<sup>103</sup> Early on, hospitals were founded typically as charitable or religious organizations, growing out of almshouses and other social welfare projects, and thus were resources for the poor, or those without families to care for them at home.<sup>104</sup>

Now, in their efforts to control epidemics public health officials could quarantine people in these facilities, or “pest houses,” as well as vaccinate those who had been exposed to smallpox. Rumors and inflammatory articles circulated, claiming that health officials took sick children from their parents, possibly never to be seen alive again.<sup>105</sup> One man claimed that during his time at one smallpox hospital at North Brother Island, he slept on a rusty bed with little to eat, no attendants or garbage removal, and dirty linens that were not changed throughout his stay, but were “falling to pieces.” Health officials tried to dispel rumors, and invited the press to tour the hospital. While they found patients “cheerful” and the conditions clean and respectable, the fear remained.<sup>106</sup> This fear and distrust drove communities to the extreme, in one notable case in 1901 of a “riot” of 300 Italian immigrants attempting to burn a smallpox hospital under construction in New York City, requiring all members of the local police and fire departments to succeed in quelling the crowd and stopping the fire.<sup>107</sup> This reaction only helped

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<sup>103</sup> Starr, *The Social Transformation of American Medicine*, 151-156.

<sup>104</sup> *Ibid*, 150.

<sup>105</sup> “Doctors Make a Raid,” *New York Times*, February 2, 1901.

<sup>106</sup> “Conditions in the Smallpox Hospitals,” *New York Times*, March 27, 1901.

<sup>107</sup> “Tried to Burn a Smallpox Hospital,” *New York Times*, March 10, 1901.

to highlight the distrust and fear the public had towards the changing medical landscape they themselves had little control over.

For both sides of the vaccination debate, public support was crucial, but did not come easy. While most lay people had not accepted germ theory or the interventionist powers health officials were claiming, anti-vaccinationists were outside of mainstream medical practice, with their own dubious claims to authority and medical knowledge. Both sides would work to gain public trust through newspapers, scientific “evidence,” and other means of influencing public opinion in what would be a clash of principles and beliefs.

## Chapter Two

### “You are Invited to Join Us:” Argument, Literature & Scientific Evidence

After months of frustration, Dr. Samuel Durgin, chairman of the Boston Board of Health, dared his anti-vaccinationist critic, Dr. Immanuel Pfeiffer, to prove his claims. Dr. Pfeiffer, a physician with a mail-order practice and ties to the patent medicine business, had made a name for himself throughout the fall of 1901.<sup>108</sup> Attending nearly every forum he could find, Pfeiffer heavily criticized the Board of Health’s tactics towards a worsening smallpox epidemic, which by the end of October 1901, had reached all corners of the city.<sup>109</sup> The Health Board, in Pfeiffer’s opinion, had gone too far, with controversial vaccination orders and “raids” targeted at poorer communities, as well as isolating smallpox hospitals, which kept smallpox patients away from their families. Vaccination, Pfeiffer claimed, was not the answer, but rather an injustice; sanitation was protection enough.<sup>110</sup> “...is it not true,” Pfeiffer asked at one vaccination forum, “that a person who is cleanly and who takes good care of himself physically is not liable to contract the disease?” Clean living and “pure blood,” Pfeiffer asserted, were the keys to smallpox prevention.<sup>111</sup>

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<sup>108</sup> Walloch, *The Antivaccine Heresy*, 131.

<sup>109</sup> Walloch, *The Antivaccine Heresy*, 69

<sup>110</sup> Walloch, *The Antivaccine Heresy*, 127; Its Big Benefits, *Boston Globe*.

<sup>111</sup> W. T. Sedgwick, “Remarks on ‘Opposition to Vaccination,’” *Journal of Massachusetts Association Boards of Health* 12, no.1, (Apr. 1092): 9.

Although Pfeiffer's comments and lectures did little to persuade top health officials, anti-vaccination publicity towards illnesses and deaths vaccines supposedly caused was taking its toll on city vaccination rates. Desperately trying to grapple with the worsening epidemic while enforcing harsher compulsory campaigns, Dr. Durgin decided to meet these "rash and unfounded charges" head on.<sup>112</sup> He invited leading anti-vaccination leaders to tour the smallpox hospitals they had criticized. Dr. Pfeiffer, who had not been vaccinated in sixty years, took him up on his offer.

Believing he was protected through his cleanliness and good health, Pfeiffer accompanied Durgin around the hospital. While he did not personally examine any patients, Pfeiffer made a show of inhaling the breath of one of the severely ill individuals, as well as use his handkerchief within the smallpox ward, waving the same handkerchief at a public meeting later that day in defiance.<sup>113</sup> So convinced of his safety, Pfeiffer went about his business as normal, taking public transportation and continuing his campaign. The papers had been following Durgin and Pfeiffer's spat for months, and Pfeiffer sent letters to a number of reporters immediately following his visit, stating how few sanitary precautions Durgin followed within his hospital, endangering the "safety of the people." Durgin, meanwhile, accused Pfeiffer

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<sup>112</sup> Sedgwick, "Remarks on "Opposition to Vaccination," 18

<sup>113</sup> Ibid 18; Walloch, *The Antivaccine Heresy*, 134.

of seeking notoriety, and for possibly exposing “friends and strangers to contagion.”<sup>114</sup>

Indeed, Pfeiffer’s criticism was prematurely celebrated. Although there were health board officers assigned to track his whereabouts, Pfeiffer disappeared a few weeks after his visit. When he was found at his home in Bedford, Massachusetts, the doctor was diagnosed with such a severe case of smallpox that headlines read “Dr Pfeiffer Has Smallpox...Likely to Die.”<sup>115</sup> Other articles reported that his condition frightened his neighbors, who feared for their own safety. The papers’ accounts of his journey home while infected with smallpox, coming into contact with “hundreds” of people—as well as his quarantine in Bedford—only spurred more to get vaccinated out of fear.<sup>116</sup> Instead of an anti-vaccination triumph, Dr. Pfeiffer survived with barely his life, his reputation in tatters.<sup>117</sup>

Durgin and Pfeiffer’s conflict came at one of the most turbulent points in the anti-vaccination movement, and helps to illustrate the differences in medical beliefs both men had. Pfeiffer was convinced that hygiene and sanitation would protect him better than any vaccination, while Durgin believed that Pfeiffer would be an example for anyone who might otherwise be convinced by the anti-vaccination movement. Newspapers and health

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<sup>114</sup> Walloch, *The Antivaccine Heresy*, 133-4.

<sup>115</sup> “Dr Pfeiffer Has Smallpox,” *Boston Daily Globe*, February 9, 1902.

<sup>116</sup> Walloch, *The Antivaccine Heresy*, 155.

<sup>117</sup> “Pfeiffer Yet Alive,” *Boston Daily Globe*, February 10, 1902.

officials “roundly denounced” Pfeiffer’s “foolhardly exploit,” but anti-vaccinationists were challenging health officials openly on numerous fronts at the turn of the twentieth century. Some, like Pfeiffer, made public stands in forums, lectures, and eventually the court room. Others used statistics, scientific “evidence,” and personal testimony to educate and sway the general public.

Both sides went on campaigns to convince the public to side with their medical beliefs. Anti-vaccinationists worked to overcome the power imbalances between their organizations and government-backed vaccine advocates, using a variety of persuasive tactics to both legitimize their credibility, as well as spread their message regarding the dangers of vaccination. Health officials, in response, worked tirelessly to educate the public, addressing concerns, correcting information, and trying to convince the general population that vaccination and germ theory were the future of medicine and disease control.

### **“Vaccination Must Go!” – Anti-Vaccination Literature**

The American anti-vaccination movement started small, with organizations forming in several cities across the country from the early 1870s onwards, often with only a few dozen active members. While loyal, dues paying members were convinced of vaccination’s evil, due to their scientific beliefs or negative personal experiences with vaccines, the public

remained “uneducated,” and unconverted to the anti-vaccination cause. In order to persuade more people to join their organizations and add public support to their activities, anti-vaccination groups began to publish and distribute literature, both in pamphlet and newspaper form, to get their ideas into mainstream communities.

These groups were not starting from scratch. The Anti-Vaccination movement had been raging in England for decades before most American organizations were founded, and had its own series of publications dating back to the first half of the nineteenth century. American anti-vaccination organizations circulated pamphlets from England alongside their own, with checklists of “must-have” publications. They also espoused many of the same messages in their own literature, using the English as an example of what they saw the American movement becoming, with the proper support.<sup>118</sup>

Within these publications, anti-vaccinationists had one goal: to prove that vaccines were dangerous, kept on the market only by unethical doctors lining their pockets with profits. These articles would list all the possible diseases vaccination was said to cause; “[vaccination] imparts to the healthy, loathsome and fatal diseases. Syphilis, scrofula, consumption, erysipelas, smallpox, measles, whooping cough, yellow fever, typhus fever, scarlet fever, diphtheria, and cholera...are communicated by vaccine pollution.” Anti-

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<sup>118</sup> “English Tracts,” n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 11, CPP.

vaccinationists alleged that vaccines even caused cancer.<sup>119</sup> Vaccines were filled with such evil that “death from vaccination and the diseases which it produces may take place at any time varying from 10 days to 50 or more years after the operation has been performed.”<sup>120</sup> The best way to avoid injury from vaccination was to simply refuse the procedure all together.

Groups also tried emotional appeals; parents wrote about their children’s suffering and death at the hands of “blood poisons,” and warned against similar fates should vaccination be allowed to continue.<sup>121</sup> Some just included lists of children who had fallen victim, noting that the list would continue to expand as long as vaccination was allowed to continue.<sup>122</sup> Groups also actively sought the stories of vaccination’s failure from the public as well, one publication asking readers in 1895 to ask “pock-marked individuals whether they were ever vaccinated” and send in the results of this “investigation,” hoping to place their cases of smallpox on vaccination’s shoulders.<sup>123</sup>

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<sup>119</sup> “The Evils and Criminality of Compulsory Vaccination,” n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 3, CPP.

<sup>120</sup> M. A. Wesner, *Effects of Vaccination*, (Cresson, PA: Press of the Cresson Record, 1903), 20.

<sup>121</sup> “Notes of the Anti-Vaccination Society of America, page 36” 1895, Minutes, Correspondence, etc. 1885-1898, Anti-Vaccination Society of America, 10c 98, Historical Medical Library, College of Physicians of Philadelphia, Philadelphia, PA.

<sup>122</sup> *Anti-Vaccination News* 1, no.1 (May 1895): 12, CPP.

<sup>123</sup> *Ibid*, 10.

Anti-vaccinationists used these stories to also ask why doctors were not being held accountable for the health of their patients. Surely, if a vaccine killed a child, the doctor must be punished in some way for administering this faulty medical product. Papers likened the responsibility to a tailor who tore clothes, and was thus required to mend them.<sup>124</sup> Anti-vaccinationists utilized the public's hesitancy about the changing medical field to encourage them to question new procedures like vaccinations, and ask for guarantees that the vaccines health authorities enforced were proven safe.<sup>125</sup> Public health officials and pro-vaccine medical professionals, instead, dismissed cases of illness and death following vaccination as either coincidence, misapplication, or parental negligence.<sup>126</sup> Physicians criticized parents for not keeping vaccination sites covered and clean, allowing germs to enter the wound and cause the illnesses commonly associated with vaccines. Few would even suggest that the process of vaccination or the contents of the vaccines themselves had anything to do with these children's mysterious illnesses and deaths.

Anti-vaccination groups did, however, see some success; Dr. Durgin and the Boston Board of Health saw these lists of "vaccination" deaths as a contributing factor to dropping vaccination rates around the city during the

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<sup>124</sup> *Anti-Vaccination News* 1, no.1 (May 1895): 10.

<sup>125</sup> *Ibid*, 5.

<sup>126</sup> "No Vaccination in Camden's Boundaries," *New York Times*, November 19, 1901.

worsening epidemic, and made officials like Durgin desperate enough to entertain individuals like Pfeiffer in an effort to counteract these stories. But tragic anecdotal stories were not enough. Anti-vaccinationists sought to provide solid, scientific, statistically based evidence that would prove to the public conclusively the evils of vaccination, especially in ways public health officials could not easily dismiss. After all, it was scientific evidence public health officials were using to support vaccination's use. Refuting those statistics with their own would add scientific legitimacy to the anti-vaccinationist cause.

One of the main tools anti-vaccinationists used were statistical examples of real epidemics, particularly European cases. A favorite of anti-vaccination writers was the Franco-Prussian War. In his piece "Effects of Vaccination," Dr. M. A. Wesner, a Pennsylvania homeopath, wrote that the French vaccinated and re-vaccinated their troops, resulting in 23,460 cases of smallpox. "This general vaccination tended rather to extend smallpox than to protect from it" Wesner quoted one staff surgeon saying. Another reportedly stated that those who were re-vaccinated fared worse than their counterparts.<sup>127</sup> The numbers were correct, but the reason behind the casualties was changed from the official account: 23,000 French soldiers had died from smallpox, but according to contemporary and modern accounts, it

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<sup>127</sup> Wesner, *Effects of Vaccination*, 12.

was the German army, not the French, that universally vaccinated their soldiers, resulting in less than five hundred deaths during the epidemic. The Prussian state had also been an early European adopter of compulsory vaccination legislation in the first part of the nineteenth century. Most mainstream sources alluded to the lack of vaccination as the reason behind French casualties.<sup>128</sup>

Clashing with mainstream accounts did not bother anti-vaccinationists; contradicting official reports and statistics enabled authors to “expose” the inaccuracies the opposition was trying to pass as factual evidence in favor of vaccination. Some, like the author of an English anti-vaccination pamphlet, used graphs to illustrate that smallpox in England had decreased as inoculation declined, implying that it was inoculation that caused these cases. As inoculations ceased (around the period following Jenner’s discovery of vaccination) the author of the pamphlet attributed low levels of smallpox to a lack of vaccination and inoculation, rather than as due to their use. Similarly, spikes in the number of smallpox cases were listed as periods of high vaccination, the level of disease “completely indifferent to little or much vaccination—mounting, with humorous contempt of the greatest vaccination Period, in 1871, to the heaviest epidemic of the

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<sup>128</sup> Michael Specter, “Resistant: Why a century-old battle with vaccination continues to rage,” *New Yorker*, May 30, 2011; “Facts About Vaccination,” n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 11, CPP.

century.”<sup>129</sup> Using these numbers, supposedly direct from the Royal Commission on Vaccination in Great Britain, anti-vaccinationist groups were able to write their own accounts based upon the data.

Others focused on addressing inaccuracies found in specific accounts. In 1899, an English anti-vaccinationist and member of the Leicester Anti-vaccination league named J. T. Biggs published “Smallpox at Middlesbrough: A Reply to Dr. Dingle’s Reports,” where Biggs went through Middlesbrough Medical Officer Charles Dingle’s public health reports, picking apart any inaccuracies he could find.

“Although it is affirmed in October that no vaccinated child died under ten, yet in the table issued in April, 1898, one death of a vaccinated child under five is recorded. This case disappears when the tables are published in July and October. Does this mean that the child did not die, or did it come to life again through being vaccinated, or had it meanwhile become unvaccinated because it died?”<sup>130</sup>

Most anti-vaccinationists believed that vaccines did not actually work, so finding evidence that some vaccinated individuals died helped support this notion. Additionally, questioning the credibility of public health officials, like in Biggs did in his publication, was an important step towards convincing members of the general public that the information the government was telling them about vaccination was incorrect, and dangerously fraudulent.

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<sup>129</sup> “The Turth About Vaccination” n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 52, CPP.

<sup>130</sup> J.T. Biggs, *Smallpox at Middlesbrough: A Reply to Dr. Dingle’s Reports* (Leicester, England: National Anti-Vaccination League, n.d.), CPP, 6.

Finally, anti-vaccinationists continued their efforts to expose vaccination as a bid for financial gain. Many anti-vaccine publications had articles asserting that vaccination had been a fraud from the very beginning, Edward Jenner profiting £30,000 in rewards from the Royal Society for false claims. They cited Jenner's own admission a few years after publicizing his discovery, that his vaccine only gave semi-permanent immunity and would need to be re-administered, as further proof that vaccines were worthless, and that Jenner himself was attempting to cover up their inadequacies.<sup>131</sup>

From Jenner on, pamphlets asserted, physicians were pro-vaccination purely because of profits. The anti-vaccination movement had, in other publications, shown that vaccines were harmful, with a long list of supposed side-effects, as well as based on incorrect information, public health reports filled with inaccuracies and half-truths about the procedure. With these issues tackled, profit was seen as "vaccination's last leg," paying out money to not only physicians, but politicians and the vaccine manufacturers themselves.<sup>132</sup> When this last leg was "knocked from under the 'hideous trade,'" however, vaccination would fall.

Anti-vaccinationists found inventive ways to prove their claims. In 1897, Dr. M. R. Levenson, a member of the AVSA, managed to obtain an offer

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<sup>131</sup> *Anti-Vaccination News* 1, no.1 (New York: May 1895): 2.

<sup>132</sup> "Vaccination's Last Leg," n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 8, CPP.

of appointment from the New York Board of Health as a vaccinator, with a salary of \$1800, a considerable wage for the period, and one Levenson viewed as excessive. Levenson wrote that he tried to get the offer in a way that he could publish it, but that the health board was rightfully hesitant, and stated they would deny his appointment if he tried to use his offer in this way. Levenson, not to be thwarted, drafted his own advertisement based on the offer, and submitted it to the AVSA anyway to be inserted in various publications, to prove the monetary motivations vaccinators had.<sup>133</sup> Although his plan had backfired, Levenson had tried to obtain proof from the health department itself that would support his claims.

And even if they could not prove monetary gain, anti-vaccinationists could certainly insinuate it. Dr. Pfeiffer was reported in one newspaper to remark that Dr. McCollum, a colleague of Dr. Durgin's on the Boston Health Board, "was paid \$10 for lecturing" at a public vaccination forum held by the Ladies' Physiological Institute in early 1902. Although he was rebuked for the statement—Dr. McCollum "was not paid a cent" to lecture—his remarks fell in line with anti-vaccination literature and lectures, which constantly asserted the lack of financial interest their producers had in comparison with their pro-vaccine opponents.<sup>134</sup>

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<sup>133</sup> "M. R Levenson Letter," 3 August, 1897, Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 72, CPP.

<sup>134</sup> "Its Big Benefits," *Boston Daily Globe*, December 20, 1901.

This notion of altruism, that anti-vaccinationists were in the movement purely for public safety, ties in with another facet of anti-vaccination beliefs: their idea that the fight against vaccines was a “crusade,” or religiously inspired war. *The Anti-Vaccinator*, an English publication from 1869, reads across its front page: “Other wars are toward death, but in this crusade the war is against death.”<sup>135</sup> Medical beliefs within anti-vaccination societies were often intermixed with religious beliefs and imagery. One poem the AVSA printed, entitled “the Vaccination King,” featured drawings of a winged demon, who pays doctors “in money of blood” to do his evil work.<sup>136</sup> Religious imagery also fit well with anti-vaccination concerns regarding bodily purity. Purity was important for spiritual health, just as bodily purity was important for physical health. The body had to be kept free from “poisons” like vaccines in order to remain free from disease. Issues of purity featured in anti-vaccination art as well, the cover of one month’s *Vaccination* depicting a cow with vaccine scars across its stomach, adorned with angel’s wings and a banner reading “purity” draped around its waist, surrounded by pox ridden children, skulls, and demons.<sup>137</sup>

Religious aspects to anti-vaccination literature were incorporated not only to “demonize” vaccines, but create an anti-vaccination community.

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<sup>135</sup> *Anti-Vaccination News* 1, no.1 (New York: May 1895): 1.

<sup>136</sup> Louis Breeze, Jr. “The Vaccination King,” n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 18, CPP.

<sup>137</sup> *Vaccination* 7, no. 8 (1904), n.p., Shelf XX (135908.1), CPP.

Frank Blue, the editor of *Vaccination*, would begin each issue with a short article entitled “Quiet Talks to the Faithful,” speaking directly to those already converted to the anti-vaccination cause. While the rest of the articles were often for the purpose of spreading anti-vaccination ideas and convincing a hesitant public, this was a section only for devoted followers.<sup>138</sup> Alongside these articles were publications like the “Anti-Compulsory Vaccination Hymn,” with refrains such as “Brothers in heart united, Raise we our voices today; Now let our vow be plighted, to sweep this law away,” set to familiar tunes. Not only was it important to bring new people to the anti-vaccination fold, it was crucial to maintain the interest and hard won support of those who already believed in the movement.

#### **“Now, reader, will you take our advice?” – Mainstream Media**

Although they had the materials – facts, evidence, and pamphlets, ready to be distributed – anti-vaccination groups and their message still struggled to reach the general public. Many members involved with the anti-vaccination movement were known for the “wrong” reasons. The anti-vaccination movement was closely tied to individuals who practiced alternative forms of medicine – homeopaths, the majority of whom probably *supported* vaccination, came to be associated with the movement around the

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<sup>138</sup> *Vaccination* 6, no. 12 (1904), n.p., Shelf XX (135908.1), CPP.

same time they were most intensely maligned by the American Medical Association.<sup>139</sup>

Anti-vaccinationists also were involved with patent medicines and self-help literature, whose ads lined the front and back pages of monthly anti-vaccination newspapers. Frank Blue, the editor of *Vaccination*, the AVSA's monthly publication, simultaneously advertised his other publications within, including "Vegetarian Magazine," as well as other associated literature, giving "club rates" for those already subscribing.<sup>140</sup> A large promotion for chiropractic school sometimes adorned its dust jacket.<sup>141</sup> Pfeiffer himself was known for his mail-order practice and endorsement of patent medicine, which placed him outside the mainstream limits of medical practice.

Existing on the fringes of medicine, the anti-vaccination groups were aware of how they were perceived. In a campaign from 1900, the AVSA asked for funds to publish "educational" material under the "order of the Executive Committee," their names purposely omitted "because [they were] known as reform cranks, hence, thought some might not subscribe on that account."<sup>142</sup> At times, however, the AVSA embraced its reputation, one 1902 membership

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<sup>139</sup> Willrich, *Pox: An American History*, 257.

<sup>140</sup> *Vaccination* 7, no. 5 (1904), 95, Shelf XX (135908.1), CPP.

<sup>141</sup> *Vaccination* 7, no. 7 (1904), n.p., Shelf XX (135908.1), CPP.

<sup>142</sup> "Educational Campaign Fund Flyer," 1900, Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 8, CPP.

flier calling the organization “an Association of ‘half-mad,’ ‘misguided’ people who write, and toil, and dream, of a time to come, when it shall be lawful to retain intact, the pure body Mother Nature gave, sends Greeting to a ‘suspect.’ ...You are invited to join us.”<sup>143</sup>

Anti-vaccination groups were desperate for a wider audience. Most anti-vaccination publications began because newspapers sided relatively quickly with the pro-vaccine movement. But these organizations needed funds—whether in the form of dues or donations—which were sporadic and sparse at best. Frank Blue worried that without a stable financial source for *Vaccination* or the AVSA, the fight against vaccination would be hindered. He wrote to the organization’s board numerous times regarding the publication’s precarious state: “the type setting is nearly all done by the Secretary [Frank Blue], mornings and evenings outside of office hours...receipts are not sufficient to hire a regular typesetter.” *Vaccination* was “running somewhat behind” but “practically out of debt.”<sup>144</sup>

Blue was concerned that relying on constantly varying monthly subscriptions, which often lapsed, might leave the publication – and the organization—without funds. Without funds, literature distribution would drop-off, and without literature circulating information to the public, “it is

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<sup>143</sup> “Membership Flyer,” 1902, Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 3, CPP.

<sup>144</sup> “Frank Blue to Executive Committee,” Sept 11, 1899. Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 73, CPP.

not to be expected that a great increase in interest will be aroused.”<sup>145</sup> If a permanent means of publication could be obtained, he argued, *Vaccination* would not need to rely on monthly subscriptions and solicitation, but instead could be distributed as free sample copies to increase their support base. The way to obtain funds, however, was through respectability and legitimacy, mainly through increased publicity, and recognized support.

Even though they were not likely to get their stories published, anti-vaccinationists continually submitted articles to news sources. Getting their articles into the mainstream news would lend a certain amount of legitimacy to their opinions, as well as increase their readership apart from their self-produced pamphlets. Reading anti-vaccine facts from a trusted source like the *Boston Globe* would also hold greater social weight than receiving a sample tract from known “cranks” in the mail. This led to submissions to news sources across the country.

These articles were often rejected; the AVSA had a list of newspapers “Decidedly in favor of Vaccination,” which included popular papers like the *New York Times*, *Herald*, and *Tribune*. Smaller local papers made the list as well, ranging from Lowell, Massachusetts and upstate New York, to Iowa and Louisiana.<sup>146</sup> At least one paper wrote a response to the AVSA along with its

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<sup>145</sup> “Frank Blue to Executive Committee,” 1899, Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 74, CPP.

<sup>146</sup> “Decidedly in favor of Vaccination,” Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 32, CPP.

rejection. In 1896, the *Binghamton Herald* rejected the AVSA secretary Frank Blue's editorial article because "he does not give the source of his information for making such statements [against vaccination] and no reliable statistics by the most eminent authorities on this point." "It is useless to give space in trying to convince Mr. Blue and his followers that they must of necessity always remain in a hopeless minority in their peculiarly stubborn belief." The paper even checked the sources he did use, stating "Our learned friend quotes from Dunplison's dictionary as follows: 'Small-pox occurs at times as an epidemic after Vaccination.' Why did you not finish the sentence, Mr. Blue, which is as follows: "But modified and greatly divested of its terrors by previous vaccination... Vaccination is now practiced everywhere except among those in whom ignorance and prejudice exclude the lights of reason..."<sup>147</sup>

The *Binghamton Herald*, and the other papers included on the AVSA's pro-vaccination newspaper list, denied anti-vaccination literature because it did not use what they considered to be "eminent" or "reputable" sources and evidence. To gain legitimacy, both within media circles, as well as with society at large, anti-vaccinationists needed support from well-respected individuals. One tactic they used were physicians' opinions. Doctors from Great Britain and the States featured in anti-vaccination pamphlets, many

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<sup>147</sup> "From Binghamton New York 'Herald'," May 27, 1896, Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 19, CPP.

speaking of their years of experience, and the horrors of vaccination they witnessed. One English pamphlet compiled quotes from a wide variety of medical professionals, officials, and publications. Although many of the members had medical degrees, a number of the physicians quoted were actually members of anti-vaccination organizations, or taken out of context to reflect anti-vaccination sentiments.<sup>148</sup> Frank Blue included a circular with his article to the *Binghamton Herald* “purporting to come from a doctor high in authority” that states that cow-pox and syphilis are the same disease, a claim which the Herald found ridiculous.<sup>149</sup> Yet, the use of community members like physicians was meant to bring the anti-vaccination movement into the realm of allopathic medicine, and thus into the mainstream medical practice.

One of the greatest successes the anti-vaccination movement had towards publishing their material in respected sources, and one that was used heavily in educational campaigns, was the inclusion of Dr. Creighton’s 1888 article on vaccination in the ninth edition of the *Encyclopedia Britannica*. Dr. Charles Creighton was considered one of Britain’s most respected pathologists. A noted author, he had published many volumes of medical texts. But during the process of writing his article on vaccination, he

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<sup>148</sup> “What Has Been Said About Vaccination, and the Vaccination Acts,” *Anti-Vaccination Scrapbook 1882-1903*, Cage Z8c 11, Folder 4, CPP.

<sup>149</sup> “From Binghamton New York ‘Herald’,” May 27, 1896, *Anti-Vaccination Scrapbook 1882-1903*, Cage Z8c 11, Folder 19, CPP.

“converted” himself to the anti-vaccination cause, adopting their beliefs in the face of the evidence they presented.<sup>150</sup> “It is right to say,” Creighton wrote, “that the views expressed in the present article diverge in many points from the opinions generally received among medical men, and must be regarded not as the exposition of established and undisputed doctrine, but as the outcome of an independent and laborious research.” His article goes on to question the origins and safety of vaccines, utilizing studies done by noted anti-vaccinationists.<sup>151</sup>

While Creighton was convinced, the English medical community widely condemned his vaccination article, in which he detailed his criticisms of the procedure, essentially ruining his career.<sup>152</sup> The placement of the article, alongside his former reputation, were fully utilized by anti-vaccination groups in both Britain and the States as legitimate “proof” that vaccination was dangerous. Groups began to point members of the public to read up on vaccination in the encyclopedia if they had doubts about anti-vaccinationist claims, and would refer to his article in speeches and publications.<sup>153</sup>

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<sup>150</sup> Sedgwick, “Remarks on “Opposition to Vaccination,” 13.

<sup>151</sup> Charles Creighton, *Encyclopaedia Britannica*, 9<sup>th</sup> ed. “Vaccination.” 1888.

<sup>152</sup> Walloch, *The Antivaccine Heresy*, 3, notes page 239

<sup>153</sup> John Pitcairn. *Vaccination*. Anti-Vaccination League of Pennsylvania, 1907, 5.

There were a few other respected figures sympathetic to the anti-vaccination cause, including Dr. Edgar Crookshank, a reputable bacteriologist at King's College in London, as well as renowned writer George Bernard Shaw and Alfred Russel Wallace, evolution's "co-discoverer."<sup>154</sup> All were referenced in literature and campaigns to add a level of respectability and authority to anti-vaccination messages. After all, if these respected minds agreed with anti-vaccinationists, the public should feel comfortable to do the same. But however many circulars or newspapers they were involved in, anti-vaccinationists still had to deal with an opposition that was only growing in power: public health organizations.

### **Public Health and Its Response to Anti-Vaccination**

By the late nineteenth century, nearly all public health officials accepted and promoted vaccination in some form or another. Vaccination was still a relatively new technique, only in its infancy, but promising to not only rid the country of smallpox, but be adapted to other fatal diseases. The possibilities seemed endless, but a finicky public, coupled with epidemics and failed vaccination campaigns, made maintaining a firmly pro-vaccination front crucial.

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<sup>154</sup> Sedgwick, "Remarks on "Opposition to Vaccination," 14.

Not only did health officials recognize vaccination's benefits, but they were also aware of the criticisms anti-vaccinationists had against it, which they sought to address and combat. They promoted vaccines through many of the same measures anti-vaccinationists used to discredit them. They handed out pamphlets that presented vaccination statistics, including the successes of overseas vaccination programs like Germany's 1874 compulsory vaccination law, which reduced smallpox rates dramatically. They utilized the same examples as anti-vaccinationists, using the Franco-Prussian War as well, but accentuated the French's lack of vaccination as the reason behind their extensive smallpox casualties.<sup>155</sup> And while health officials often had the authority of health boards and government agencies behind them, they also used famous and respected pro-vaccine individuals like Benjamin Franklin to persuade audiences of its importance.<sup>156</sup>

Health boards also used images of smallpox patients to create a stark image of the dangers the disease posed to unvaccinated individuals. The New York State Department of Health released a book in 1908 entitled "Vaccination," which included photos of unvaccinated, smallpox stricken children next to their healthy, vaccinated siblings, to show the difference vaccination made when exposed to the virus.<sup>157</sup> The images were often

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<sup>155</sup> "Facts about Vaccination," n.d., Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 5, CPP.

<sup>156</sup> *Vaccination*. (New York: New York State Department of Health, 1908), 6.

<sup>157</sup> *Vaccination* (New York State Department of Health), 25-26.

shocking in contrast, two healthy children, vaccinated at school, while their toddler brother, too young to fall under mandatory school vaccination laws, is covered with smallpox eruptions. These photos were used not only to help health professionals and the public differentiate between smallpox and more minor conditions like chickenpox, but also illustrate the protections vaccination could afford.<sup>158</sup>

Much of health officials' time educating the public was stressing the importance of vaccination even when there appeared to be little risk of exposure. Virulent smallpox, while still present, had decreased dramatically by the beginning of the twentieth century. In its place was mild smallpox, which was not nearly as debilitating, or as easy for medical professionals to recognize. But the lack of visibility mild smallpox had meant a lack of incentive for parents to get themselves and their children vaccinated. Vaccination required a visit to a doctor or dispensary, which took time away from work, something lower class individuals often did not have. Many parents refused to get their children vaccinated because they believed the risks of vaccination outweighed the risk of getting smallpox. Vaccine safety continued to evolve over the late nineteenth century, with both the use of cow derived vaccines, to reduce transmission of syphilis and other communicable diseases, and the introduction of glycerin to sterilize the

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<sup>158</sup> *Vaccination* (New York State Department of Health), 6, 10.

vaccines to diminish the number of bacterial colonies in each vaccine vial. These advancements did not end possible vaccine contamination.<sup>159</sup>

In the fall of 1900, Camden, New Jersey, a town of roughly 76,000 people near Philadelphia, was in the midst of a smallpox outbreak, prompting local health officials to step in and provide vaccines to stem the epidemic. The outbreak seemed to proceed normally until a sixteen-year-old boy came down with tetanus after a recent vaccination. Soon after, three more children took ill with lockjaw. Within a few weeks, all were dead, while more cases turned up, all in a short span of time.<sup>160</sup>

The Camden Board of Health quickly stopped all vaccination within the city limits, although more than 5,000 of the 8,000 school children had already received the vaccine.<sup>161</sup> Doctors examined the vaccines used by physicians in the Camden area, testing samples on white rats, concluding that no tetanus bacteria was present when none of the rats contracted the disease.<sup>162</sup> Instead, they suggested that perhaps the cases were “resulting from neglect on the part of the patients.” “There are a hundred ways that tetanus microbe might have been introduced. No boy ever lived who doesn’t say ‘See my vaccination?’”<sup>163</sup> Others agreed; one physician wrote into the

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<sup>159</sup> Walloch, *The Antivaccine Heresy*, 27.

<sup>160</sup> Willrich, *Pox: An American History*, 171-174.

<sup>161</sup> “No Vaccination in Camden’s Boundaries,” *New York Times*, November 19, 1901.

<sup>162</sup> Willrich, *Pox: An American History*, 190.

<sup>163</sup> Allen, *Vaccine: The Controversial Story of Medicine’s Greatest Lifesaver*, 79.

*New York Times*, arguing that the tetanus could not have come from the vaccines, as too much time had elapsed between the date of vaccination to onset of symptoms. Poor care post-vaccination was likely the culprit.<sup>164</sup>

The Camden Board of Health echoed his statements. Tetanus, they claimed, could “never occur if the vaccination is properly protected from contact with the atmosphere, or with soiled clothing, bandages, etc.”<sup>165</sup> This was not actually true. Only a year after the outbreak of tetanus in Camden, at least seven more would die from tainted vaccines in St. Louis, which were linked back to a single infected animal. Not only that, but in 1904, scientists found that glycerin, the agent used to disinfect vaccines, preserved tetanus spores, rather than killed them. Still, health officials and medical professionals continued to urge that vaccines were not at fault. With doctors doing little to assuage fears, the Camden tetanus outbreak only heightened fears surrounding vaccination, with parents across the country refusing to immunize their children.<sup>166</sup>

Health officials felt that they could not express any doubts in vaccination, or present anything but a united front against the opposition. This meant that even if there were flaws in vaccines – which there were – health departments often covered things up, and denied that there was

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<sup>164</sup> Albert C. Barnes, “Facts about the Camden cases of tetanus,” *New York Times*, 1901.

<sup>165</sup> “Camden Lockjaw Outbreak,” *New York Times*, November 30, 1901.

<sup>166</sup> Willrich, *Pox: An American History*, 178, 205.

anything wrong with the lymph itself. It was the procedure, the patient, or any number of other causes. After the Camden epidemic and tetanus outbreak, vaccine manufacturers wrote to Dr. Joseph McFarland, the official tasked with investigating the Camden vaccines, asking him to stay quiet for the “good of the cause of Vaccine at Heart.”<sup>167</sup> Both vaccine manufacturers and health officials understood that each failed vaccination reduced the trust the public had, and gave anti-vaccinationists more fodder. But most saw the possible casualties as a small price for an end to smallpox as a whole; their faith in vaccination remained:

Small-pox was then, and is now, a horrible, foul, loathsome disease. An occasional bad arm, or even an occasional lost leg, if you prefer, doesn't compare for a moment with the fear and pain and anguish and sorrow that came only too often in the old days. Our opponents suffer from a lack of perspective, from a failure to look at things in a large way, and see where the most beneficent results, after all, have come in.<sup>168</sup>

Even if they were not perfect, public health officials continually argued, vaccination remained the best protection against epidemics, meaning that both health boards, and state and local governments needed to remain firm on their support for vaccination, even in the face of incidents like Camden.

Members of the public were not as convinced as their health officials of vaccination's importance, particularly in the wake of vaccination scares like the one in Camden. Parents began to find ways to get around vaccination

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<sup>167</sup> Allen, *Vaccine*, 94.

<sup>168</sup> Sedgwick, “Remarks on “Opposition to Vaccination,” 10.

requirements, which anti-vaccinationists readily embraced. One article published in the journal *Practical Druggist* gave instructions on how to imitate a vaccine scar with nitric acid scratched onto the skin, “so nearly resembling vaccination that the average physician can’t tell the difference.”<sup>169</sup> Some physicians went further, a 1904 *New York Times* article protesting the “nefarious traffic” of fraudulent vaccination certificates, where doctors provided “worthless” papers for a price, allowing people to provide false proof of vaccination without undergoing the procedure, subverting the law “essential for their own protection and for the general public welfare.”<sup>170</sup>

In some cases, objectors could get around compulsory laws due to exemption clauses. A major victory for anti-vaccinationists in England was the decision to allow exemptions for conscientious objectors in 1898, and most American anti-vaccination groups lobbied for similar clauses within their own state vaccination laws.<sup>171</sup> Public health officials saw exemptions, even for medical reasons, as “a weakening” of authority, a “disastrous first step toward the upsetting of a wholesome and beneficent law.”<sup>172</sup> Although herd immunity, the idea that a certain percentage of the population needed to be vaccinated or immune to protect an entire community, would not be formally recognized until the 1920s, health officials had already noticed the

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<sup>169</sup> “Imitation Vaccine Scar,” *Practical Druggist and Spatula*, 15-16 (1904): 234.

<sup>170</sup> “Vaccination Certificate Frauds,” *New York Times*, May 9, 1904.

<sup>171</sup> Allen, *Vaccine*, 69.

<sup>172</sup> Sedgwick, “Remarks on “Opposition to Vaccination,” 7.

importance vaccination held in controlling the spread of epidemics, and feared what would happen should these laws disappear.<sup>173</sup> In states like Pennsylvania, which allowed exemptions, officials quickly saw vaccination numbers dwindle; in 1899, a Pennsylvanian school had 260 students, or one-third of the student body, provide certificates declaring them medically unfit for vaccination.<sup>174</sup> Caveats like these made compulsory vaccination campaigns nearly impossible, and weakened the authority of Health Board members to enforce vaccination laws.

Faced with weakened laws, exemptions, and a frustrating anti-vaccination movement, health officials like Durgin were willing to implement more controversial orders during epidemics, orders that Pfeiffer had criticized. Vaccination “raids” were targeted at residential areas, particularly poor and immigrant neighborhoods.<sup>175</sup> Vaccinators, accompanied by policemen, would go door to door, vaccinating all with whom they came in contact. Any cases of smallpox that was discovered during the raids were typically sent to smallpox isolation hospitals, keeping them quarantined and away from family members and the community. “The sight of the policemen’s night sticks might have been something of a persuader...once the officials appeared in the room it was easier to submit...”<sup>176</sup> One article about Little

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<sup>173</sup> Colgrove, *State of Immunity*, 3-4.

<sup>174</sup> Allen, *Vaccine*, 78.

<sup>175</sup> Walloch, *The Antivaccine Heresy*, 179.

<sup>176</sup> “Army of Vaccinators,” *New York Times*, December 25, 1900.

Italy in New York described policemen tearing “suffering little children from the arms of shrieking mothers,” and chasing a man in his nightclothes down the street, only to discover he did not speak English, and had already been vaccinated. Parents whose children were taken to smallpox hospitals were sometimes denied access to their sick sons and daughters, unsure if they would see them alive again.<sup>177</sup>

Boards of health were well aware that their severe actions to enforce compulsory vaccination could be construed as a violation of liberty, and a serious infringement on individual rights. “We infringe personal liberty, of course, in a good many ways. We take the criminal, and shut him up against his will. We stop people from trespassing upon the property of others. We frequently interfere with personal liberty.”<sup>178</sup> When an individual had the potential to harm the community, health departments argued, liberty did not apply. Sick individuals could not be allowed to remain in crowded neighborhoods, and vaccination orders needed to be followed, even if by force. Anti-vaccinationists, however, decried this treatment, reiterating their conviction that compulsory vaccination violated the fourteenth amendment and other constitutional rights. This disagreement between personal liberty and public good would come to a head in the 1905 Supreme Court case *Jacobson v Massachusetts*.

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<sup>177</sup> “Doctors Make a Raid,” *New York Times*, February 2, 1901.

<sup>178</sup> Sedgwick, “Remarks on “Opposition to Vaccination,” 8.

### Chapter Three

#### Vaccination and the Courts: State Authority and Individual Rights

On March 15, 1902, Reverend Henning Jacobson received a visitor. That winter had been particularly rough for the Boston area, which had been the midst of a multi-year smallpox epidemic that showed no sign of abating. In response, the Cambridge Board of Health issued a resolution requiring vaccination for all residents who had not been vaccinated in five years, or face a five-dollar fine, a hefty penalty of nearly half an average weekly wage.<sup>179</sup> Jacobson's visitor was the chairman of the Health Board, a man named Dr. Edwin Spencer, who came with the offer to vaccinate Jacobson and his family, free of charge. Jacobson refused.

Reverend Henning Jacobson was an unlikely source of rebellious sentiment. A Swedish immigrant, Jacobson was devoted to his Cambridge parish, practicing the conservative religious doctrine of his homeland. He was highly educated, studying at Yale Divinity school, and law abiding, generally unknown outside his small congregation. No records exist that connect him with any anti-vaccinationist groups before his refusal.<sup>180</sup> But Jacobson was terrified of vaccination; both he and one of his sons experienced severe reactions as children after receiving smallpox vaccines.

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<sup>179</sup> Colgrove, *State of Immunity*, 38; Willrich, *Pox: An American History*, 285.

<sup>180</sup> Colgrove, *State of Immunity*, 39, 40.

He would not stand to see himself and his family vaccinated again, nor would he agree to pay any fine.<sup>181</sup>

What would follow Jacobson's refusal would be a case that went all the way up to the Supreme Court, calling into question both the constitutionality of compulsory vaccination, as well as the police powers health departments could exercise. Jacobson's defiance of vaccination was not intended as a public statement of anti-vaccinationism like Pfeiffer's, but became as much of an open, publicized event all the same.

*Jacobson v Massachusetts* marked the culmination of decades of debate. Both Jacobson's case, and those that preceded it, highlighted the growing power of the public health movement, which in places like New York and Boston, made its boldest claims to authority in the name of public safety. While they did not definitively end the anti-vaccination movement, the resulting decisions from these cases redefined the nature of personal liberty, and public health's importance within greater society.

### **Commissioner Emery and the Brooklyn Epidemic of 1894**

Jacobson may have been the most famous vaccination case, and the one that went the farthest in terms of higher levels of court, but previous cases had already laid groundwork for what anti-vaccinationists wanted to

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<sup>181</sup> Willrich, *Pox: An American History*, 286.

achieve. The most successful of these suits were the Brooklyn Vaccination cases. In cases like *Smith v Emery* (1896) that were lodged against Brooklyn Health Commissioner Z. Taylor Emery, judges sided with the “victims” of vaccination efforts over health officials.

In the spring of 1894, over one hundred Brooklyn residents were quarantined due to smallpox, and the numbers were rising.<sup>182</sup> The source was reportedly a large party in late January, and had since spread out into the surrounding neighborhood. Brooklyn authorities quickly declared an epidemic. Tents were erected to accept new patients at the local smallpox hospital, and more than one hundred vaccinators sent out to vaccinate the masses. The main targets: factories and public schools.

From sugar refineries to hat factory workers, Dr. Emery, Commissioner of the Brooklyn Board of Health, sought out people from all walks of life. Of special interest were those who were employed in jobs that made them especially vulnerable and likely to transmit diseases around the city, like subway and railroad employees. Often these workplace vaccinations offered little choice: either be vaccinated, or be fired.<sup>183</sup> Smallpox was bad for business, especially because health officials like Emery were not hesitant to quarantine or close stores for refusing vaccines during an epidemic. One livery stable in Brooklyn soon found its doors forcibly closed after its owners

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<sup>182</sup> “Great Increase in Smallpox,” *New York Times*, March 27, 1894.

<sup>183</sup> “Submitted to Vaccination,” *New York Times*, May 19, 1888.

refused the procedure, simply for residing in a neighborhood where smallpox had recently been reported. Employers found it easier to work with health officials, rather than face consequences or quarantine.

In public schools, children had their arms checked for smallpox vaccination scars, and their records checked for corresponding vaccination certificates. If found wanting, they were vaccinated again. State laws mandated vaccination for entry into public schools, and for many students, these laws prompted their first vaccination, occurring around age five or six. The longer these children stayed in school, the more vaccines they typically received. Schools were also prime places for public health departments to exert their control. "Before entering school," one physician remarked, "the little ones are vaccinated; at seven or eight they are vaccinated again. And if they remain in school the process is usually repeated when they are fourteen or fifteen."<sup>184</sup> Vaccination was encouraged at all ages, but health officials could do little to force the vaccination of smaller children during non-epidemic periods. That did not stop government agencies from promoting the procedure, and advertising its risks.<sup>185</sup>

Even with regulations requiring all students to submit a certificate of vaccination upon matriculation, there were at times a lack of enforcement, or

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<sup>184</sup> "Smallpox Story Made Out of Whole Cloth," *New York Times*, February 10, 1901.

<sup>185</sup> *Vaccination*. (New York: New York State Department of Health, 1908), 8.

lapses between vaccinations. “These children present certificates that are given by physicians who do not wait to see whether the vaccination has taken or not, and too, many of the certificates presented are fraudulent and forgeries.”<sup>186</sup> Fraudulent certificates remained a constant problem for school officials. One health official in the years following the Brooklyn epidemic complained that physicians would write certificates exempting children for unfitness without even examining the child, and were often completely unaware of the child’s physical condition.<sup>187</sup> The Brooklyn Health Board was wary of such frauds, which were a widespread problem in cities across the country, and if a child’s vaccination was in doubt, or deemed unsuccessful, health officials vaccinated students at the schools themselves. Children whose parents refused vaccination were typically excluded until they complied with the health order.<sup>188</sup>

Emery’s goal was to end this epidemic almost as soon as it had begun, requiring both public support and cooperation, as well as more extreme health measures. “The department,” Emery stated, “is confident of its ability to cope with the emergency; but it looks to the citizens for hearty cooperation, which will greatly hasten the complete eradication of the trouble, and save much sickness and loss of life, as well as considerable money to

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<sup>186</sup> “Vaccination in Brooklyn: Health Authorities Declare the State Law,” *New York Times*, August 30, 1899.

<sup>187</sup> “Beating Vaccination,” *Boston Daily Globe*, September 19, 1900.

<sup>188</sup> “Vaccination Test Cases,” *New York Times*, June 24, 1894.

taxpayers.” The faster the public submitted to vaccination and quarantine, the sooner the epidemic would end, and things could get back to normal.<sup>189</sup>

Not only was Emery determined to end this mess quickly, he was assured that his actions were well within his power as health commissioner.

The Brooklyn Charter stated that:

in the presence of great and imminent peril to public health of the city of Brooklyn...it shall be the duty of said commissioner to take such measures for the preservation of the public health from such impending pestilence as he may in good faith declare the public safety and health to demand, and the mayor of the said city and the president of the Medical Society of Kings County shall also in writing approve...<sup>190</sup>

Public health laws granted further power, allowing for the “isolation of all persons and things infected with or exposed to such disease.”<sup>191</sup> Along with various legislative protections, the commissioner enjoyed the political support of powerful constituencies. Brooklyn’s mayor, Charles Schieren, fully backed Emery, and employed him as his family’s personal physician. The Kings County Medical Society also lent their political clout, passing a resolution praising Emery’s efforts. With both the law and major political actors in Brooklyn on his side, it appeared that Emery and the Brooklyn Health Department had full control over the epidemic.<sup>192</sup>

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<sup>189</sup> “Great Increase in Smallpox,” *New York Times*, March 27, 1894.

<sup>190</sup> *In Re Smith*, 146 N.Y. 68.

<sup>191</sup> *Ibid.*

<sup>192</sup> Colgrove, *State of Immunity*, 25-26.

Emery, however, quickly ran into problems. His actions to fight the epidemic provoked outcry among citizens who felt their rights were being violated, and that health officials were going too far. "Hundreds of policemen would surround a city block at night, holding every one within prisoner while twenty young physicians went through the houses vaccinated all the people, sometimes using force, sometimes breaking doors to do it."<sup>193</sup> Henry Millman came in to one police precinct to report that vaccinators had barged into his home, even though he was willing to let them in, and "vaccinated the women in his family before they had time to get even partially dressed." In another home, a policeman grabbed a man who was trying to escape by the hair, dragging him back to submit to the procedure.<sup>194</sup> "In some instances," one inspector said, following a vaccination raid "we met with denials and slight resistance, but...they readily yielded to persuasion. We had no actual need to summon...the police, but their presence undoubtedly made our work easier."<sup>195</sup>

What the health department saw as "persuasion" appeared to many concerned residents as "force." Citizens began to organize themselves in the wake of compulsory vaccination orders. In April 1894, shortly after the epidemic began, anti-vaccinationists and concerned citizens in Brooklyn organized themselves into the newly formed "Brooklyn Anti-Compulsory

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<sup>193</sup> "Fighting the Great Plagues," *New York Times*, March 15, 1896.

<sup>194</sup> "Sixty Doctors take little Africa by Storm," *Brooklyn Daily Eagle*, May 2, 1894.

<sup>195</sup> "3,000 Arms Were Scraped," *Brooklyn Daily Eagle*, April 27, 1894.

Vaccination League.” They demanded “the repeal of the laws and ordinances, State and local, compelling people to submit to vaccination.”<sup>196</sup> The group also sought equal recognition of homeopathic treatments for smallpox, including “varioline,” a treatment that consisted of treating individuals with mixed solutions of smallpox matter and fluids that homeopathic physicians claimed provided quick relief and treatment for smallpox patients.<sup>197</sup>

The Anti-Compulsory Vaccination League of Brooklyn (AVLB), led by homeopathic physician M. Levenson, who was also an active member and officer of the Anti-Vaccination Society of America over in Manhattan, organized large public forums to spread their message. They called for the removal of Dr. Emery “on the ground[s] that he has proved himself a bigot and a tyrant; that he has squandered the people’s money illegally,” as well as an end to the monopoly of authority given to his appointed vaccinators, who were the only ones allowed to provide vaccination certificates in the schools (and thus limiting the ability of anti-vaccinationist physicians to get around vaccination orders).<sup>198</sup> Emery and allopathic medicine’s dominance had to go.

The response to Dr. Emery’s measures also led to several lawsuits, something not particularly common in earlier epidemics. The most

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<sup>196</sup> “Against Compulsory Vaccination,” *New York Times*, April 22, 1894.

<sup>197</sup> Ibid; Schnappauf, “The Curative Action of Varioline,” *British Homeopathic Journal* 9 (1851) 471.

<sup>198</sup> “Demand Mr. Emery’s Removal,” *New York Times*, May 29, 1894.

immediate response came from business owners hampered by Emery's restraints. One such man was William Smith, who owned a livery stable and employed men to deliver goods around the city, shipping materials from factories to businesses around New York City.

By nature, Smith's employees moved in and out of Brooklyn, and when a case of smallpox was discovered in the neighborhood, these men were considered a possible risk for further spread of the disease.<sup>199</sup> In response, health officials gave Smith, and an employee names Thomas Cummings, twenty-four hours to get themselves vaccinated. Returning the next day and finding the men unvaccinated, the health department placed the business under quarantine, closing its doors and placing policemen outside until the men complied with the vaccination order.<sup>200</sup>

Smith, in response to the quarantine, contacted his personal physician, a man named Charles Walters. Unfortunately for Emery, Dr. Walters happened to be a member of the AVL, and readily jumped into action, hiring a lawyer to seek a writ of *habeas corpus* for the men's release. In a stroke of good fortune, Smith's case went before Justice William Gaynor, a judge sympathetic to citizen's rights, and a man wary of government corruption.<sup>201</sup> The writ was granted, and the men released. Emery appealed

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<sup>199</sup> Colgrove, *State of Immunity*, 26.

<sup>200</sup> *In Re Smith*, 146 N.Y. 68.

<sup>201</sup> Colgrove, *State of Immunity*, 27.

the action, and in February 1895 the appellate court overturn Gaynor's decision.<sup>202</sup>

The incident eventually culminated in *In Re Smith (1895)*, making its way to the New York Court of Appeals. Smith's lawyer argued that the men were detained solely as a "means to compel them to submit to vaccination" and that with such power, the commissioner could force any medical treatment he wished. "He might as well decree that every one should take sarsaparilla or any other patent medicine he might favor." The commissioner's orders were forcing his medical beliefs on to others like Smith, violating their rights. Emery's counsel argued against Smith's claim, stating that to limit the department from quarantining vaccine refusers would "so cripple the department as to render it almost powerless to prevent the spread of smallpox."<sup>203</sup>

The Court of Appeals ultimately affirmed Justice Gaynor's original decision: the health law explicitly stated that the Commissioner could only quarantine individuals who were directly exposed to or contracted smallpox. "No authority is given...to quarantine any person simply because he refuses to be vaccinated, and to continue him in quarantine until he consents to such vaccination."<sup>204</sup> Emery could not imprison individuals to force their

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<sup>202</sup> Ibid, 29.

<sup>203</sup> "Vaccination by Force," *Brooklyn Daily Eagle*, April 24, 1895.

<sup>204</sup> *In Re Smith*, 146 N.Y. 68.

vaccination, nor could he require compulsory vaccination where the law did not support it. “If the people of this State,” Justice Gaynor wrote in his opinion, “intended that every individual within it should be vaccinated they would have made a penal provision for the enforcement of the law.”<sup>205</sup> The case was a victory for the AVLB and a blow for Emery’s health department. Smith filed a further suit against the Commissioner for commercial damages, and won an additional \$641.32.<sup>206</sup> *In Re Smith* affirmed that, while powerful, health departments were not above the law.

Aside from the Smith cases, Emery faced additional legal challenges, particularly around his campaign to enforce school vaccinations. Dr. Walters, Smith’s physician and a member of the AVLB, decided to pursue a lawsuit of his own against Brooklyn’s Public Schools for trying to compel him to vaccinate his two children. The case aimed at striking down the state law regarding vaccination as a requisite for enrollment. This time, however, the judge ruled that public schooling was treated as a privilege under the New York State constitution, not a right. Therefore, the state could enforce regulations as it saw fit, namely denying enrollment for refusing the procedure. Smith’s case and eventual victory had little influence, as the judge was careful to highlight the differences between the two law suits.<sup>207</sup>

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<sup>205</sup> “Law as to Vaccination,” *New York Times*, May 5, 1894.

<sup>206</sup> Colgrove, *State of Immunity*, 30.

<sup>207</sup> Colgrove, *State of Immunity*, 29.

Imprisoning someone without legal authority was a different legal question than regulating public school enrollment.

The epidemic also saw personal injury lawsuits, a new and upcoming type of case that became more prominent at the turn of the twentieth century. One man, Emil Schaefer, claimed the doctor who came to his house during the epidemic used force, exclaiming “You shall be vaccinated if I die for it!” Schaefer himself nearly died “from loss of blood and shock” due to the procedure, and Justice Gaynor again ruled against the health department.<sup>208</sup> Schaefer won \$1,500 in damages from Dr. Emery and his department, a decision that set precedents for further personal injury lawsuits.<sup>209</sup> Parents began to sue Emery and health officials for vaccination malpractice, typically over severe illness or death of a child. A common theme in anti-vaccination literature, these cases alleged that the health department was enforcing procedures that were not administered correctly, and which officials could not guarantee to be fully safe. One of the more widely known injury cases was that of nine-year-old Julia Burggraff.

In line with Emery’s orders, school boards allowed inspectors in to vaccinate children who did not meet Health Board standards. “Notice” was given that the vaccinators were coming in, and Julia Burggraff, making “no

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<sup>208</sup> “Says the Doctor Used Force,” *Brooklyn Daily Eagle*, November 15, 1895.

<sup>209</sup> “\$1,500 for Forced Vaccination,” *New York Times*, November 16, 1895.

objection,” was vaccinated alongside her schoolmates.<sup>210</sup> She soon contracted lockjaw, and died three weeks later on May 2, 1894. Her father, in return, sued Emery \$5,000 for her loss. The Burggraffs were not anti-vaccinationists like Dr. Walters or Smith; Julia had in fact been vaccinated eight months previously, although that did not prevent her from being revaccinated in April 1894. Their issue was with the specific procedure Julia was subjected to, her death allegedly caused by “improper quality of vaccine” the health department had administered.<sup>211</sup>

The Health Department claimed that these vaccinations were completely voluntary, that they had advised the students of these vaccinations (who then could inform their parents). If the Burggraffs did not want their child vaccinated, they should not have sent their child to school. The counsel for the health department also claimed that the child gave her consent to the procedure, and thus the vaccination was not a “forcible trespass” upon her person. The judge, however, curtailed the purview of the jury to whether or not it was the actions of health officials in administering the vaccination that directly caused Burggraff’s death. In the end, the jury was not able to make a decision, and the case was dismissed.<sup>212</sup>

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<sup>210</sup> “Burggraff vs. Emery” *Brooklyn Medical Journal* 19 (1896): 145.

<sup>211</sup> “Vaccine Suits in Brooklyn,” *New York Times*, January 10, 1896.

<sup>212</sup> Colgrove, *State of Immunity*, 31.

The Burggraffs may have lost their suit, but against a back drop of concerned parents, unwilling patients like Mr. Smith, and lockjaw outbreaks in places like Camden, NJ, cases like both *Burggraff v Emery* and *In Re Smith* helped establish precedent for holding health officials accountable legally for the procedures they performed. The relative success of the Brooklyn cases, as well as the AVLB's influence, also inspired other anti-vaccinationists to take their cases to court.

Frank Blue of the AVSA brought his own case to bear in Terre Haute, Indiana, protesting the exclusion of his son, Kleo Blue, from school during a smallpox epidemic in 1900 in *Blue v Beach*. He claimed that by the time his son was expelled from school, the danger of the epidemic had passed, and that vaccination "in all cases produced a loathsome constitutional disease...and frequently resulted in death."<sup>213</sup> As the Court in New York had ruled in Dr. Walters' case, the Indiana court disregarded Blue's statements that vaccination was dangerous, and asserted that his son's rights were not abridged, and that public school systems were a privilege, not a right.<sup>214</sup>

**"Nothing short of an assault upon his person" – *Jacobson v Massachusetts***

Much like Brooklyn in 1894, the 1901-1903 Boston epidemic became a battle between an aggressive health department and the anti-vaccination

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<sup>213</sup> *Blue v. Beach* 155 Ind. 121 (1900).

<sup>214</sup> *Ibid.*

groups that opposed their tactics. It was during this particular epidemic that Immanuel Pfeiffer and Commissioner Durgin had their public newspaper fight, culminating in Pfeiffer's visit to the isolation hospital and his own eventual case of smallpox. Like in Brooklyn, local Boston area health departments had been providing free vaccinations on a voluntary basis. As the numbers of cases continued to escalate, however, they turned to an alternative: compulsion.<sup>215</sup> Health departments in Massachusetts had the power to enforce compulsory vaccination if "it is necessary for the public health or safety" of the general public. Anyone who refused was fined \$5 (about \$100 today), a hefty sum for the time.<sup>216217</sup>

Typically, compulsory vaccination was reserved for admittance into public school or during an epidemic, like the Boston and Cambridge area faced, in which case adults and children were targeted. Boston's Health Commissioner Samuel Durgin achieved compulsory vaccination through police involvement. Police officers would accompany officials into neighborhoods, with orders to "restrain" resisters. Vaccinators, along with four "strapping patrolmen" would go on "nocturnal vaccination tours," particularly in poor neighborhoods and cheap lodging houses. These "virus

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<sup>215</sup> Ibid, 165.

<sup>216</sup> *Jacobson v Massachusetts* 197 US 1 (1905), Wendy K Mariner, George J Annas, and Leonard H Glantz, "Jacobson v Massachusetts, It's Not Your Great-great-Grandfather's Public Health Law," *American Journal of Public Health*, 2005, 95:4.

<sup>217</sup> Willrich, *Pox: An American History*, 285.

squads” would go from cot to cot, vaccinating their inhabitants. If they resisted, the policemen would hold them down forcefully, sitting on their bodies to restrain them, or in one case, club those who put up a fight.<sup>218</sup> Most individuals obliged. During “official” vaccination sweeps, however, refusals were given protection of due process, objectors being “haled into court,” without the implicit threat of restraint or force.<sup>219</sup>

For Reverend Henning Jacobson, compulsion came in the form of an official visit from Dr. E. Edwin Spencer, the chairman of the Cambridge Board of Health. Spencer employed a less aggressive vaccination campaign, sending out vaccinators, sans policemen, to vaccinate anyone they could find, including students and faculty members of Harvard University. People were not forced to show vaccination scars, but rather were simply asked if they were immunized, and if so, were spared the vaccinator’s attentions.<sup>220</sup> Spencer’s visit to Jacobson’s house was no different. Informing Jacobson of the health department’s order for all Cambridge residents’ vaccination, Dr. Spencer offered to perform the procedure free of charge. Instead of lying about his status, as many other Cambridge residents did to get around complying with the vaccination order, Jacobson refused the procedure outright. Citing a bad reaction to the vaccine as a child in his native Sweden,

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<sup>218</sup> “Virus Squad Out,” *Boston Daily Globe*, November 18, 1901.

<sup>219</sup> Walloch, *The Antivaccine Heresy*, 163; “Fighting Smallpox in Boston,” *New York Times*, January 26, 1902.

<sup>220</sup> Walloch, *The Antivaccine Heresy*, 180.

as well as one of his own sons' negative experience with immunization, Jacobson would not allow his family to be vaccinated again.<sup>221</sup>

Months passed, and resisters were not initially punished, the Cambridge Health Board satisfied with its containment of the epidemic. Historian Karen Walloch remarks that Spencer himself was hesitant to come up against wealthy residents, and looked the other way when seven hundred individuals from majority upper class neighborhoods refused vaccination, only warning them that legal action might be taken against them in a letter of possible future "legal sanctions."<sup>222</sup>

When the epidemic spiked in the summer of 1902, however, Spencer had to scramble as elected officials put pressure on his lackadaisical vaccine campaign.<sup>223</sup> As smallpox continued to spread in Jacobson's neighborhood, and Cambridge in general, health officials decided to penalize vaccine refusers in order to encourage compliance with the health order. Like English vaccination campaigns decades before, those who refused vaccination and the fines imposed in penalty faced the possibility of jail time.<sup>224</sup> Commissioner Durgin in Boston already resorted to jailing resisters, first bringing Charles Cate, a laborer who helped move furniture, to court for resisting both vaccination and the fine imposed in February 1902. He was

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<sup>221</sup> Willrich, *Pox: An American History*, 285-286.

<sup>222</sup> Walloch, *The Antivaccine Heresy*, 180.

<sup>223</sup> *Ibid*, 180.

<sup>224</sup> *Ibid*, 163.

sentenced to fifteen days, after which his fine would be absolved. After release, however, Cate ran the risk of incarceration should he refuse vaccination again. Cate replied that he would stay in jail a century rather than give in.<sup>225</sup>

In July 1902, Cambridge Health officials brought their own cases to trial. Jacobson—along with five other resisters—was pronounced guilty of refusing vaccination and fined \$5. He would, with three other defendants, appeal his case.<sup>226</sup> Through successive appeals, two of the other defendants would concede and pay the fine, but both Jacobson and one other man, a Mr. Albert M. Pear, took their case in front of the Middlesex County Supreme Court.<sup>227</sup>

Albert Pear was the perfect poster child for the anti-vaccination movement: young, handsome, the son of a local political leader and a public servant himself, Pear was known in the Boston area as “one of the most strenuous anti-vaccinationists in the city.” “I do not propose that the board of health shall dictate to me what medicine I shall put into my system,” he proclaimed to a reporter for the *Boston Globe*.<sup>228</sup> Pear had been found guilty, and did not dispute the facts of his case; he had refused to be vaccinated and

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<sup>225</sup> “Fifteen Days in Jail,” *Boston Daily Globe*, February 21, 1902.

<sup>226</sup> “Fine Them \$5 Each,” *Boston Daily Globe*, July 24, 1902.

<sup>227</sup> Willrich, *Pox: An American History*, 295-8, *Commonwealth v Pear* 183 Mass 242 (1903).

<sup>228</sup> “Won’t Submit,” *Boston Globe*, July 18, 1902.

to pay the fine the refusal incurred. It was his desire to test the constitutionality of the overall ordinance, a decision that would have to come from a higher court.<sup>229</sup> Pear was very public with his case to garner support, intending to reach the Massachusetts Supreme Judicial Court to do away once and for all with the state compulsory vaccination law.

Albert Pear served as a rallying point for the anti-vaccination movement in Massachusetts. In April 1903, after appealing his case, the *Boston Globe* reported on a meeting of the Massachusetts Anti-Compulsory Vaccination Society. The organization, after discussion, vowed to raise \$3000 to help Pear's appeal, and hopefully carry it on up to the United States Supreme Court. A decision there, in their favor, on the constitutionality of compulsory vaccination could do what dozens of anti-vaccination societies had been attempting to achieve for decades. Most anti-vaccination groups could only fight the individual state laws regarding vaccination. A supreme court case could strike down vaccination laws across the country.

The organization was, like most anti-vaccination groups, underfunded to begin with. The article included the Massachusetts Anti-Compulsory Vaccination Society secretary's request that funds be raised for his own salary before the organization took on the optimistic goal of raising \$3000.<sup>230</sup> The group solicited help from societies around the country,

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<sup>229</sup> "Vaccination Test Case," *Boston Daily Globe*, November 13, 1902.

<sup>230</sup> "Funds are Needed," *Boston Daily Globe*, April 7, 1903.

including the Anti-Vaccination Society of America, stating the importance of the opportunity before them: “No case of the kind has ever before been taken to the Federal Court.” The AVSA, perpetually short on funds itself, treated the request as one of utmost urgency, a hand-written note from one AVSA member stating that the organization must “do whatever is possible to aid the work” of the Massachusetts society.<sup>231</sup>

Jacobson, on the other hand, saw his appeal as an honest, fervent plea to the courts for bodily autonomy. Before his refusal, Jacobson had attended a few anti-vaccinationist meetings, but was in no real way involved in the movement himself, with no evidence of anti-vaccination ever entering into his preaching or sermons.<sup>232</sup> In his first trial, he attempted to defend himself, although he knew little about legal proceedings. It was only when he went to appear before the Superior Court that Jacobson received help from both the Massachusetts Anti-Compulsory Vaccination Society and Pear’s lawyer, James Winthrop Pickering.

Unlike Pear, who offered no case to the jury, but instead saw lower courts as a stepping stone to the higher courts and the constitutionality of vaccination, Jacobson’s main concern was to explain himself and prove his

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<sup>231</sup> “An Appeal from the Massachusetts Anti-Compulsory Vaccination Society,” August 1, 1903, Anti-Vaccination Scrapbook 1882-1903, Cage Z8c 11, Folder 77, CPP.

<sup>232</sup> Willrich, *Pox: An American History*, 296.

“fourteen points” against compulsory vaccination.<sup>233</sup> These points were similar to previous anti-vaccination claims, and probably made to garner continued support from Massachusetts anti-vaccinationists, arguing that vaccination was harmful, possibly even lethal in some cases, and that vaccines manufactured in the United States were unsafe. Only in his last few points did he make a personal plea regarding his family’s unique history with vaccination, and the dangerous reactions they risked undergoing the procedure. The court, however, ruled these facts immaterial to his case, and thus excluded them from its decision.<sup>234</sup>

Both cases, although initially argued separately, were reviewed together in *Commonwealth v Pear; Same v Jacobson* (1903). The Massachusetts Supreme Judicial Court’s Chief Justice, Marcus P. Knowlton handed down a decision similar to what the previous courts had said about the vaccination health order: “We see no reason for regarding the present statute as outside of legislative authority...it is wholesome and reasonable...”<sup>235</sup> Indeed, the only real difference from Knowlton’s decision was his comment on the powers of the health department: “it is not in their power to vaccinate [Pear] by force, and the worst that could happen to him

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<sup>233</sup> Willrich, *Pox: An American History*, 299.

<sup>234</sup> Willrich, *Pox: An American History*, 297-298; *Commonwealth v Pear* 183 Mass 242 (1903).

<sup>235</sup> *Commonwealth v Pear* 183 Mass 242 (1903).

under the statute would be the payment of the penalty of \$5.”<sup>236</sup> This caveat on the power of health departments was a marked departure from forced quarantine and vaccination squads.

In the end, only Jacobson sought appeal to the Supreme Court following the Supreme Judicial Court’s decision. Historian Michael Willrich suggests that Pear chose not to continue his case on the premise that Jacobson had greater argument against compulsory vaccination. After all, he was the only individual among the vaccine refusers to have had previously bad reactions with vaccination itself.<sup>237</sup> Like the Burggraff case in Brooklyn, Jacobson’s case was both a question of constitutionality, as well as an issue of possible personal injury.

*Jacobson v Massachusetts* went before the Supreme Court much as it had previously. With the Massachusetts Anti-Compulsory Vaccination Society footing the bill, Jacobson, along with his new legal team headed by renowned lawyer George Williams, presented an argument that encapsulated many facets of the anti-vaccination movement. Jacobson’s lawyers argued that while voluntary vaccination was an acceptable practice, health departments should not have arbitrary power to force adults, especially those with medical conditions, to be vaccinated. Not only that, they argued, but smallpox was no longer the scourge it once was, Massachusetts an “outlier” state in its

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<sup>236</sup> Ibid.

<sup>237</sup> Willrich, *Pox: An American History*, 322.

retention of its compulsory vaccination law. Finally, and most importantly, the Fourteenth Amendment protected an individual's rights to their body and health, and prevented any laws "abridging the privileges or immunities of citizens."<sup>238</sup> Compulsory vaccination was unconstitutional at best, and at worst "nothing short of an assault upon his person."<sup>239</sup>

The Court returned with its decision in early 1905, with Justice Harlan delivering the opinion. "The liberty secured by the Constitution of the United States," he wrote, "does not import an absolute right in each person to be at all times, and in all circumstances wholly freed from restraint."<sup>240</sup> When public welfare was at stake, the Court argued, the rights an individual had under the Fourteenth Amendment could be restricted in the name of public good. "Although this court has refrained from any attempt to define the limits of [police] power, yet it has distinctly recognized the authority of a State to enact quarantine laws and 'health laws of every description.'"<sup>241</sup> Health Departments had the power to enforce compulsory vaccination orders given necessary cause, obtainable goals, and care towards avoiding any unnecessary harm.<sup>242</sup> While not explicitly limited by the Supreme Court,

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<sup>238</sup> *Jacobson v Massachusetts* 197 US 1 (1905).

<sup>239</sup> Willrich, *Pox: An American History* 325-6, *Jacobson v Massachusetts* 197 US 1 (1905).

<sup>240</sup> *Jacobson v Massachusetts* 197 US 1 (1905).

<sup>241</sup> *Ibid.*

<sup>242</sup> Lawrence O. Goston, "Jacobson v Massachusetts at 100 Years: Police Power and Civil Liberties in Tension," *American Journal of Public Health*, 2005, 95:4.

health departments were still bound by the United States Constitution, and health officials had to show that their orders were not in any way arbitrary or oppressive towards the people they promised to protect.<sup>243</sup> They cited other situations that limited individual rights, like military drafts, quarantine, and inspection laws.<sup>244</sup>

While Harlan and the Court sided with health departments, they did condone exemptions in both adults and children due to health issues: “we are not inclined to hold that the statute establishes the absolute rule that an adult must be vaccinated if it be apparent or can be shown with reasonable certainty that he is not at the time a fit subject of vaccination or that vaccination, by reason of his then condition, would seriously impair his health or probably cause his death...” to vaccinate an individual with health issues, they argued, was “cruel and inhuman in the last degree.”<sup>245</sup> But in terms of Jacobson’s case, the Justices were not sympathetic: “No such case is here presented. It is the case of an adult who...was himself in perfect health and a fit subject of vaccination...refused to obey the statute.”<sup>246</sup> Jacobson, and the anti-compulsory movement, had lost.

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<sup>243</sup> *Jacobson v Massachusetts* 197 US 1 (1905).

<sup>244</sup> Lawrence O. Goston, “*Jacobson v Massachusetts* at 100 Years: Police Power and Civil Liberties in Tension,” *American Journal of Public Health*, 2005, 95:4.

<sup>245</sup> *Jacobson v Massachusetts* 197 US 1 (1905).

<sup>246</sup> *Ibid.*

**“All the Fools Are Not Dead Yet” – Post – *Jacobson v Massachusetts***

When its decision was handed down, *Jacobson* did not make major headlines, and was not covered extensively outside of the east coast.<sup>247</sup> One editorial in the *New York Times* remarked that the ruling would “not end the discussion of vaccination as a measure of protection...but it should end the useful life of the societies of cranks formed to resist the operation of laws relative to vaccination.”<sup>248</sup> Indeed, instead of striking down vaccination laws across the country, the ruling strengthened the power of government-backed health officials to act.

Anti-vaccinationists certainly were disappointed, but as Frank Blue wrote in the AVSA publication *Vaccination*, “there is nothing to be discouraged about in an adverse court decision, because whenever a court, in the past has run against an unpopular opinion it has always found for the popular side.”<sup>249</sup> Losing the case certainly put a damper on anti-vaccination efforts, but these groups were used to fighting an uphill battle. Though weakened, the anti-vaccination movement vowed to keep up the fight.

Pastor Jacobson, quiet and unassuming as he was, faded back into obscurity. There are no records that he ever was revaccinated, as the

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<sup>247</sup> Colgrove, *State of Immunity*, 40.

<sup>248</sup> “Editorial Article 1 -- No Title,” *New York Times*, February 22, 1905.

<sup>249</sup> *Vaccination* 8, no. 2 (1905), 15, Shelf XX (135908.1), CPP.

epidemic passed by the time his case went to trial, and smallpox would never again ravage his city as it had in the decades before. He returned to his congregation, happy to focus on guiding his flock than making any more impassioned speeches about compulsory vaccination. He would go on to build a new church in 1909, and continued to preach until he passed away in 1930 at the age of 74.<sup>250</sup> For all his case had done to change the face of public health, the achievements of his church were what mattered most to Jacobson in the end.

1905 was a turning point, not only in the vaccination debate, but in the prevalence of smallpox in the United States as well. By the early twentieth century, the last great smallpox epidemics were over, with only periodic outbreaks in the decades that followed. The public forgot what diseases like smallpox were like; most had never been exposed to an epidemic, and even physicians would not initially recognize the symptoms of the disease due to their own lack of experience. This lack of knowledge caused people to turn towards a known source of medical expertise in times of danger: the Health Department. “When you get a scare,” Assistant Attorney General R. C. Williams stated in 1946, “everyone within 100 miles gets vaccinated.”<sup>251</sup>

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<sup>250</sup> Walloch, *The Antivaccine Heresy*, 212.

<sup>251</sup> Willrich, *Pox: An American History*, 339.

The question regarding vaccination was not immediately settled following *Jacobson v Massachusetts*, nor were court cases regarding rights against vaccination. Schools became the next target against vaccination laws. Even as the number of smallpox cases dwindled, most schools retained their vaccine requirements for enrollment.<sup>252</sup> These laws had been challenged before *Jacobson*, both by Frank Blue of the AVSA and Dr. Walters in Brooklyn, and in other cases across the country, contesting school bans on unvaccinated children, particularly during epidemics. In both Blue and Walter's case, the courts ruled against anti-vaccinationists, as state constitutions did not list public education as a right, but rather a privilege the state chose to provide.

The question surrounding schools and vaccination continued to go to court until in 1922, the United States Supreme Court heard *Zucht v King*. Public officials in San Antonio, Texas expelled fifteen-year-old Rosalyn Zucht from public school for her refusal to be vaccinated, and due to the ordinance in place, also caused her to be excluded from private school. The case claimed that San Antonio's ordinances on vaccination "violate the due process and equal protection" provided under the Fourteenth Amendment, a similar argument to both *Pear* and *Jacobson*.<sup>253</sup> The argument was so similar that at least one justice on the Supreme Court did not initially want to hear the case,

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<sup>252</sup> Colgrove, *State of Immunity*, 72.

<sup>253</sup> *Zucht v. King*, 260 U.S. 174 (1922); Colgrove, *State of Immunity*, 72.

because he believed asked the same constitutional question as they had ruled on in *Jacobson*. Citing *Jacobson* in their opinion, the Court unanimously ruled that excluding unvaccinated students violated no constitutional rights.<sup>254</sup> At least in the eyes of the court, vaccination was a fully legal and enforceable extension of health departments' power to protect the American public.

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<sup>254</sup> *Zucht v. King*, 260 U.S. 174 (1922).

## Conclusion

Arriving in New York on a bus from Mexico City in March 1947, Eugene Le Bar was not feeling well. The forty-seven-year-old businessman and his wife were to spend a few days in the city, their eventual destination a small town in Maine. Although he had felt sick since early in their journey, Le Bar stayed four nights at a midtown hotel and shopped around Manhattan before checking into New York's Bellevue Hospital with a fever of 105 degrees and a rash covering his face and hands. A few days later, on March 8th, he was transferred to Willard Parker Hospital's contagious disease facility, where he eventually died.<sup>255</sup> The cause of death was listed as "bronchitis with hemorrhages."<sup>256</sup> It was not until two more individuals, both of whom had been patients at Willard Parker during Le Bar's stay, were admitted with similar symptoms that hospital officials realized smallpox had returned to New York for the first time in nearly a decade.<sup>257</sup>

On April 4<sup>th</sup>, New York City Health Commissioner Dr. Israel Weinstein gave a press conference in his office, reassuring the public that the chance of a smallpox epidemic in the city was "slight," but that everyone who had not been recently vaccinated should do so.<sup>258</sup> What ensued was the largest

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<sup>255</sup> Colgrove, *State of Immunity*, 75-6; Smallpox Victim Hotel Guest Here

<sup>256</sup> "Smallpox in City, Inoculation Urged," *New York Times*, April 5, 1947.

<sup>257</sup> Colgrove, *State of Immunity*, 75-6; Smallpox Victim Hotel Guest Here

<sup>258</sup> "Smallpox in City, Inoculation Urged," *New York Times*, April 5, 1947.

smallpox vaccine campaign the city had ever seen. In one morning, more than 200,000 residents were vaccinated; “more immunizations were achieved in a few hours than ordinarily in a full year,” one department spokesman claimed.<sup>259</sup> There were lines with two hour wait-times, and many facilities ran out of vaccines, ordering hundreds of thousands more to meet demands.<sup>260</sup> New York Mayor William O’Dwyer was vaccinated by Dr. Weinstein himself.<sup>261</sup>

Although there were only twelve cases of smallpox during the outbreak, including two fatalities, the vaccination campaign would eventually total over six million vaccinations in little over a month.<sup>262</sup> Three would die from reactions to the vaccine: one from an infection at the vaccination site, and two infants from “vaccinia,” where cowpox virus spread throughout the body uncontrollably. Health officials saw these deaths as a tragic, yet necessary alternative to possible epidemic and the potential loss of hundreds of lives.<sup>263</sup> Dr. Weinstein and his health department were perhaps overzealous in their campaign, vaccinating eighty percent of New York residents, but their measures drove home a point – vaccination worked, and remained a vital tool in public health prevention.

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<sup>259</sup> “Vaccinations Stop, Drug Supply Gone,” *New York Times*, April 16, 1947.

<sup>260</sup> *Ibid.*

<sup>261</sup> Colgrove, *State of Immunity*, 76.

<sup>262</sup> “Smallpox Danger Considered Past,” *New York Times*, May 12, 1947; Colgrove, *State of Immunity*, 79.

<sup>263</sup> *Ibid* 79.

The vaccination campaign also marked a shift in public opinion. Papers were overwhelmingly positive about health officials' actions, and there were few, if any, anti-vaccination sentiments in the media. The Health Department worked swiftly to address any rumors, and claimed "nothing would be hidden,"—that facts regarding the potential epidemic would be shared as honestly as possible. A report from the Chief of Public Relations at the New York City Department of Health stated that there was one instance of individuals handing out anti-vaccination flyers at one of the city's vaccination clinics, but that members of the public "took matters into their own hands" and "drove them away."<sup>264</sup> The same report noted that the department only received a handful of "anti-vaccination crank letters" concerning the vaccination drive.<sup>265</sup> The nature of vaccination as a medical procedure, and its reputation, had changed greatly in the decades following *Jacobson v Massachusetts* and the fiercest years of anti-vaccination debate. But why? What had changed?

Anti-vaccination never hit the same heights it had achieved pre-*Jacobson*. However, the Supreme Court decision was certainly not the end of anti-vaccination groups across the country. While the Anti-Vaccination Society of America and other groups like it disappeared from public view by

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<sup>264</sup> Karl Presthold and Caroline C. Sulzer, "Speed, Action, Candor," *Channels* 25, no. 1 (1947): 4-6.

<sup>265</sup> *Ibid.*, 4-6.

the 1910s, other organizations were only beginning. One of the most prominent later groups was the Anti-Vaccination League of America, founded in 1908 in Philadelphia by John Pitcairn and Charles M. Higgins, two wealthy industrialists who lobbied heavily in both New York and Pennsylvania state legislatures to limited success.<sup>266</sup> The organization went on to publish numerous pamphlets and became associated with the Citizens Medical Reference Bureau, a medical liberty group run by Pitcairn's sons. The League appears to have lasted through the 1920s due to the support of its generous donors, only to quietly disappear when Higgins died in 1929.<sup>267</sup> The "crusaders" who promised to fight against vaccination their entire lives did just that, but often had no one to whom they could pass on the torch.

Vaccination also found increased support in legislatures. In 1914, the Massachusetts House of Representatives rejected an "antivaccination" bill that would have allowed unvaccinated children to enter schools if their parents were opposed to vaccination. One of the representatives involved in the debate was Immanuel Pfeiffer Jr., the son of Dr. Immanuel Pfeiffer, who had challenged Dr. Durgin and the Boston Health Department over a decade before. Although Representative Pfeiffer stood fiercely opposed to vaccination, the legislative body voted 53 to 133, rejecting the bill. Dr. Bigelow, a physician from Framingham, opened the debate, stating:

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<sup>266</sup> Colgrove, *State of Immunity*, 53-54.

<sup>267</sup> Colgrove, *State of Immunity*, 75.

Vaccination is not on trial here today. The members are not competent to discuss the merits of vaccination. It is an established scientific institution. You have seen the triumph...and it is a poor time to break down the health barriers in Massachusetts. The proponents of this bill will not stop with this. They will try to break down quarantine laws.<sup>268</sup>

Bigelow was right; the state representatives were not medical experts. That title was now within the grasp of allopathic physicians, whose dominance in medicine would only grow as the century progressed. Before 1889, irregular physicians had outnumbered their regular colleagues in places like Rhode Island.<sup>269</sup> By the end of the 1920s, alternative medical practitioners like homeopaths and chiropractors were responsible for the care of only five percent of all illnesses in the United States.<sup>270</sup> Allopathic family physicians around the same period, however, were increasingly viewed as expert sources for information on how to “scientifically” rear children.<sup>271</sup> The world of medicine had changed.

Vaccination perception had changed as well. Smallpox vaccines were not the only immunizations on the market in the early twentieth century. Servicemen during World War I were vaccinated against both smallpox and other diseases like typhoid. Health officials used patriotism to advocate for the public to get vaccinated as well. “Do you believe for one instant,” read one

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<sup>268</sup> “Will Not Relax on Vaccination,” *Boston Globe*, May 15, 1914.

<sup>269</sup> Retsinas, “Leap of Faith,” 117.

<sup>270</sup> Colgrove, *State of Immunity*, 75.

<sup>271</sup> *Ibid*, 99.

health circular from 1919, “that the Army and Navy would vaccinate their men if it did not protect them and was not absolutely safe?”<sup>272</sup> Antitoxins and immunizations came on the market for other diseases, particularly diphtheria. The diphtheria vaccine had few of the severe side-effects that the smallpox vaccine had, and more parents were willing to risk immunization for the benefits it would provide.<sup>273</sup> The introduction of the polio vaccine in the 1950s, and the campaigns surrounding its implementation would further turn vaccination into a popular cause, rather than an infringement on personal rights.<sup>274</sup> Eventually, with no reported cases of smallpox for over twenty years, and a few deaths annually from the vaccine, the smallpox immunization was discontinued in the 1970s.<sup>275</sup> By that point, however, immunization had become a normal part of healthcare, and its use and breadth only increased as the century progressed.

Andrew Wakefield’s paper at the end of the twentieth century stirred up many of the old sentiments and rhetoric that had driven the anti-vaccination movement of the nineteenth century. It created doubt over the safety of vaccines, fostered distrust towards well-known medical institutions, and reintroduced the concept of vaccines as a “dubious science,” the product

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<sup>272</sup> “Vaccination,” *Keep Well Series, United States Public Health Service no. 7* (1919): 7.

<sup>273</sup> Colgrove, *State of Immunity*, 85-87

<sup>274</sup> Willrich, *Pox: An American History*, 340.

<sup>275</sup> Willrich, *Pox: An American History*, 339.

of incorrect, or possibly corrupt, mainstream medicine. This new generation of anti-vaccinationists see themselves as watch dogs, “bypassing the traditional gatekeepers of medical knowledge.” As the past movement had fought the rise of allopathic, interventionist experts, the new movement places equal weight on the opinions of those self educated from online sources as it does medically trained physicians. Like their predecessors, these groups have their own evidence and science to show and their own concerns regarding medical freedom.<sup>276</sup>

But this new movement faces a more powerful opponent than its predecessor. Allopathic physicians remain the dominant force in the medical field and are the experts to which the government, media, and the majority of the public turn to for medical advice. Similarly, there is a consensus within both the scientific community and most Americans that germ theory, is in fact, true; scientists have far superior technology, as well as a greater working knowledge of how and why vaccines work. Vaccine advocates additionally have the firm support of the law. Some states like California are choosing not to tolerate anti-vaccination sentiments, but mandate vaccination once more in hardline legislation that force compliance for school enrollment. As one *New York Times* reporter states, “Maybe changing

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<sup>276</sup> Anna Kata, “Anti-vaccine activists, Web 2.0, and the postmodern paradigm – An overview of tactics and tropes used online by the anti-vaccination movement,” *Vaccine* 30 (2012): 3779-3780.

minds isn't so important. People may not have altered their attitudes about vaccination, but the fact is that these laws actually changed behavior."<sup>277</sup> In the face of a powerful and established system of public health, the future of the movement is uncertain, even if beliefs do not change. If the anti-vaccination debate seeks to re-write the nature of health and medicine as its predecessor helped to do back at the turn of the twentieth century, they have a long way to go.

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<sup>277</sup> Emily Oster and Geoffrey Kocks, "After a Debacle, How California Became a Role Model on Measles," *New York Times*, January 18, 2018.

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