

*The Forgotten Symptom: Smallpox's Affective Impressions and the Climate of Fear
During the Smallpox Inoculation Debate, Boston 1721-22*

By

Hannah C. DeGenova

A Dissertation submitted to the

Graduate School-Newark

Rutgers, The State University of New Jersey

in partial fulfillment of the requirements

for the degree of

Master of History

Graduate Program in

written under the direction of

Lyra Monteiro

and approved by

Newark, New Jersey

May, 2015

© 2015

Hannah C. DeGenova

ALL RIGHTS RESERVED

ABSTRACT

The Forgotten Symptom: Smallpox's Affective Impressions and the Climate of Fear During the Smallpox Inoculation Debate, Boston 1721-22

By Hannah C. DeGenova

Dissertation Director: Lyra Monteiro

This thesis revisits the question of why a heated debate broke out in Boston in 1721-22 over smallpox inoculation, by exploring how emotions were integral to this eruption and decisions to be either for or against inoculation. Employing recent work on affect by Sara Ahmed and others, I examine how smallpox affected fear in the general public. I assert that as smallpox became epidemic, a climate of fear consumed Boston, and that these fears were a significant factor causing a debate to form over the new procedure of inoculation. Further, as smallpox impressed fears through circulation, these fears were predicated on individual histories, knowledge, and accepted truths. Decisions regarding whether or not to inoculate were dependent on these factors, on how smallpox impressed fear individually. Inoculators, those who would choose to inoculate themselves and their loved ones during the 1721-22 epidemic, did so for fear of smallpox's deadliness and to avoid its ravages. However, since inoculation transmitted smallpox and was yet unproven infallible, anti-inoculators feared inoculation because smallpox's affective economy easily slid onto inoculation. Inoculation, therefore, could not be fully accepted until it impressed widespread confidence instead of fear.

Dedicated to my Mom

Lisa P. Scher

9/27/1961-2/23/2014

CONTENTS

Introduction.....	1
Figure I: Painting of Distinct Smallpox, Paris 1829.....	3
Figure II: Painting of Confluent Smallpox, Paris 1829.....	5
Chapter One	
The Symptom of Fear: Smallpox in Boston from 1678-1721.....	17
Chapter Two	
Treating the Symptom: How Smallpox's Affective Potential Was Decisive in the Implementation of Inoculation.....	40
Chapter Three	
Diagnosing the Disease: Anti-Inoculators Denunciation and Acceptance of Inoculation Given Affective Impressions.....	62
Conclusion	
The Affective Aftermath.....	88
<i>Bibliography</i>	94

Introduction

Sometime in August of 1829 a little boy of unknown age came to reside in the Hopital des Enfants Malades in Paris to be cared for a likewise, unknown ailment. But by August 16, the child had contracted distinct smallpox through his stay at the hospital, an unintended side effect. His illness progressed much like any other. On the first and subsequent few days of the disease, the “period of invasion,” the little boy had a fever, aches along the neck, back, groin, and head, chilliness, restlessness, sleepless evenings, bad dreams and spasms, paired with relentless burning sensations in the stomach, esophagus, and mouth, loss of appetite, and diarrhea. By the fourth day, in what was typically termed the “eruptive phase” in the nineteenth century and prior, the little boy’s rash from the previous day turned into raised bumps, the beginnings of full-blown pustules to come. Breaking out on the face before moving down the neck to the “trunk” or base of the body, then further along to the extremities, the small, hard red bumps appeared over the course of a few hours and multiplied over the course of a few days. By day six, two days after the “eruptions” began, the bumps turned into pustules with “translucent specks at their summits,” painful to the touch.¹ But luckily, the early symptoms of fever, malaise, and digestive issues indicative of smallpox subsided over the course of the “eruptions,” aside from a sore throat that typically lasted the duration of the illness. The pustules then assumed their “march,” though all at different times, after the fourth day of “eruptions” or eight day of illness when the bumps became fully exposed through the skin forming pustules, as they one by one pushed out and began to indent.

¹ John D. Fisher, M.D., *Description of the Distinct, Confluent, and Inoculated Smallpox, Varioloid Disease, Cowpox, and Chickenpox*, (Boston: Wells and Lilly, Court Street, 1829), 11.

Five days after the eruptions started, the pustules further swelled with fluid, leaving their bases red, and the skin untouched by pustules swollen and red, the eyes and eyelids first, the rest of the face and body to follow, the skin left shining. Six days after the eruptions, the period of “suppuration” began.² The pustules all reaching their fruition, the liquid consistency within the blisters transformed into opaque pus over the next two to three days before crusting over, turning white and hardened with black specks (Fig. I). At the same time that the pustules went through “suppuration,” or the ejection of the pus, the boy’s fever returned on the eleventh day of illness, and much like the early stages of the disease, his throat and bowels burned. As his body began to hemorrhage blood from the nose and his fever raged on, the little boy died on the tenth day of eruptions, two weeks after his illness began. After his death, autopsy revealed that like his outside appearance, his insides were also ravaged by smallpox. The Doctor John D. Fisher explained, “the mucous membranes of the fauces, esophagus and stomach, were found to be considerably inflamed, and numerous whitish specks were discovered in them, which were supposed to have been the remains of pustules which had invaded these organs.” In addition, “the lungs and brain were gorged with blood.”³

² Ibid., 15.

³ Ibid., 3.

Figure I



Description: Painting was completed of the little boy on the eight day of eruptions, two days before he died. Below the painting is the progression of pustules for those inoculated with smallpox from the first

appearance of bumps to full scabbing pustules.⁴

While the little boy was not so fortunate with his bout with distinct smallpox, a variation of the disease that was typically milder than confluent smallpox though still mortal in thirty percent of cases, a twenty-five year old woman, another patient within the hospital confined to the smallpox ward, had confluent smallpox at the same time. More severe than the distinct variation of smallpox and just if not more mortal, confluent smallpox had all the symptoms of distinct smallpox only worse. Rather than distinct pustules, the pustules ran and melded into one another, covering large swaths of the body, including the face, while the fever, restlessness, and general discomfort were intensified as the patient passed through the stages of illness at a faster rate, usually a day or two before distinct smallpox. For the young woman patient, this was the case. By the second day of her fever, pustules began to break out and by the fourth day of eruptions, suppuration began. By the tenth day, she was in “great anxiety and distress,” as the pustules oozed and crusted over her face (Fig. II).⁵ Luckily, after five weeks of illness the woman was able to leave the ward with her vision intact, blindness affecting one out ten who survived the disease, though severely disfigured from the pustules that had covered her entire face, leaving their permanent mark for a lifetime. Though the fact that she would never have to fear smallpox again, to be sure, was some consolation.

⁴ Ibid., 7.

⁵ Ibid., 19.

Figure II



Description: Painting completed on the tenth day after eruptions first appeared. The smaller painting below

is a portrait of the pustules on the fourteenth day after eruptions as they dried up.⁶

The most deadly disease that mankind has ever experienced, smallpox had an indelible effect on the trajectory of human history as millions perished in its wake with families across Europe, Asia, Africa, and the Americas ravaged by disease. In eighteenth century London alone, it is estimated that 300 per 100,000 persons died annually from smallpox out of a population of 653,000 people. And by 1800, smallpox is estimated to have killed up to 400,000 people per year throughout Europe.⁷ With such a deadly and horrific disease, physicians spent centuries studying the illness, searching for ways to mitigate its ravages, largely, though not completely, unsuccessfully. In the late seventeenth century, physician Thomas Sydenham put forth his cooling regimen, a regimen that allowed the body to take its natural course, overturning centuries of reliance on the heating regimen that exacerbated rather than mitigated the illness, causing death. In the early eighteenth century, inoculation, the purposeful giving oneself smallpox, came to the forefront thanks to Mary Wortley Montague who sent letters to England from Turkey of the procedure that was practiced there as a potential method to avoid the mortality and severity of smallpox. And though debated in both England and in the colonies, no more hotly so than in Boston in 1721-22, the debate examined within this thesis, the procedure found acceptance by the mid-eighteenth century as a reputable way to contract smallpox with only a two to three rather than thirty percent mortality rate. By the end of the century in 1796, Edward Jenner furthered the procedure of inoculation by implanting cowpox into an eight-year-old little boy, a vaccine that ultimately gave the

⁶ Ibid., 20.

⁷ Donald R. Hopkins, *Princes and Peasants: Smallpox in History*, (The University of Chicago Press: Chicago and London, 1983), 41-42.

boy immunity, though not lifelong, from smallpox. Jenner's vaccine would ultimately enable the World Health Organization to declare in 1980 that smallpox had been eradicated from the world. The world's deadliest disease was no longer a threat.

But in the twenty-first century, in a world where biological warfare is a constant fear, smallpox once again looms large as the world's greatest biological threat. With a population no longer vaccinated or whose previous vaccines no longer provide immunity, the entire world is at risk if smallpox were to be purposely introduced back into the population. In 2004, just three years after the attacks on the World Trade Center, politicians began questioning whether or not vaccinating Americans was worthwhile—if it was worth the risk given the vaccine's side effects including, though rarely, death. Is vaccinating for an eradicated disease and the subsequent complications rational based on unsubstantiated threats? The debate continues today.

In 1721 Boston, these same questions of risk versus threat in light of fears that plague politicians in the twenty-first century were brought to the forefront as Boston was met with a smallpox epidemic and a new procedure was touted as life-saving though not without risks: inoculation. To be sure, the risk of getting smallpox and dying from the disease in colonial Boston was very real. So real that the idea of purposely giving oneself smallpox, the most dreaded disease, was a risk not many were willing to take, despite the probability of catching the disease naturally being so high. Still, a debate surrounding the procedure, its fallibility, success rates, and risks grew into heated contentions in Boston as physician Zabdiel Boylston, at the provocation of minister Cotton Mather, began inoculating individuals in the town. While inoculators touted the procedure as life-saving through newspapers articles in the *Boston News-Letter* and *Boston Gazette* along with

other published pamphlets, anti-inoculators were quick to point out the flaws in their own newspaper, the *New England Courant*, and pamphlets. The *Courant*'s articles discussed how inoculation was regardless the purposeful spreading of disease, inoculation being as infectious as smallpox in the common way, and had no tangible evidence that the practice worked, experimentation and observation lacking. These concerns highlighted in the written debate became heightened so much so that by mid-November, 1721 one anti-inoculator threw a bomb through the window of Mather's house, though luckily the device did not explode, with a note attached, "Cotton Mather, You Dog, Dam you: I inoculate you with this, with a Pox to you."⁸ Yet the facts remained, inoculation was happening within the town borders whether everyone was on board or not, proving a threat as inoculated smallpox spread throughout Boston. The rhetorical storm that exploded in response was immense, leaving a historical trail that historians have used to piece together the events centuries later.

Being the first instance of inoculation in North America, the inoculation debate in 1721-22 Boston has been a subject of interest to historians of medicine, who have unearthed the various ways in which the debates enlivened and thus reveals underlying social, political, and religious tensions. Historian John Blake in his groundbreaking essay of 1952, "The Inoculation Controversy in Boston: 1721-1722," uncovered how medicine, rather than religion, was instrumental in the debate surrounding inoculation. Blake argued that while much of the debate was "couched in religious terms... None of the opponents [of inoculation] was content to rest his case on the necessity of trusting in God's providence; however they phrased it, they all thought the practice was harmful to the

⁸ Diary of Cotton Mather, 658.

health and lives of their fellow citizens.”⁹ Pro-inoculators accordingly argued for the safety and relative ease with which those inoculated survived the distemper in comparison to those who succumbed to it via the “common” way, while anti-inoculators pointed to the risks of inoculation in addition to the inevitable spread of the distemper and harm to the larger community if the practice continued, adding to their authoritative claims. Historian Perry Miller, conversely, has argued that rather than medicine proving decisive; religion was the significant factor within the debate. Taking a similar yet distinct stance in his 1953 classic *The New England Mind: From Colony to Province*, Miller argues that the debates splintered religious authority and ideology adding to overall trends of declension, rather than political or medical claims of authority.¹⁰ While Miller agreed with Blake that the debates were a significant moment in the history of medicine and scientific discovery, Miller suggested that the debates simultaneously signified the rupture of religious authority and the original covenant of grace in the debate’s attempts to reconcile longstanding religious ideology with inoculation. In the process, not only did the ministers lose their clout, which they never fully regained, but the original covenant of grace, which had governed Puritan New England thought for a century.

While Blake takes a noticeably more medical focus, and Miller more religious, they both ultimately find the inoculation debate as a moment of power transfer from ministerial to medical/political authority, signifying both the professionalization of

⁹ John B. Blake, “The Inoculation Controversy in Boston: 1721-1722,” *The New England Quarterly*, 25:4 (Dec., 1921), 499.

¹⁰ Perry Miller, *The New England Mind: From Colony to Province* (Cambridge, Massachusetts and London, England: The Belknap Press of Harvard University, 1953).

medicine, as Blake contends, and the decline of the church, as Miller does. Yet despite the difference in emphasis, both historians' contentions use the inoculation debate as a lens through which to view the tensions of a society in political flux, and as a distinct moment of change in favor of medicine over religion that had been evolving over the first half of the eighteenth century, despite the continued hegemony of religious ideology. The debates thus signified, in Blake and Miller's accounts, a definitive moment of change in authoritative power from which the church would not return, and professional medicine was beginning to emerge.

While historians such as Dennis Don Melchert and Maxine Van De Wetering reiterated the circumstances surrounding the power struggle Blake and Miller describe in the period between, historians in the later twentieth and early twenty-first century revisited inoculation in light of the social turn in the history of medicine. Rather than using inoculation as a strict lens to view authoritative change, historians such as Amalie M. Kass, Margot Minardi, John B. Burton, and Sara Stidstone Gronim, have reexamined the subject of inoculation, subjecting the events in Boston to new analytical lenses, revealing more nuanced understandings of the debate and its significance to larger historical narratives.¹¹ Though each distinct, these scholars have tended towards analyses of inoculation and smallpox as a lens to view the ideological social context of particular moments, with an eye towards change and consistency.

¹¹ Amalie M. Kass, "Boston's Historic Smallpox Epidemic," *Massachusetts Historical Review*, Vol. 14 (2012); Margot Minardi, "The Boston Inoculation Controversy of 1721-1722: An Incident in the History of Race," *The William and Mary Quarterly*, Third Series, 61:1 (Jan., 2004); John B. Burton, "'The Awful Judgments of God upon the Land': Smallpox in Colonial Cambridge, Massachusetts," *The New England Quarterly*, 74:3, (Sept., 2001): 495-506; Sara Stidstone Gronim, "Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century," *Bulletin of the History of Medicine*, 80:2 (2006): 247-268.

Kass, writing for the *Massachusetts Historical Review*, gives a broad examination of the epidemic in 1721-22 Boston in her 2012 journal article, “Boston’s Historic Smallpox Epidemic,” including the debate. Like Miller, Kass also contends that the public could not accept inoculation due to longstanding religious worldviews, but goes further in detail to assert that longstanding medical theories had to be overturned as well. Rather than the eruption in religious authority and calls for professionalization of the medical field that Blake, Miller, and Van De Wetering find in the debate, Kass explains, “Inoculation required new ways of thinking about disease, and these had implications that challenged the medical theories and religious beliefs that were fundamental to their world view.”¹² Due to the fundamental nature of both religious ideas of providence and medical beliefs in poisons needing to be eliminated from, not entered into, the body, Kass argues for the impossibility of widespread social acceptance of inoculation due to its contradiction of these deep set beliefs, explaining public and professional medical backlash against the procedure.¹³ By examining the ideological social context, rather than authoritative power, within which the debate was set, Kass enables a more thorough understanding of the reasons why inoculation did not come into widespread acceptance until the 1730s, simultaneously buttressing claims of an overall ideological shift during the first half of the century.

While the inoculation debate has long served as a frame through which historians have viewed crises in religious authority, the professionalization of medicine, and the changing of religious and medical worldviews of the early eighteenth century, the debate

¹² Amalie M. Kass, “Boston’s Historic Smallpox Epidemic,” 31.

¹³ Ibid.

has simultaneously been examined as a case study through which to understand the emergence of physical characteristics of racial ideology. Departing from Blake, Miller, Van De Wetering, and Kass, historian Margo Minardi in her 2004 journal article, “The Boston Inoculation Controversy of 1721-1722: An Incident in the History of Race,” analyzes the ways in which the inoculators and anti-inoculators used racial ideology to either buttress or undermine claims of truth, in the process formulating physical racial conceptions. Rather than observing the debate from a pure history of the professionalization of medicine, Minardi discusses how the overall professionalization, which coincided with the development of racial ideology in New England, was critical to the establishment of new scientific facts. These facts thus gave explanatory weight to physical, observable characteristics of the human body, including race as an inherited bodily characteristic, signifying mental and social worth.¹⁴ The debate over inoculation being a moment of this professionalization, Minardi examines the ways in which the debate “shows how, in the colonial context of early America, racial language and thought informed dialogues that, on the surface, had little to do with race at all.”¹⁵ Through her examination of the underlying racial language of the debate, Minardi therefore explains the ways in which the inoculation controversy highlights how an increasingly racialized medical discourse helped buttress medical authority. The inoculation controversy consequently shows how the concept of race displayed during the period examined was “manifold and muddled,” prefiguring any racial ideology. Yet an examination regardless

¹⁴ Margot Minardi, “The Boston Inoculation Controversy of 1721-1722: An Incident in the History of Race,” 48.

¹⁵ *Ibid.*, 55.

shows how the debaters still managed to project racism without the fully conceived concept of race and difference that would emerge in the later eighteenth century, by “questioning the truthfulness, belting the knowledge, and concealing the works of their African informants.”¹⁶

Whereas the inoculation debate of 1721-22 Boston has garnered the attention of historians of medicine, religion, and race, historians over the past half-century have increasingly employed smallpox and other diseases as lenses through which to view pivotal moments in American history.¹⁷ Examining the same Smallpox epidemic in Boston from 1721-22 and beyond, historians John B. Burton and Sara Stidstone Gronim, have observed how inoculation was accepted and or rejected by individuals and communities outside of Boston. Discerning how inoculation was experienced in a community directly outside of Boston during the 1721-22 and 1730 epidemics, Burton’s 2001 article, “‘The Awful Judgments of God upon the Land’: Smallpox in Colonial Cambridge, Massachusetts,” decidedly turns away from the debate in Boston to analyze how Harvard University worked with and responded to the surrounding community in Cambridge while experimenting with inoculation. Burton contends that unlike Boston, there was not an overwhelming divide between inoculators, who were Harvard students and faculty, and anti-inoculators, the community of Cambridge, despite similar communal fears of the spread of contagion. Burton concludes that the relative peace with which inoculation was met with in Cambridge was not due to any religious or medical shift in ideology, but rather the preventative measures Harvard took with the

¹⁶ Ibid., 75-76.

¹⁷ Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866*, (Chicago and London: The University of Chicago Press, 1962, 1987).

establishment of quarantine houses for students going through inoculation, thus relieving fears and tensions between the University and town.

Examining colonial New York in her 2006 article, “Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century,” Gronim describes how the public came to accept inoculation over the first half of the eighteenth century. Departing from Burton while aligning with Kass and Miller, Gronim contends that a re-imagination of inoculation had to take place in order for inoculation to be accepted, not just the proper quarantine measures. As Kass and Miller suggest, Gronim agrees that eighteenth century religious ideology and medical knowledge did not align with inoculation, and therefore the practice could not be accepted despite physical proof that the procedure worked. Therefore religious and medical conceptions of inoculation changed between 1722 and 1740 to allow for widespread acceptance. Gronim states:

By focusing on the preparation of the body, they successfully integrated inoculation into familiar ways of treating smallpox. And reconceptualizing smallpox as innate altered its providential meaning, translocating that meaning from the disease onto inoculation itself. But another important reason why inoculation was accepted relatively quickly in New York was that it was practiced by ordinary people. While conceptually inoculation had to be reimagined in order to make it congruent with New Yorkers' understanding of the body and illness, its practice disturbed ordinary social relations of healing not at all.

By the mid eighteenth century, the “reconceptualization” of inoculation was complete, and hence inoculation became an accepted form of treatment, as colonial New Yorkers thought of the procedure, for smallpox.

While these historians have unearthed the various ways in which inoculation serves as a frame through which to examine ideological, social, political, and religious change, historians have yet to use the debate as a lens through which to examine

emotions. This thesis aims to address this absence through an examination of smallpox's affective potential given past histories and current impressions with the disease. But further, this work will examine how the climate of fear these impressions forged was significant to the eruption of the debate itself. By analyzing the ways in which emotions are resident and thus exposed within the inoculation debate, I intend to reveal how emotions were significant factors predisposing individual and communal decisions to inoculate, and how emotional climates emerge and become resident in populations given collective and individual impressions both past and present.

I argue here that affective impressions matter within the overall ideological shift narrative outlined by past historians examining the debate within the first half of the eighteenth century more generally. By looking at how smallpox affected fear through continuous impressions with the disease's affective objects in conjunction with an analysis of how religion and medicine were conceived and understood, I contend that smallpox undoubtedly impressed fear. As Bostonians were impressed with fear by smallpox, I assert that inoculation itself became an affective object of smallpox, impressing in some confidence while in others fear. But further that the way in which inoculation impressed either confidence or mistrust was predicated on specific histories that included individual knowledge and experiences with smallpox and religion that were shifting given social and intellectual changes, leading to different affective impressions despite the universal fear that smallpox impressed. For those determining whether to inoculate themselves or be against inoculation entirely within the climate of fear resident in Boston, inoculation's impressions were dictated in part by these personal experiences and learned understandings, ultimately persuading some to go through with inoculation,

while others to be vehemently against it. In the end, inoculation would have to impress widespread confidence, a confidence that exceeded the known risks, in order for the greater population to accept the procedure. This acceptance was possible in the years post ideological shift that historians have mentioned, as new accepted truths spawned new affective impressions of confidence, leading people to inoculate themselves and their families. The inoculation debate and its eventual acceptance therefore shine a light on how ideological shifts can spawn emotional changes as well, and how emotions can be just as significant to historical timelines as the knowledge and experience emotions themselves are affected by.

Chapter 1

The Symptom of Fear: Smallpox in Boston from 1678-1721

At the end of December in 1720, the *Boston News-Letter* boldly printed that contrary to public fears, “The Danger of the Small Pox [was] over at present thro’ the Mercy of GOD.” As such, the newspaper informed its readers that they “may now venture to inform the Publick of the deplorable and general loss we have lately sustained, in the Death of Capt. JOHN FORE of this town.” John had recently arrived to Boston’s waters after a voyage from London. During the trip, small pox, “that Contagious Distemper,” had infected “seven of his Company... one of whom died and the other six well Recovered.” Unfortunately for John, he had never had the disease, and was by this point “the only person remaining on Board who had not had the Distemper,” leaving the captain a perfect specimen ripe for infection, as only those never infected with smallpox could contract the contagion. As such, he “fell Ill about the Time of his Arrival: On Monday the last of October the Small Pox came out: On the Monday following he Died and on the next Day Evening was Buried on Spectacle Island.”¹

While the *Boston News-Letter*’s proclamation that the spread of the distemper had been averted proved true, the “Danger of Small Pox” was coming as another ship, *The Seahorse*, would soon bring the disease to the port city of Boston once again. Shortly after the ship’s arrival in the expanding, booming trade center, the selectmen of the town made notice of its potentially infected crew as a Negro who came from aboard the ship was found infected with the distemper within the town. On May 8, 1721, the select men and constables of the town sent John Clark Esquire to investigate within and attest to the

¹ *Boston News-Letter*, December 19-26, 1720, Boston MA.

status of the ship, while on land a nurse and two guards were sent to the house where the infected man recovered, the nurse to care and the guards to prevent any from either entering or leaving the premises. In addition to the guards and care taken to prevent the spread of disease from the ship and from within the town, the select men further called for street cleaning on May 24, “to prevent the Smal Pox Spreading.”² Yet despite the quarantine and street cleaning that were put in effect by the select men, less than a week later on May 27 the *Boston News-Letter* revealed that eight more individuals had come down with the disease.³ Not long after, attempts at quarantining the individual houses of those infected with the distemper were seen as futile. The guards removed themselves from houses infected with smallpox, and the feared epidemic was set in motion.

Historical Experiences with Epidemic Smallpox in Boston

Smallpox was an infamous, ghastly killer, and Bostonians were all too aware. Having dealt with epidemics in 1678, 1690, 1698, and 1702 the people of Boston were conscious of the outcome of smallpox epidemics, the rapid spread of infection and deaths, and subsequently feared for their lives on the eve of the most severe point of the epidemic in 1721. The rate of infection and death tolls of previous epidemics were enough proof of the odds of avoiding or surviving smallpox to cause general communal anxiety, especially for those who had lived through previous epidemics, and therefore knew how the disease could and would surely ravage their own family and friends.

² Thirteenth Report of the Record Commissioners, Records of the Select Men 1716-1736, Boston: Rockwell and Churchill, City Printers, 1885. 81-82.

³ *Boston News-Letter*, May 27, 1721, Boston MA.

Newspapers were one of the few sources that made public the rates of disease during any given epidemic. In 1690, the *Publick Occurrences* printed in Boston described the current and previous epidemics of smallpox in the town, listing the approximate deaths and destruction imposed on the community by each. Relieved, the paper declared that, “the Small-pox which has been raging in Boston, after a manner very unordinary is now very much abated.” While smallpox had ravaged Boston, this round of the distemper had proven more favorable than the last in 1678. More individuals had come down with the distemper than “when it raged so much twelve years ago,” but “nevertheless it [had] not been so Mortal” with three hundred and twenty dying out of a population of seven thousand, “which [was] not perhaps half so many as fell by the former.”⁴ Yet in June, July, and August, despite low mortality, there were over one hundred requests for prayers sent to the ministers on any given day due to the sickness that “seized upon all sorts of people that came in the way of it.” The distemper was so bad, the paper claims, that “it infected even Children in the belies of Mothers that had themselves undergone the disease many years ago.” Saddened and shaken by the epidemic, the article concludes, “‘Tis not easy to relate the trouble and Sorrow that poor Boston has felt by this Epidemical Contagion. But we hope it will Be pretty nigh Extinguished, by that time twelve month when it first began to Spread. It not inhappily spreads in several other places, among which our Garrisons in the East, [the Indians], are to be reckoned some of the greatest Sufferers.”⁵

⁴ Lawrence W. Kennedy's *Planning the City Upon a Hill: Boston Since 1630*, The University of Massachusetts Press - Amherst, 1992.

⁵ *Publick Occurences*, September 25, 1690, Boston MA.

Prominent judge and politician Samuel Sewall would also detail the spread of smallpox in his diary that spans the second half of the seventeenth into the early half of the eighteenth century, revealing how smallpox interrupted Bostonians lives, offering a glimpse into the lived familial experience in 1690. Relating the course, survivals, and deaths of acquaintances stricken by the distemper prior to 1721, Sewall highlights the contagiousness of the illness as it spread throughout his family. Having had the distemper in 1678 in a bout that “brought [himself] very near to death; so near that [he] was reported to be dead,” Sewall subsequently observed many of his own familial relations come down with the disease in 1690.⁶ The first was his daughter Hannah, who on May 8, Sewall observed, “droops as though she has the small pocks,” fever and malaise being the first symptoms of the disease. The next day, due to the encouragement of her grandmother, Hannah took a vomit, a procedure that involved eating herbs to cause vomiting in order to expel bile matter, and was discovered to have the small pocks “very favourably.” She stayed in bed but “three or four days,” the typical being closer to three weeks, with about “50 or 60 [pox] in her face; pretty many on her wrists.”⁷ By May 19, Hannah was pronounced well enough to join sleeping quarters with her brother Joseph and sister, Betty, the distemper believed to have taken its full course.

Yet contamination had not been averted despite early quarantine. Smallpox was easily transferred through direct or indirect contact with smallpox infected people or objects, consequently other members of the family showed signs of infection as soon as the usual incubation period expired. Sixteen days after Hannah first showed symptoms of

⁶ Diary of Samuel Sewall, 1674-1729, Vol. V, Boston: Massachusetts Historical Society, 1878. XIV.

⁷ Ibid., 319-310.

the illness, the latter end of the typical seven to seventeen day incubation stage, Jane Toppan, Sewall's niece, took ill with the distemper. Likely coming into contact with the contagion due to cross contamination between the houses as people and objects moved between them, Jane became "very ill," so ill a vomit did not prove completely effectual. On May 26, the family determined she had smallpox, considering that day the first of the long twenty-one day progression of the distemper from fever to scabs completely falling off. By May 28, the "Small pocks appear[ed]," a good sign that indicated the body's natural inclination to expound vile matter from the corporeal was occurring, producing equilibrium between the body's believed four humors.⁸ And whereas Sewall offers no conclusion to Jane's illness, the lack of mention of a funeral encourages that she survived the distemper.

While its probable Jane survived the illness, the contagion continued spreading throughout the Sewall family, with judge Sewall's own children falling ill on June 1. Twelve days after Hannah began sleeping in the same quarters as both Joseph and Betty, the two were taken ill with the distemper, likely as a result of Hannah infecting her brother and sister through contact with her inchoately healed scabs. Betty was initially "very delirious" after the disease incubated, a typical symptom indicative of high fever, but she would prove better off than Joseph by June 9, as Joseph encountered what Sewall describes as several bad nights likely consisting of bad dreams, restlessness, and fever, neglecting to mention details. But a respite followed, as Sewall observed on June 10, noting that the "Small Pock doe apparently dye away in his face."⁹ Unfortunately, the

⁸ Ibid., 322.

⁹ Ibid.

distemper would spread throughout the family again as the trend of one member recovering and another becoming ill continued. On June 11, Sewall's other son Sam would be the last individual within the immediate family noted with the disease, as the rest of the town continued to be ravaged by the contagion, entry after entry within the diary noting multiple infections, deaths, and funeral attendances in the months that followed.

While Sewall's diary offers examination of the lived familial experience of smallpox in Boston, newspapers after the initial news broke of smallpox's entrance into Boston during the 1721 epidemic also reveal how smallpox previously ravaged other towns, as foreign publications were printed in order to help the public best prepare for the disease at hand. One such article, printed in the *Boston News-Letter* on July 10, was an excerpt from a recently published work in Great Britain. Published the past November by Dr. Richard Mead, a highly regarded British physician, the *Discourse of Contagion* was printed in order to educate individuals on how to best approach smallpox once infected. The excerpt in the *Boston News-Letter*, similarly printed to spread the information to peoples otherwise unable to obtain it, provides a window into the life of those quarantined with the disease during past epidemics, including the emotional climate of those subjected to such preventative measures. Within the excerpt, Dr. Mead denounces the primary precaution that Boston along with other major cities such as London had always taken during smallpox epidemics: quarantine. Quarantines had been used for decades to prevent the spread of smallpox and other deadly diseases such as the plague. Physicians and other learned people relied on quarantine, knowing that smallpox generally spread from person to person contact, even if they did not know the biological

process that occurred as contagions spread. Criticizing the only known way of avoiding smallpox infection, Dr. Mead describes the dire, dismal situation of those quarantined in smallpox-infested houses, relating the general experiences individuals lived through during past encounters with contagion. Dr. Mead states:

It is not easy to conceive a more dismal scene of Misery, than this; Families seized with a Distemper, which the most, of any in the World requires Help & Comfort, lock'd up from all their Acquaintance; left, it may be, to the Treatment of an inhumane Nurse (for such are often found at these Times about the Sick;) and Strangers to every Thing by the Melancholy Sight of the Progress, Death makes among themselves; with small Hopes of Life, and those mixed with Anxiety and Doubt, whether it be not better to die than to Survive the Loss of their best Friends and nearest Relations.¹⁰

Reasoning that with such bleak prospects under quarantine, the spread of disease only increased due to individuals infected refusing to alert neighbors to the outbreak for fear of quarantine, Dr. Mead revealed the inefficiency of quarantine. In addition to this fear of quarantine and the inevitable spread of disease under such measures, Mead argues that the justifications for treating people so inhumanely, such as saving the community from spread of infection, did not hold true, for the community was not saved from the spread of disease through such measures. Rather, Mead asserts, quarantine only bottled up contagion within the home, which would then be released to the public once the disease had taken its course within the family as the quarantine was lifted. Mead's solution was removing all individuals within infected households, those sick and healthy alike, to a destination three or four miles outside of the city as to prevent not only the spread of the distemper, but also to better care for those stricken with the disease through access to open air that would otherwise be restricted under quarantine. This would ultimately be

¹⁰ *Boston News-Letter*, July 10-17, 1721. Boston, MA.

used for the epidemic in 1721-22 Boston as individuals were removed to Spectacle Island, a location outside of Boston, when the disease could be controlled through such measures.

Mead's excerpt uses understandably extreme language to emphasize what the doctor perceives as not only inhumane treatment, but also to underline the terrifying nature of smallpox and the climate of fear that quarantines used to manage the spread of contagion fueled when the disease visited families in past and present epidemics, at home and abroad. Despite the intent of Mead's rhetoric, the text regardless highlights the situation that many within cities, including Boston, dealt with in times of epidemic. Paired with the text that appeared in the *Publick Occurrences* and Sewall's diary, the picture painted in the wake of these epidemics was grim. While Sewall was fortunate in that none of his children passed away in the 1690 epidemic, the events Sewall recorded nonetheless attest to how the disease spread throughout families without bias, and could prove even more disastrous under quarantine in less fortunate families, in the process forging fears and realizing anxieties through the process of contagion. The destructive nature of smallpox was probably further accentuated for families who did not have access to clean air or facilities; those who had even more to fear from a smallpox visitation, yet leave no first hand historical accounts to attest to their experiences, as they did not have the resources for doctors, nurses, or space for separating the sick from the healthy. Lastly, the language that the *Publick Occurrences* exhibits paired with horrific stories such as children within the womb being afflicted with smallpox only further highlights the affective potential of smallpox as the disease moved and progressed through towns and families, evoking a certain emotional climate in the process. Every individual would have

been touched even tangentially by smallpox, creating on its eve and in its wake an emotional climate of fear. While Boston had escaped what was then considered favorable bouts of illness in the past several epidemics, as few paid with their lives but only their physical appearance, none, Sewall, Mead, nor the *Publick Occurrences* could truly relate the “trouble and sorrows,” the indescribable horrors that smallpox had or could bring, and would surely bring again.¹¹

Smallpox Experiences in 1721-22 Boston: Affective Economies and the Emotional Climate

With such memories of the distemper never completely removed from Boston’s collective memory, the contagion that broke out to epidemic proportions in the second half of 1721 was less than well received. More severe than the past two epidemics due to most of the population being susceptible after a near two decade respite from an outbreak, newspapers and diarists recorded not only the spread of the distemper, but the emotional climate as their words reveal how fears and anxieties forged in the past were realized and catalyzed in the present after smallpox’s long absence.

In order to understand the emotional climate in Boston on the eve of and during the smallpox epidemic of 1721-22, understanding how smallpox affected individuals through circulation both literally as infection and affectively through objects both tangible and intangible is essential. Affect theorists over the past several decades have increasingly defined what affective objects are; how these objects form, change, and affect other objects, including people, through the process of impression. Notable scholar

¹¹ *Publick Occurences*, September 25, 1690, Boston MA.

Sara Ahmed in her 2004 book *The Cultural Politics of Emotion* addresses what emotions do—how they move, stick, and formulate—creating objects and surfaces through circulation, mutually reinforcing objects and emotions in the process. Ahmed contends that emotions do not just circulate between affective objects or signs, impressing upon people and other objects in the process, but also literally create the boundaries of an “inside” and “outside” of these objects through the process of circulation. As Ahmed explains, “emotions are not ‘in’ either the individual or the social, but produce the very surfaces and boundaries that allow the individual and the social to be delineated as if they are objects.”¹² But further, through the process of impression, objects or signs, which have no definitive skin, such as smallpox, are able to stick, slide, and produce emotions, affecting the lived, felt experience.

While affective objects depend on the continual process of impression for affective potential, an objects potential is also directly linked to its own affective history, which is part of the impression process and thus the production of emotions. As Ahmed contends, an object’s affective value, or affective economy, increases through the continual movement between signs and circulation, thus the more objects circulate, the more affective they become, invoking particular emotions and felt experiences. Emotions are therefore contingent and shaped by contact with certain objects as they become more associated with given objects or signs, though they are not *in* the objects themselves. An objects affective potential therefore involves immediate contacts and past histories, which in the process give residence to emotions in present objects. Therefore, as Ahmed explains, “How the object impresses (upon) us may depend on histories that

¹² Sara Ahmed, *The Cultural Politics of Emotions*, (New York: Routledge, 2004), 10.

remain alive insofar as they have already left their impressions. The object may stand in for other objects, or may be proximate to other objects. Feelings may stick to some objects, and slide over to others.” Through this understanding of affective economies, Ahmed suggests objects or signs allow scholars to examine the “sociality of emotions,” or how certain objects, even those without “skin” become tied to certain emotions through the process of circulation in conjunction with past impressions.

More recently, historians of emotions have used these contentions as frames to observe how a given object’s affective potential given past impressions can explain and interrogate the emotional climate of historical moments. In Jan Plamper and Benjamin Lazier’s compilation of essays on fear, *Fear Across the Disciplines*, historian Harold James uses contentions, like Ahmed’s, to analyze the emotional climate of New Yorkers before and after the New York Stock Market Crash of 1929. James’ asserts that the Stock Market Crash of 1929 was spurred not by economics, but a rise in “physiological stress, which was a reaction to the sense that the future consisted literally and psychically of loss and renunciation.”¹³ Or in other words, “history was the major reason why individuals suddenly felt that there might be a broad range of alternative, much lower, valuations of stock. History actually induced the sense of crisis.”¹⁴ When individuals began to associate a dip in the market, which James contends was a completely repairable dip at first, with past market shifts in 1920, 1907, 1903, and 1901, which had spurred the rapid sale and trade of stocks crashing the market, people on Wall Street anticipated a similar outcome

¹³ Harold James, “The New York Stock Market Crash of 1929,” in *Fear Across the Disciplines*, ed. Jan Plamper et al., (University of Pittsburg Press: Pittsburg, PA, 2012), 142.

¹⁴ Ibid., 143.

and thus sold their holdings. This was despite, as James explains, economists' assurances that the market would repair itself; the moralistic commentators proved too strong a pull. James thus concludes, "Fear arises when deep historical experience suddenly reemerges and becomes alive as a possible version of the present."¹⁵ Emotions produced through affective impressions with given objects such as stock market crashed in light of past object circulations thus matters according to James, not just the pure economics of the event as historians have previously noted.

Although stock market crashes and smallpox epidemics are two very different experiences, the impression made by each attests to the power of affective objects to influence emotional climates given historical familiarities in relation to past impressions, in the process affecting the lived and felt experience. Like the stock market crashes in New York that created specific affective economies which would affect the future, when smallpox entered Boston in 1721 and became, to use James' words, "alive as a possible version of the present," the historical experience reemerged and impressed upon the public the anxieties and fears of past epidemics, invoking emotions in response to perceived futures. And as smallpox continued to circulate both as infection and affective object after first appearing in Boston in 1721, smallpox's affective potential would only increase, creating while confirming fears and latent anxieties.

In May as the contagion first entered Boston, the two local papers, the *Boston Gazette* and the *Boston News-Letter*, would give the initial impression, activating latent fears through publishing the early and subsequent news related to smallpox and the new, hotly contested procedure of inoculation. Publishing the inoculation debates and news

¹⁵ Ibid., 146.

from the beginning through the substantially more severe months of the epidemic, September, October, and November, the papers fueled the creation of a third, rival newspaper. By late August, after its first publication just a few weeks prior, the *New England Courant* had already printed numerous articles relating the status of the epidemic while refuting inoculation. The *New England Courant*, offering a unique stance, modestly characterized the distemper as to undermine, as will be discussed, rival newspapers early interpretations of the epidemic in relation to what was considered a drastic procedure. While a recent “Advertisement”, as the *Courant* notes, presumably in the *Gazette* or *News-Letter*, had described the epidemic and smallpox by early August as a “desperate disease” requiring as such a “desperate remedy,” since “Small Pox in Boston (say they) is a terrible distemper, whereby many were severely and dreadfully handed, and whereof so many died, as gave an awful prospect [*sic*],” the *Courant* writer contended such a description would “better suit the Plague in Marseilles,” which had taken close to 90,000 lives out of a population of 250,000 in 1720.¹⁶ Rather, the writer explained, the most detrimental symptom of smallpox was not physical illness, but “Fear & Dejection of Spirits” which “may tend to obstruct the towns being supplied with Provisions from the Country, and interrupt all Trade, Commerce and Communication with out Neighbouring Colonys,” Boston being a bustling center of exchange.¹⁷

Albeit the *Courant*’s writer was, to use his own words, “imprudent” in his assessment of smallpox and what was to come in Boston, the author does reveal a population emotionally vulnerable to smallpox’s impression given its affective potential

¹⁶ *New England Courant*, August 14-27, 1721. Boston MA; “Nova Et Vetera. The Great Plague of Marseilles,” *The British Medical Journal*, 1:2054 (May 12, 1900): 1172-1173.

¹⁷ *New England Courant*, August 14-27, 1721. Boston MA.

on the eve of the most severe portion of the epidemic. While smallpox would become “a terrible distemper” in Boston by the fall, in Mid-August these fears were not yet realized. Rather, the symptom of “fear,” as the author explains, rather than physical illness, had become epidemical. And a population infected with “fear” was more willing to try “desperate remedies” for what was perceived, and known early on from previous experiences and thus impressions of smallpox, as a “desperate disease.” The following week this emotional climate was only further solidified, as the *Courant* would once again expound inoculation, in the process relating the fear that permeated Boston prior to the majority of deaths from smallpox. Written August 17 and published in the *Courant* the week of August 21 to 28, the author discusses how “A Distemper so awful as the Small Pox, could not but spread Fear and Amazement in and around a Place, which has escap’d a Visitation of so terrible a nature so long. But the concern, I observ’d in some measure began to abate with some upon the News of a much easier way of taking it by Inoculation.”¹⁸ While inoculation curbed some peoples fear, the author details, “The Lawfulness and Safety of such a practice was the next considered,” informing readers that safety and lawfulness was not considered until after rushing into the procedure for public fear of getting smallpox in the “natural” way.¹⁹

Fear was also being relayed back to London, as news from Boston entered British newspapers, conveying the emotional experience to the homeland of those abroad in New England. Written in Boston on September 5 but not printed in London until November 4 due to the long distance the message had to travel, Bostonian publishers wrote of their

¹⁸ *New England Courant*, August 21-28, 1721. Boston MA.

¹⁹ *Ibid.*

own experiences with what they considered a horrible distemper, one that was besieging the population when the epidemic was just starting to flourish. The *Stamford Mercury*, publishing news from a London newspaper likely taken from one in Boston, dispatched “that the Small-Pox is *still* so mortal in that City [Boston], that they are ’tis said, in great Fear of Depopulation; the Passing Bells are continually tolling, Trade is almost entirely reduced, and Money is very scarce, Silver being 13 s. per Ounce.”²⁰ While mortality increased and trade in the city was depicted as nearly nonexistent, the population was also removing itself from Boston, as “The Chief of the Inhabitants [have] gone into the Country to escape the Distemper, which however have overtaken several of them.” In order to escape infection, the politicians of the town had also removed themselves, and were by September holding assemblies “at the George Tavern, the last House in the Precinct of Boston, and a Mile out of the Town, where they have a Guard of Soldiers to keep People out of the House that come to Boston.” Quarantining was still a necessary precaution.

By September, the *Boston News-Letter* would also publish articles indirectly relating the climate of fear that the disease impressed upon the population in the process of contagion. In early September, the day before news was written to London about the epidemic, the *News-Letter* published an advertisement relating wool and cotton that was for sale. Rather than a straightforward message about the quality of the product that would typify usual adverts, the advertisement goes into detail about where the cotton came from, how the material was shipped, and where one could go to buy it in order to convey the cotton’s safety to wary buyers. The advertisement specifies, “People may be

²⁰ *Stamford Mercury*, November 9, 1721. Stamford, Lincolnshire.

fully satisfied, that there is no danger of any Infection, they are desired to take Notice, That it came from St. Thomas's, where the Small Pox has not been for diverse Years, and that it was never Landed at Boston, but conveyed by Water to Roxbury." And further, "that the said Greenwood has never had the Distemper himself, but removed out of Boston purposely to escape it," and therefore no weary patrons should worry about any lingering smallpox contamination within the premises.²¹

In two weeks on September 23, the *News-Letter* would reveal not just wary customers, but also sellers, as those who usually supplied Boston with goods were either hesitant or refused to come to the once bustling town for fear of small pox. Printing the selectmen's declaration that Boston was experiencing a significant shortage of firewood due to small pox fears, the notice described how "sundry of the Sloop men that for some time past have supplied this Town with Fire-wood, do now decline coming up to Town with their Boats, by reason of the Small-pox," contagion looming as a threat, "which may occasion Inconveniencies to the Boat-men, as well as Inhabitants of this Town." To entice these boatman, the selectmen gave notice to any that were not willing to bring firewood that if they were to go to "Castle Island, their Sloops or Boats, shall be brought up to Boston, and immediately Unloaded at such Wharffs as the Master or Owner of the Boats shall direct and appoint," in order to avoid contamination that could occur over longer stays. Even further, the selectmen entailed, "The Charge of bringing up and carrying down the several Vessels to and from the Castle, [was] to be born by the Town

²¹ *Boston News-Letter*, Sept. 4-11, 1721. Boston MA; Emphasis added on "still."

of Boston,” allowing these sellers to make even more money than usual, perhaps swaying sellers to visit Boston’s harbors.²²

Though whether or not boatman were enticed by these measures, or whether patrons were convinced of the safety of the cotton given its assured pedigree is unclear, the fear that underlined such advertisements and declarations was undeniable. As news and infection spread throughout Boston and the trading world, not only the physical symptoms of contagion but also the symptom of fear, to use the *Courant*’s expression, would inhibit life as usual for the city. Smallpox’s affective economy by September had increased exponentially due to the amount smallpox impressions circulated in the months leading up to the fall of 1721, whether these impressions circulated through news, infection, or declarations. Given this increase, the climate of fear that was impressed upon the public had reached new heights by the fall, as evidenced in suspect customers unwilling to buy goods and weary sellers unwilling to risk their lives due to the perceived threat, a threat that fear encouraged as smallpox impressed upon Boston—its families and tradesmen. But further, even prior to the fall of 1721 when the epidemic would prove most fatal, Bostonians elicited fear as news and infection circulated and impressed, prompting emotional responses forged over decades. These fears, confirming smallpox’s affective potential, would cause Bostonians to flee the city, refuse certain goods, and inhibit travel to the major city prior to these fears being fully realized, as past epidemics had left enough of an impression to cause widespread fear of acquiring and dying from the disease. As these newspapers make clear, smallpox had made an impression, one that

²² *Boston News-Letter*, Sept. 18-25, 1721. Boston MA.

produced fear and anxiety, and one that would hinder the town in ways that reached beyond the pure physical, health-related affects of epidemical smallpox.

Whereas newspapers offer a glimpse into how smallpox was received before and during the height of the epidemic, simultaneously exhibiting how smallpox circulated and impressed upon the public, diarists once again offer a window through which to view the inner workings of families stricken with disease during this same period, revealing general public responses. Prominent minister and son to Increase Mather, Cotton Mather, also recorded at length the progression of the disease in Boston during the 1721-22 epidemic. Like the newspapers at the time, Mather took notice of the distemper's arrival in Boston right away as the papers were alerting the public, remaining keenly aware of the contagion throughout the epidemic as he recorded any and all personal and tangential encounters with the disease. Fourteen days after the Record of Commissioners documented the first individuals infected with Smallpox in Boston, Mather noted in his diary on May 26 how "the grievous Calamity of the small-pox ha[d] entered the town."²³ Having had the distemper in 1678, though he had forgotten by 1721 being only fifteen at the time of his infection and likely incurring only a mild bout with the disease, Mather like Sewall was anxious for his children in addition to himself as he watched them for signs of the smallpox, debating whether or not to send his two children to the country away from infection.²⁴ Reflecting the trend of parental anxiety over the distemper given past impressions, Mather consistently notes the status of his children throughout the

²³ Diary of Cotton Mather, 620.

²⁴ *Selected Letters of Cotton Mather*, compiled with commentary by Kenneth Silverman, (Baton Rouge: Louisiana State University Press, 1971).

epidemic, praying to God for benevolence in his diary in the first few days of the news breaking. His first such entry written just two days after his revelation of smallpox entering the town, describes how his “two Children... are liable to the Distemper,” Mather confessing that he was “at a Loss about their flying and keeping out of the Town,” subsequently crying “to Heaven for Direction about it” yet receiving no answer nor solace.²⁵ While Mather continued to express his fears through bouts of prayer and anxiety, he was not the only one who feared smallpox, his children dreading the distemper as well. Even though Boston had not seen an outbreak in the time since their birth, Mather notes on May 30, “My two Children... have their Terrors of the Contagion breaking in upon us.”²⁶ By June 13, his children were further distressed as smallpox continued to circulate, producing more and more infections while reinforcing their fears of contagion as the likelihood of infection grew nearer. Mather notes how Sammy, his son, having returned from school in Cambridge at Harvard where smallpox had begun to spread through the neighborhood, was “lothe to return” for fear of catching the deadly distemper, highly likely given close living quarters.²⁷ His daughter Lizzy was also afraid, as Mather related, and was “in greater Fears than he” despite infection being not so near as for Sam, mentioning again on June 27 “the Fear, which Distresses Liza” and his attempts to calm her.²⁸ Although Mather would continue to “improve with all the Contrivance I can, to make [it] subservient unto the Interests of Piety in them,” his children remained frightened throughout the epidemic, as smallpox made impression

²⁵ Diary of Cotton Mather, 621.

²⁶ Ibid., 622.

²⁷ Ibid., 626.

²⁸ Ibid.

after impression, affecting fear which simultaneously encouraged piety and repentance of ones sins.²⁹

The townspeople were also unnerved by the news of smallpox's entrance into the town of Boston and its subsequent progression, as Mather remarked on June 2 that the ministers should turn the next lecture day into a day of prayer, because, as Mather states, "of the destroying Angel standing over the Town, and the grievous Consternation on the Minds of the People."³⁰ While the day of prayer was held, the public's fears only further solidified as contagion further circulated. By July 8 Mather continued expressing communal fears, his entries revealing a town on the brink of panic as he was increasingly called to ease people's troubled minds, revealing "Some under grievous Consternation, from Small-Pox now spreading, must be directed and comforted," despite smallpox at this point being no where near its voraciousness by the fall.³¹

Like in 1690, Sewall once again noted in 1721 the progression of the disease throughout the community, recording those ill and deceased. While Sewall's family is seemingly spared this time around, the diary still underlines the voraciousness with which smallpox took the lives of those infected, impressing fear and confirming anxieties, all while increasing affective circulation and leaving deep impressions. Judge Sewall, revealing these impressions, noted the many funerals he attended as part of his political and personal duty, recording in his diary nearly daily burials, with multiple per day at the height of the epidemic. Unlike Mather, Sewall neglects the onset of the distemper in

²⁹ Ibid.; Ibid., 628.

³⁰ Ibid., 623.

³¹ Ibid., 680.

Boston, beginning to take note of the contagion while recording those deceased by the disease in mid-September as the infection was reaching its peak in October and tapering off to its conclusion in December 1721. Despite Sewall attending many funerals over the course of his lifetime and the years the diary spans, Sewall notes how exceptionally devastating Smallpox was, especially during this particular epidemic on one emotionally taxing occasion. On November 18, Sewall was pushed to reflect on the impact of smallpox when he attended the funeral of not only Reverend Joseph Stephens who was taken by the disease, but also the reverend's daughter and sister in law who both also died of the illness. Sewall was so deeply moved by the scene of a family taken all at once to the same grave as to write a eulogy in the *Boston News-Letter* regarding the professed "Ingenious, Learned, Modest, and Chearful, Sincere and Free" reverend and the sad events.³² Detailing the happenings, Sewall explained how the reverend, 39, died after experiencing pox eruptions for eight days, after the pox typically turned into full pustules, but prior to the pox scabbing, and was buried along with his only daughter and wife's sister having all "Deceased of the damed [*sic*] Distemper, and laid in the same Tomb."³³ Conjuring the emotional loss left by the departure of the reverend and fellow family members in conjunction with the epidemic and dreadful disease, Sewall explains "It is a most Deplorable and Publick Loss and especially to this Town, and at such a sorrowful and awful Conjunction," with the disease having afflicted and continuing to afflict so many.³⁴

³² *Boston News-Letter*, Nov. 20-27, Boston MA.

³³ Ibid.

³⁴ Ibid.

Sewall, having escorted many to the grave during the 1721-22 epidemic, was acutely aware of the trials and tribulations individual families and the collective town went through as the contagion made its way through the susceptible population, elites and the poor alike, never detaching from the collective emotional climate of fear and sadness as his eulogy to the reverend attests to. While smallpox had largely exited Boston by January, Sewall felt, for political or perhaps personal reasons, that this epidemic deserved a commemorative “ring”, which he gifted to “his excellency,” the governor of Boston, with the motto “*Post tenebras lucem*. January 1721/2: respecting the darkness of the Small Pocks, and our divisions” engraved within the piece.³⁵ Translating to “light after darkness,” Sewall and others looked forward to a brighter future after Boston was brought so low in the wake of epidemic smallpox. But while the smallpox, the “darkness,” would end by January, the “divisions” that erupted over inoculation would only continue, catalyzed by the memories of smallpox forged in the fall of 1721.

Conclusion

From the onset of smallpox in Boston at the beginning of May 1721 to its fruition in the fall, the disease impressed upon those who had experienced the distemper, along with those who had not, fears and anxieties that proved another symptom of smallpox, one just as relevant as the diseases corporeal affects for individuals in Boston who were directly affected by these fears. As both the literal infection and news of smallpox circulated, with them circulated affective objects forming economies. These economies were forged through not only previous epidemics, making the mention of smallpox

³⁵ Diary of Samuel Sewall, 299. *Post tenebras lucem* translates to “light after darkness.”

conjure memories of a perceived future, but also the months leading up to the most distressing, mortal portion of the epidemic. When smallpox finally did reach its peak in the fall, the climate of fear had already been cast, leading Bostonians to leave the town, patrons to be hesitant of buying imported goods, and importers themselves wary to bring such goods. But further, these public fears, though impressed by smallpox singularly, would be dependent on histories and past experiences that were just as much individual as communal in nature. With these individual subjectivities within the larger emotional climate of fear, the months leading up to the fall of 1721 would produce more than just fear and anxieties as smallpox impressed upon the population, as deep set differences predicated on these fears would erupt, forming a debate that would last for years, creating tensions while exacerbating fears.

Chapter 2

Treating the Symptom: How Smallpox's Affective Potential Was Decisive in the Implementation of Inoculation

As with previous epidemics, quarantines had proven ineffective and the inevitable spread of disease and accompanying mortality solidified Mather's and the general public's fear of smallpox and widespread contagion. Yet Mather had learned as early as 1706 from his African slave, and certainly by 1716 in European academic writings, of a procedure that he believed could potentially save the lives of many.¹ Inquiring into the procedure since the last epidemic in 1702-3, Mather discovered that by diverting the deadliness of smallpox through exposure to the disease itself, the procedure of transplanting the infectious matter of an individual with small pox to a healthy individual gave the said person a mild form of the disease. Though mild, the individual gained lifelong immunity to the common, and deadly, form of small pox through experiencing its transplanted, less deadly, form. By May 26, 1721, the same day that Mather noted the entrance of smallpox to Boston, the minister contemplated the new procedure, inoculation, in his diary as the distemper spread. Taking note that "the practice of conveying and suffering the *Small-Pox* by *Inoculation*, ha[d] never been used in *America*, nor indeed in our nation," Mather questioned, "But how many lives might be saved by it, if it were practised?" In the hopes of averting the numerous deaths that an epidemic of smallpox was bound to produce, and of saving the lives of his own children, Mather decided that he would "procure a consult of our Physicians, and lay the matter before

¹ John B. Blake, "The Inoculation Controversy in Boston: 1721-1722," *The New England Quarterly*, 25:4 (Dec., 1921), 490.

them.”² By early June of 1721, Mather wrote to the physicians of Boston to experiment with this newly discovered procedure: inoculation.³

Writing to the physicians, Mather explained the experiment and its known origins. Citing the *Physical Transactions of the Royal Society*, the scholarly publication of England’s premiere scientific society, of which he was a member, Mather described the letters published within of Doctor Emanuel Timonius in Constantinople and Doctor Jacobum Pilarium in Venice who wrote to physicians in London about their experience with the procedure. Enumerating the process laid out by both Timonius and Pilarium in his own diary, Mather wrote in retrospect on his own experience coming across inoculation, the content of his letter to the physicians, and their adverse responses. Describing the first encounter he had with the procedure, Mather explained, he “had a Garamantee Servant, who first gave him an Account, of a Method frequently used in Africa, and which had been practis’d on himself to procure an easy Small-Pox, and a perpetual security of neither dying by it, nor being infected with it.”⁴ This story later affirmed by other unspecified African servants, Mather found further solidification of the practice in Timonius and Pilarium’s accounts, enough to warrant the calling together of physicians and his own recommendation of the procedure. Laying out the process Timonius explains, Mather suggested physicians take the matter, or discharge, from the pustules of a patient with smallpox, make an incision in the arm of a healthy individual, mix the smallpox matter with the blood in the incision, and cover the wound with a

² Diary of Cotton Mather, 620-621.

³ Mentions the writing of the letter in *An account of the method and success of inoculating the small-pox, in Boston in New-England*, (London: Printed for J. Peele, MDCCXXII [1722]), Sequence 20.

⁴ Ibid., sequence 13.

concave object to ensure the transfer of disease in a favorable way.⁵ To Mather's shock and dismay, the physicians did not react in the hopeful manner he had anticipated after outlining the procedure and providing seemingly reasonable proof. There was one exception, Zabdiel Boylston. A local physician trained by way of apprenticeship like most others who saw potential in the experiment to protect his children who were exposed to smallpox through his own visits to sick patients. Deciding to go through with inoculation, Boylston first experimented with the procedure on his own two slaves and his son.⁶ Despite both the slaves and the young boy healing completely from the procedure, backlash from the physicians and people of Boston ensued. Mather, anguished by the public response, blamed "the Destroyer" on July 16 as he described the town's reaction.⁷ The ungodly, evil "destroyer," clearly "enraged at the Proposal of any Thing, that may rescue the Lives of our poor People from him," Mather thought, "ha[d] taken a strange Possession of the People on this Occasion." Under what Mather reasons was the devil's spell, Bostonians, the minister revealed, "rave, they rail, they blaspheme; they talk not only like Ideots but also like Franticks, And not only the Physician who began the Experiment, but I also am an Object of their Fury; their furious Obloquies and Invectives."⁸ Most notably, William Douglass, the only university trained physician in

⁵ Ibid., sequence 15.

⁶ Zabdiel Boylston, "An historical account of the small-pox inoculated in New England, upon all sorts of persons, whites, blacks, and of all ages and constitutions: with some account of the nature of the infection in the natural and inoculated way, and their different effects on human bodies: with some short directions to the unexperienced in this method of practice," (London: Printed for S. Chandler, at the Cross-Keys in the Poultry, MDCCXXVI [1726]; [Boston in N.E.]: Re-printed at Boston in N.E. for S. Gerrish in Cornhil, and and T. Hancock at the Bible and Three Crowns in Annstreet, MDCCXXX [1730]).

⁷ Diary of Cotton Mather, 631-632. "Destroyer" refers to the devil, or unearthly evil being.

⁸ Ibid.

Boston and fellow elected member of the Royal Society, scorned Boylston's testing of the procedure, leading the inoculation denouncers throughout the duration of the epidemic. Calling the experiment, Mather, and the physician himself "rash," "mischievous," and "dangerous," Douglass saw the threat inoculation on a grand scale posed to the city of Boston, knowing that inoculation was just as contagious as any other form of smallpox.⁹ With the spread of contagion in the mind of physicians versus the anticipated deadliness of contagion in the common way in the mind of the ministers of the town, a Pamphlet/newspaper war ensued that would not end until years after the epidemic was over, leaving a historical trail with which historians have pieced together and analyzed the event centuries later.

Despite the wealth of scholarship on the written dispute, an examination of why inoculation came to the forefront in 1721, becoming a debated procedure, and how emotions were relevant in its implementation and subsequent denunciations has yet to be completed. As I contend, smallpox's affective potential and the impressions that followed enveloped Boston in a climate of fear and anxiety prior to, during, and after the most severe portions of the epidemic, fear being a symptom as contagious as the infection itself. Through examining how this climate, how the emotions of fear, anxiety, and confidence particularly influenced the emergence of inoculation in Boston and the public backlash surrounding the measure that followed, I intend to divulge how inoculation quelled fears while simultaneously catalyzing others, filling and delving into the climate of fear, creating the heated debate. Looking to the pamphlets and newspapers articles, those who subjected themselves to the procedure of inoculation did so for fear of

⁹ *Boston News-Letter*, July 10, 1721, Boston MA.

smallpox, while those who were vehemently against inoculation did so for fear, though distinctly different, of smallpox as well. Analyzing the ways in which these fears, though a product of the same affective object, were impressed differently given individual histories and knowledge, reveals how the debate erupted into a prolonged, bitter, and determined battle, driven by party-like groups whose reasoning evolved from similar emotional underpinnings. Contentions within the debate thus reveal these simultaneous yet opposing fears, and a moment where emotions would prove instrumental in the call for or denunciation of inoculation.

The Debate

Starting just a few days after the news of Boylston's experiments on his own son and two slaves spread throughout the town, the events "raised," as Mather noted in his diary on June 30, 1721 "an horrid clamour" in the townspeople.¹⁰ By July 15, Boylston felt the need to respond to the public outcry against inoculation, starting the published discourse that would form the debate. In order to prove the safety and success of inoculation, Boylston published a short response to the inflammatory remarks published by Douglass that denounced Boylston's skill and the procedure. With the help of the ministers led by Cotton Mather, who would all lend their support throughout the debate in written form, Boylston published his side of the story. Having inoculated his son and two slaves, in Boylston's account, he had "patiently born with abundance of Clamour and Ralary, for beginning a new Practice here, (for the Good of the Publick) which comes well recommended, from Gentlemen of Figure & Learning... to prevent the hazard of

¹⁰ Diary of Cotton Mather, 628.

Life which is often indanger'd and lost by that Distemper in the common way of Infection.” Assuring the people that his experiment went well, Boylston concluded that after performing the procedure and leaving their recovery “wholly to nature,” he found the accounts of Timonius and Pilarium to be “just and true,” concluding that “in a few Weeks more, I hope to give you some further proof of their just and reasonable account.”¹¹

Less than a week later, on July 20, Douglass would respond to Boylston’s account and insistence to continue with the practice that only further infuriated the public. The first to counter in a letter published in the *Boston News-Letter*, Douglass noted not only Boylston’s apparently low success rate with treating those infected with smallpox in the natural way and his illiteracy, unable to read the texts in the *Physical Transactions*, but also his “rashness” which, Douglass decried, “appears in every circumstance, first his mischievous propogating the Infection, [through inoculation], in the most Publick Trading Place of the Town, then entirely free from the same; next, his excusing his first bad Success from his Negligence, in not preparing the Bodies of his Subjects.”¹² Ending with a note on how this “case of conscience” could be rectified, Douglass surmised that nature should be left to God’s providence, not the “machinations of man,” inoculation being “a propagating of infection and criminal.”¹³

But even with this declaration of the dangers and rashness of the procedure, Boylston continued to experiment in Boston. Douglass once again retaliated, and this

¹¹ *Boston Gazette*, July 15, 1721, Boston MA.

¹² *Boston News-Letter*, July 10, 1721, Boston MA.

¹³ *Ibid.*

time with the clout of the government and physicians reinforcing his assertions.

Having gained support from the other physicians and the Selectmen of Boston, on July 21 the Selectmen reprimanded and forbade Boylston from experimenting any further with inoculation after the physicians convened and denounced the practice. A strike back from the ministers and Boylston in published form was seemingly inevitable as the public grew more displeased with the practice and Boylston continued inoculating anyone who requested him to do so.¹⁴ By the end of July, a note addressed to “the Author of the Boston News-Letter” was published within the *Boston Gazette*, expressing how “unhandsomely” Boylston was treated in the *News-Letter*’s text, and further that if objections were to be made against the procedure, those individuals should not detract “from the known worth of the doctor.”¹⁵ Yet personal denunciations paired with questions of conscience would continue as the physicians and professional persons against inoculation mounted a verbal attack against the pro-inoculation ministers and Boylston. By October the debate only became more exacerbated as the disease reached its height. And while the disease tapered off by late November, the debate raged on until May, when Boylston officially ceased inoculating individuals and the distemper made a full exit from the town.

Pro-Inoculators: Fear and Confidence

Perhaps none was more passionate about inoculation than Cotton Mather. The man who brought the procedure to the forefront of Boston in 1721, he would write

¹⁴ John B. Blake, “The Inoculation Controversy in Boston: 1721-1722,” 493.

¹⁵ *Boston Gazette*, July 31, 1721, Boston MA.

numerous pamphlets and articles propounding inoculation, convince numerous individuals to go through the procedure, and do this despite severe public backlash and risk to his own person. While historians have discussed the centrality of Mather to the inoculation debate, scholars have yet to study why he especially, but others as well, remained obsessively driven for the cause of inoculation before, during, and after the epidemic, providing a receptive audience for Mather. Examining Mather's history, diary, and publications during the debate, one aspect is clear: Mather's stance and propagation of inoculation was a direct product of his fears, and his supporters, who either felt the same fear of one's own death or that of one's family, including children, or had confidence in religion and his teachings, would follow.

As a pious man Mather had the appropriate amount of fear and reverence for God's wisdom and providence, remaining steadfast in his belief of God's ordained will in all earthly things from disease to famine, war to witchcraft. Still, no amount of trust in God's benevolence could spare his troubled mind, frayed by the perpetual impressions left on him through his duties as a minister tending to diseases bodies and souls. In his ministerial role, Mather constantly observed pious individuals struck by poor crops, fires, and diseases among other things, all of which were seen by parishioners and even the not so devout as a message from God, directly related to the sins one committed and did not repent for.¹⁶ As such, he understood that even the faithful could acquire diseases, especially if the right secondary measures were not heeded.

¹⁶ For more on Puritan religious doctrine relating to God's Providence see David. D. Hall, *World of Wonder, Days of Judgment: Popular Religious Belief in Early New England* (Cambridge Massachusetts: Harvard University Press, 1989); Edmund Morgan, *The Puritan Dilemma* (Toronto and Boston: Little Brown and Company, 1958); Perry Miller, *The New England Mind* (Boston: Beacon Press, 1954).

Individuals such as Mather believed in God's working in the world but also the natural order of things, such as water leading to crops and cleanliness to better health. They understood the world as divided into primary and secondary causes.¹⁷ Primary causes, as Mather and other learned men knew, were those directly divined, they were brought down straight from the arrow of God. Secondary causes, on the other hand, were those that were part of the known mechanics of nature, though still delineated from God's hand, but could be observed in the world with relatively understood processes. For example, farmers knew that if land was properly tilled and seeds were planted and tended with the right amount of water and sunlight, crops would grow, the secondary process was understood even if the process of photosynthesis we know today was not. So while an individual's illness was a direct result of God's disfavor for either individual or communal sins committed, if a person were to come into needless contact with another who was sick, going out of their way to come into contact with disease and acquire illness, the secondary rules of nature and infection remained firm. Minister William Cooper highlighted this fact in his own pro-inoculation piece, *A reply to the objections made against taking the small pox in the way of inoculation from principles of conscience: in a letter to a friend in the country*, written in 1721 and published subsequently in 1730. Cooper explained his own beliefs, beliefs similar to those of Mather and other educated Christian men, while clarifying his stance towards the fallibility of inoculation stating, "I truly believe, as my bible teaches me, that God has fixed the period of every one's life; but I also believe, that he has done it with a regard to second causes, or that course of nature which he has established; the End and means are

¹⁷ John E. Van De Wetering, "God, Science, and the Puritan Dilemma," *The New England Quarterly* 38:4 (Dec., 1965), 494-495.

determined together.”¹⁸ Thus secondary causes mattered, regardless of one’s status with God. An individual could always get sick if exposed to the right circumstances.

With these understandings of the world in mind, Mather contemplated the ways he could illuminate and negate the repercussions of these secondary causes—the ways in which these secondary causes were discovered and thus potentially avoided being perceived as God’s benevolent gifts to society—and save individuals from needlessly coming into illness. Smallpox was one of these deadly diseases that seemed to have no recognized natural mechanism. But Mather was not just a minister, he was also a man with many interests, one in particular being medicine and biology, a career path he nearly took prior to entering Harvard. As a minister, medicine was not completely out of the realm of duty. Ministers often found themselves, as some of if not the most learned men in towns, as caretakers both spiritually and physically, as the spirit and the corporeal were perceived as linked. Mather, extending beyond the normal ministerial interest in medicine, was as educated as any doctor at the time in Boston, if not more so. He would send for books from London on medicine, and reach out to physicians for new cures, as he reminded himself on May 5, 1713 in his diary, “There are some Physicians in this Countrey, whom I would solicit, to obtain for me, as much as maybe, of the Knowledge of the Botanicks of the Countrey; as also, of rare cures or cases occurring to them.”¹⁹ As such Mather often published pamphlets on piety and medicine to help the general public in times of need. On June 22, 1721, Mather notes in his diary, “I prepare a little Treatise

¹⁸ William Cooper, “A reply to the objections made against taking the small pox in the way of inoculation from principles of conscience: in a letter to a friend in the country,” (Boston: Printed for S. Gerrish in Cornhill, and J. Phillips at the Stationers Arms near the town-dock, 1730), 24.

¹⁹ Diary of Cotton Mather, 208.

on the Small-Pox; first awakening the Sentiments of Piety, which it calls for; and then exhibiting the best Medicines and Methods, which the world has yett had for the managing of it; and finally, adding the new Discovery, to prevent it in the way of Inoculation. It is possible, that this Essay may save the Lives, yea, and the Souls of many People,” a task he had often undertaken when disease visited Boston prior to 1721.²⁰ But his interest in medicine was double-fold. Not only did he wish to help others, and his family even more so, but also himself as a man rattled with anxiety and uncertainty over his place with God. His interests combined with his anxieties would ultimately lead him into the practice of inoculation, as he looked to God and his natural world for a solution to the terrible distemper of smallpox.

In a world where nothing could be readily predicted, individuals maintained a healthy amount of fear and complacency as the world seemingly moved around them. But Mather’s fear outpaced his ability to be content. On several occasions he felt his cries to God were unanswered, and feared for his life and the lives of those around him when smallpox first entered Boston, pushing him in the direction of inoculation even though this meant reconciling and ultimately redefining some deep set religious beliefs. Once again on May 28, two days after Mather first discovered smallpox in Boston, he related in his diary that “besides a Variety of Duty to the People,” discussing the instillation of piousness in the general public necessary when disease entered Boston, he reminds himself also to “awaken in me several tempers and actions of Piety relating to myself.” Not entirely convinced that God’s providence could spare him, Mather confesses, “My

²⁰ The Diary of Cotton Mather, 627-628. Cotton Mather’s other work on Piety and Medicine, *The Angel of Bethesda*, 1724.

own Life is likely to be extremely in danger, by the horrid Venom of the sick Chambers, which I must look to be call'd unto," knowing that even in these pious tasks he was at risk.²¹ But close to two weeks later on June 11, Mather found solace, that even though, he admitted, "I feel myself a Loser in some Temporal Interests," he simultaneously felt confident that "my Spirit so rejoicing in GOD my SAVIOUR on this Occasion, that I am sure of His owning me among His Followers and Confessors, and of His Dealing wonderfully with me."²²

While Mather himself felt simultaneously blessed and damned from day to day, he felt fairly certain that he was in good graces with God, knowing that even if smallpox took him he would find everlasting life. His children, on the other hand, he could not be so sure of. Mather feared for his own temporal life, as he suggests while confiding in his diary, but he feared more so for his children's lives than anyone else, an emotional connection that should not have been more significant than his relationship with God, for one's relationship with God was meant to overtake all other earthly relations.²³ Mather knew this, but could not help begging God to help him in his endeavor to preserve his children. On July 7, not long before Mather expressed confidence in his own salvation, Mather held a day of "Humiliations and Supplications" to help ease his troubled mind as smallpox loomed. In addition to his quest for help regarding "unhappy Administration," Mather sent "One special Errand unto Heaven," which was "to beg (as good Things for

²¹ Diary of Cotton Mather, 621.

²² Ibid., 625-626.

²³ See Edmund Morgan, *The Puritan Dilemma*; Laurel Thatcher Ulrich, *Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650-1750*, (New York and Toronto: Oxford University Press, 1982).

all my Children, so especially) the Lives of my two Children, which are threatened by the contagious Distemper of the Small-Pox; which is now spreading among us; and a Direction of Heaven, what I may do for their Welfare in that, and (for all of them) in all Regards.”²⁴ But Mather did not trust that his calls to God would be answered, and feared for both the temporal and spiritual lives of his children. By July 18, Mather grew increasingly angry at the public backlash against the procedure of inoculation, but his anger was not pointed so much at his inability to bring inoculation to the masses, but rather at his inability to save his children if the procedure was banned. He wrote:

The cursed Clamour of a People strangely and fiercely possessed of the Devil, will probably prevent my saving the Lives of my two Children, from the Small-pox in the Way of Transplantation. So that I have no way left, but that of my continual and importunate Cries to Heaven for their Preservation. Accompanied with Admonitions unto them to make their own.²⁵

Mather would nonetheless continue praying to God, whether to save his children or calm the masses that he increasingly observed as overtaken by the Devil himself. Still, his inner doubts are clear. Though he hoped God would preserve his own and his children’s lives, he had no guarantee. Inoculation would offer a solution to those fears, he would save the lives of his children if God would not, allowing for some measure, although never complete, of certainty in an uncertain world.

Mather was the first to bring inoculation forward to the public in Boston, in large part due to his own personal fears regarding his life, his children’s lives, and the lives of those around him. When he did so, all but one refused to experiment with the procedure when Mather sent his letter to the physicians of Boston concerning inoculation.

²⁴ Diary of Cotton Mather, 629-630.

²⁵ Ibid., 632.

Analyzing Zabdiel Boylston, the physician who would ultimately come into the practice and conduct the first experiments, once again reveals how fear catalyzed the curiosity of pro-inoculators, like Mather, ultimately forging his, and others', decision to inoculate.

Similar to Mather, Boylston was an educated man even though he was illiterate. Having studied under a prominent surgeon in the town in addition to other physicians, Boylston knew how to care for those who were ailing, enabling him to amass wealth and status despite his seeming lack of education.²⁶ But being illiterate, Boylston did not leave a diary such as Mather's, accounting his daily thoughts, observations, and prayers. Still, the two larger published works that Boylston authored, *An historical account of the small-pox inoculated in New England* and *Some Account of What is said of Inoculating or Transplanting the Small Pox*, with the help of ministers such as Mather allow for some insight and interpretation of his own reasoning for coming into inoculation.

Chronologically the second of these works, which Boylston published in retrospect in 1726 for the educated in Britain to account for his experiments in 1721-22, *An historical account of the small-pox inoculated in New England*, discusses the various people who underwent inoculation in addition to his own reasoning for first considering the procedure. Beginning his narrative, Boylston states, "I began the Practice indeed from a short Consideration thereof; for my Children, whose Lives were very dear to me, were daily in danger of taking the Infection, by my visiting the sick in the natural Way."²⁷ But

²⁶ *Biographical Sketch of Dr. Boylston*, (Philadelphia: s.n., 1815), Countway Library of Medicine: Harvard University, page 70, sequence 4.

²⁷ Zabdiel Boylston, *An historical account of the small-pox inoculated in New England, upon all sorts of persons, whites, blacks, and of all ages and constitutions: with some account of the nature of the infection*

he continued on, despite “a Cloud of Opposers” as he described, “for the saving of Lives not regarding any, or all the menaces, and Opposition that were made against it.”²⁸

Like Mather, Boylston had to visit sick patients, becoming a receptacle for diseases that he could then bring back to his children. As such, he also feared for his children’s lives, searching for ways to mitigate the repercussions of his occupation, proving once again that parental anxiety over children’s well being with the addition of the desire to do good were both substantial reasons for going through with inoculation for Mather and Boylston alike. But in addition to these noted reasons, Boylston’s first large publication, published during the debates in 1721 and titled *Some Account of What is said of Inoculating or Transplanting the Small Pox*, offers an even clearer answer as to why Boylston and others experimented with a procedure that had no clear data to attest for its accuracy. Boylston, running through the lists of reasons why anti-inoculators were so against the procedure and offering responses, addresses denouncers accusations that inoculation made otherwise healthy people ill, thereby going against one of God’s commandments. To counter this, Boylston questions, “But an *Anxious Fear* of the Small Pox; is not this an *Evil Disease*? Especially when I have it so near to me, that ’tis next to

in the natural and inoculated way, and their different effects on human bodies: with some short directions to the unexperienced in this method of practice, (London: Printed for S. Chandler, at the Cross-Keys in the Poultry, MDCCXXVI [1726]; [Boston in N.E.]: Re-printed at Boston in N.E. for S. Gerrish in Cornhil, and and T. Hancock at the Bible and Three Crowns in Annstreet, MDCCXXX [1730]; Cambridge Massachusetts: Houghton Library, Harvard University), ii.

²⁸ Ibid.

a miracle if I escape it? If I take Physick only to *Remove and Prevent* this *Fear*, it can't be said that *I make myself sick before I have any disease*.”²⁹

While anti-inoculators, as noted in the previous chapter, described fear as a symptom of smallpox, the result of continuous impressions forged over decades in Boston, Boylston takes this metaphor one step further. Fear, as Boylston acknowledges, is not just a symptom, but also an “Evil Disease” in itself, one that required a remedy just like any other illness. For Boylston, Mather, and others who would either choose to inoculate themselves or support the procedure, this was surely a factor considered. Inoculation could ameliorate if not obliterate any long held fears and anxieties regarding smallpox, curing the disease of fear that crept up along with smallpox. And as more people went through with the procedure, becoming personally acquainted with inoculated persons, confidence grew.

Dennis Don Melchert in his 1974 dissertation, *Experimenting on the Neighbors: Inoculation of Smallpox in Boston in the Context of Eighteenth Century Medicine*, delves into the lives of those who went through with inoculation, ascertaining what sort of individuals went through inoculation. Although first hand accounts of the reasons why individuals willingly infected themselves with smallpox are not available like they are for Mather and Boylston, Melchert instead analyzes any data available on the individuals Boylston names in his history of inoculation in New England, piecing together their lives to come up with likely scenarios and groupings.

²⁹ Cotton Mather, *Some account of what is said of inoculating or transplanting the small pox*, (Boston: Sold by S. Gerrish at his shop in Corn-Hill, 1721; Cambridge, Massachusetts: Houghton Library, Harvard University), Sequence 30.

While Melchert breaks down the records of these individuals into four distinct groups, “The Faithful,” “the Prominent and the Educated,” “Harvard College,” and “The Last Decisions” to determine what sort of people were inoculating, Melchert’s data can simultaneously be used to inform how affective impressions were significant in individual’s decisions to go through with inoculation. As Melchert describes these groupings, those who went through the procedure within the first couple months of its introduction, Melchert contends, were those with direct ties to either Mather or other pro-inoculation ministers. After this initial connection with the church, as Melchert asserts, a trend becomes noticeable “of immediate family groupings and close relatives deciding to adopt the new practice” after witnessing relatives go through the procedure unharmed.³⁰ Thus examining the fifty-four individuals who were inoculated prior to the death of Mrs. Dixwell in late September, the first person to die from inoculated smallpox; Melchert determines that only twenty-eight families were involved. Melchert states:

Seven of these families (25%) remain unidentified. Of the twenty-one identified families, 100% were connected to the churches of the inoculation ministers; four of the twenty-one (19%) were either that of the inoculator’s or those of inoculation ministers; six of the twenty-one families (28.6%) contained either Deacons, ruling elders, or founders of the inoculation minister’s churches; and the remaining eleven of the twenty-one possessed at least one adult member of one of the churches of the inoculations ministers.³¹

To choose to inoculate took a lot of faith and confidence, something only certain families had on the eve of any substantial data being available on previous inoculations.

³⁰ Dennis Don Melchert, *Experimenting on the Neighbors: Inoculation of Smallpox in Boston in the Context of Eighteenth Century Medicine*, (Iowa City, Iowa: The University of Iowa, 1974), 198.

³¹ *Ibid.*, 221.

Examining the role of affect in these families' decision to inoculate offers some clarity as to why this particular group of people went into the practice.

But Melchert is not the only one to make these observations; physician William Douglass also mentioned this trend in a letter to a friend in London. Published in Boston in January of 1722, soon after the worst part of the epidemic was over, Douglass discusses the debate and his own contentions regarding the practice and its onset in Boston. Describing the first patients, Douglass writes, "At first it was Congregational, being almost confined to Mr. W—h's Heaters; then it spread among the Devotees of Dr. M. And Mr. C." But while the faithful were the first, Douglass subsequently noticed how, "lately many being buzz'd in the Ear with the great Losses sustained in the Natural Way, have as it were in Despair come into it."³² Douglass furthers this observation, describing how inoculation was debated within families who had recently lost a member due to the disease; an event that impressed regrets of opportunities missed. Douglass states:

One of the Mischiefs attending this Practice, is, Family Divisions and Heats. When GOD is pleased to take to himself some Relation, Servant or Slave in the natural Way, v.g. A Child; the Wife with Bitterness reflect on the Husband, telling him, Parson— says, Inoculation would have sav'd our dear Child. And how many afflict themselves, since wrought upon by the Inoculating Ministers, because of the Deaths of their near Relations?

While these individual's were bothered by the thought of inoculation potentially saving the recently deceased, Douglass contends "The late inoculated Deaths make these people more easy in their Minds. If Contentions arise say they in their Cases of Conscience, is no matter to them, because it was so in our Saviour's time."³³

³² William Douglas, "Inoculation of the Smallpox as Practised in Boston, Consider'd in a Letter to A— S— M.D. & F.R.S. In London," (Boston: Massachusetts Historical Society, 1936), 12-13.

³³ Ibid., 17.

Unmistakably, as both Melchert and Douglass contend, the first individuals to practice inoculation were those who had great faith in both Cotton Mather and the church, so much so to put their lives at risk. And while Melchert asserts that this faith was directly related to one's faith in God, Melchert's data paired with Douglass' observation also reveals how individuals impressed with confidence and fear were more willing to go through with the procedure.³⁴ For both those committed to the church and Mather, in addition to those who followed after a family member had gone through and survived inoculation, confidence had been impressed, forming a significant reason people inoculated. For the first individuals who were church members, the affective impression of the church, Mather himself, and the perceived power of God, which certainly impressed people with both confidence and fear, had, through circulation and multiple impressions, evoked confidence. When Mather and other ministers promoted a new, untested procedure, these devout, faithful church members felt confident in the ministers' ability to discern right from wrong in addition to discerning God's benevolence. In this way, the ministers and church were affective objects similar to smallpox's objects and signs that impressed fear when the disease first entered Boston, recalling past impressions through these signs. For them, the church, Mather, and God had not steered them wrong before, so why not believe in them now? As these first individuals survived the procedure, acting as proof for the next wave of inoculees, the next to go under the practice were those directly related to the previous. These people, those who had first hand knowledge and proof that the procedure worked, were more willing to go through with inoculation; inoculation had impressed confidence, confidence that they too could

³⁴ Ibid., 199.

survive smallpox, eliminating the symptom of fear that permeated each individual's existence when smallpox inevitably circulated once more.

After Mrs. Dixwell's death on September 23, which happened to coincide with a marked increase in smallpox mortality as the disease began to flourish in Boston, inoculation took a rapid downturn. During the month of October when 411 people died of smallpox, the month with the most fatalities, only five people went through with inoculation.³⁵ This contrasted with later accounts of the number inoculated during smallpox epidemics. As Fenn points out while discussing the later epidemic that erupted from 1775-1782 across much of the North America, individuals were more likely to get inoculated during the height of epidemics, in part because it became legal and accessible in certain New England and Southern colonies, but also because contracting the disease in the natural way seemed inevitable and the risks of inoculation worthwhile.³⁶ Analyzing the absence of inoculation during this period when the epidemic reached its peak from September through December, Melchert contends that fear paired with proof of smallpox's fallibility given Mrs. Dixwell's death, and the serious consequences of blindness and scarring another individual faced from inoculation, contributed to the lack of interest, as Melchert explains, "now a pro-inoculation decision contained an unmistakable element of gambling with one's life."³⁷

³⁵ Ibid., 214.

³⁶ Elizabeth Fenn, *Pox Americana: The Great Smallpox Epidemic of 1775-82*, (New York: Hill and Wang, 2001), 39. Fenn also discusses mandatory inoculation for soldiers during the Revolutionary War, a precaution that was used when the disease seemed inevitable. Inoculation would eventually be mandatory for all newly issued soldiers as the war went on, 49.

³⁷ Dennis Don Melchert, *Experimenting on the Neighbors*, 217.

This is undoubtedly true, as ministers had promulgated inoculation as an infallible, safe procedure, Mrs. Dixwell's death and the severity of another's bout with inoculated smallpox caused serious apprehension. One could no longer rely on faith alone, the impressions of confidence that the ministers and church had previously secured were now tainted with new data that attested otherwise. Inoculation had officially impressed fear into the already demonstratively fearful public as the emotion circulated with smallpox, ravaging Boston during the epidemic's peak. Going into inoculation was now an even weightier decision, begging the question of who would go into the procedure under these circumstances? Douglass offers some clues. Those who would undergo the procedure later typically had lost a relative in the common way, "despair" and fear being one reason for going through with inoculation. Melchert's data confirms what Douglass suspected. All five of those who went into inoculation during the height of the epidemic, according to Melchert, had direct ties to the church, but further, two of the five had witnessed a relative come safely through inoculation in addition to being the children of a father wanting their protection, while three of the five had lately lost a relative to smallpox in the natural way.³⁸ Clearly, impressions mattered. For those that did go through the procedure, the fear that smallpox impressed was more substantial than the fear that inoculation impressed. For them, inoculation was worth the risk.

Conclusion

Fear, given smallpox's affective potential and current impressions, was a significant factor impacting the ways in which individuals rationalized being for or going

³⁸ Ibid., 223.

through with inoculation. Whether these fears were related to the proximity of the disease given personal circumstances, as it was for Mather and Boylston, the desire to save one's children, which was surely a common desire, or the overall aspiration to do good and avoid widespread mortality, all led individuals to inoculation. For Inoculation would be a two-fold remedy for Bostonians in 1721, one that could cure fear while eliminating the "Violence, Rage and Hazard that we" as Boylston knew "are expos'd to in the *common way*."³⁹

While fear proved a decisive factor in both Mather and Boylston's decisions to move forward with the procedure, not having much data or experience, confidence in addition to fear would prove pivotal for people deciding to go through with inoculation after its initial onset. Whether pushed towards inoculation after the loss of a close relative, heightening fears after a close affective impression, or relying on their confidence in the church, or further gaining confidence through exposure to inoculation given personal associations going through the procedure, these individuals based their decisions on felt emotions given lived experiences and affective impressions. Whether these impressions were from smallpox, impressing fear, or from the church and relations, impressing confidence, these experiences influenced whether or not individuals went through with inoculation.

³⁹ Cotton Mather, "Some account of what is said of inoculating or transplanting the small pox," 26.

Chapter 3

Diagnosing the Disease: Anti-Inoculators Denunciation and Acceptance of Inoculation Given Affective Impressions

By the middle of January 1722, as smallpox was making an exit from Boston, William Douglass started begrudgingly to discuss how inoculation could potentially become an established practice to prevent smallpox. After months of quarreling with the ministers and inoculees, writing pamphlets and newspapers while heeding the physicians and public of Boston against the procedure, Douglass, in the letter to his friend, began to change his perception of inoculation in the midst of his continued opposition. Douglass wrote about the “rash and bold experiment,” describing how if it had been done under “better management,” inoculation could have yielded better results. Instead, Douglass expresses his condolences to the academic world and to the people the experiment could have saved, in his opinion, if not for the “promoter,” Cotton Mather, being “credulous and whimsical” while the “operator,” Boylston, “rash and unthinking.”¹ Despite this analysis of a botched, rash experiment, Douglass admitted on the following page that inoculation could prove useful to not only “Guinea traders,” who often became ill after smallpox broke out on any given ship, but to the larger population who often experienced smallpox and its ravages. But only “If the Dismal Consequences do not discourage us, by a vitiated Constitution of the Inoculated and their Progeny;” if not, Douglass estimated, “who knows but this may be so improved upon, as to become a Specifick Preventetive of the Small Pox, but it must first be allowed of by Act of Legislature... & prosecuted by

¹ William Douglas, “Inoculation of the Smallpox as Practised in Boston, Consider’d in a Letter to A— S— M.D. & F.R.S. In London,” (Massachusetts Historical Society: Boston, 1936), 19.

abler hands than Greek old Women, Madmen, and Fools.”² By 1730, any qualms

Douglass had about the procedure were nullified. Nearly a decade after the epidemic in 1721, when another smallpox epidemic erupted in Boston, Douglass fully conceded to the method, inoculating anyone who sought out the procedure.³

But how did Douglass come to this tentative conclusion in 1722, a conclusion that would lead him into the practice eight years later when the same epidemical conditions arose. After all, he had been so vehemently against the procedure at its outset, enough to convince both the selectmen and all of the physicians of Boston, except Boylston, to refute the practice. And Douglass was not the only one to come into the practice: by 1730, nearly all physicians offered the procedure, having inoculation as part of their skill set. Clearly, something changed, even by the end of January in 1722, to allow for Douglass’ concession. Analyzing the anti-inoculators contentions from their onset with Douglass at the helm to the end of May, when their position became mute in light of smallpox no longer looming as a threat offers a clue. Affective impressions and the emotions they produced would once again, as with the inoculators, play a decisive role in determining which individuals were against inoculation, and why these same individuals, Douglass in particular, would change their stance as smallpox exited and re-entered Boston in 1730.

Fear: The Affect of Medical Knowledge

² Ibid., 20.

³ Amalie M. Kass, “Boston’s Historic Smallpox Epidemic,” 37.

With inoculation acting for some as a remedy for fears and anxieties impressed by smallpox, why was there simultaneous public backlash against the procedure? Backlash that erupted into an explosive debate over the latter half of 1721. Looking to Douglass, the university-trained physician at the forefront of anti-inoculation pamphlets and articles, along with others who disagreed, offers a window into how fear and mistrust were decisive in anti-inoculator's decisions to denounce the procedure. Like Boylston, Douglass left no diary to trace his thoughts. But piecing together his interpretations of inoculation through pamphlets, given his known medical background, does allow for insight into the reasons why he was so against inoculation when it first appeared in Boston, and why he would eventually choose to inoculate years later.

Douglass' medical knowledge and history have been thoroughly investigated by both medical historians and scholars examining the inoculation debate. Physicians trained like Douglass through academic training and those trained like Boylston through apprenticeship agreed upon several basic tenets of corporeal physiology. The most important of these tenets was humoral theory, the theory that underpinned all others. Physicians accepted that the body was made up of four humors. These humors, which consisted of yellow bile, black bile, phlegm, and blood, were conceived as working together, keeping the body in equilibrium between the four humors thus meant a healthy body. When one of the four humors became out of sync with the rest, disease or illness would follow related to this disturbance of equilibrium.⁴ For example, if an individual had a cold, the resulting excess of phlegm via the nose and mouth meant an imbalance of

⁴ Dennis Don Melchert, *Experimenting on the Neighbors*, 35.

phlegm within the body. The cold was thus the bodies' way of putting the four humors back to their original, harmonious state.

This most basic tenet, humoral theory, was the foundation for all other medical theories, practices, and experimentation; a theory that was perceived as indisputable given its constant confirmation under medical observation. When physicians treated patients their goal was consequently in line with this theory, the physician did not cure the patient in the twentieth and twenty-first century definition of the word, but rather attended to the body's natural inclination to rid itself of bile matter. For smallpox, under the humoral theory, the physicians' job was to therefore examine the patient's natural ability to rid the body of the matter in the way most other persons did, watching for the typical stages that most other individuals went through on the days most others did. For example, when an individual did not break out in pustules by the fourth or fifth day after the first symptoms of smallpox, the physician's job was to make the rash appear through whatever means available. This typically involved exposure to heat, the most common remedy for inchoately developed smallpox pustules. Conversely, if an individual's pox did not begin to scab by the two-week mark, the patient was generally exposed to cooler elements to encourage the process. The physicians' job as a trained individual was thus to know the progression of each illness, and when to intervene in this progression when an individual's natural order was not on par with the more general observed order.⁵

While different schools emerged over the course of the late seventeenth through the end of the eighteenth century and beyond, as historian Dennis Melchert points out, each remained grounded in humoral theory, these alternate schools buttressing the

⁵ Ibid., 38.

centuries old philosophy. Melchert, whose work uncovers the “normal” medicine and periphery schools of medicine prevalent during the early eighteenth century, discusses accepted and widespread ideas surrounding medicine to understand why individuals were against inoculation given these ideas and standards. Examining them, Melchert contends that both the mechanical and chemical schools dominant in the early eighteenth century used new concepts given Newton’s laws of physical relationships to prove the “normal” science, humoral theory.⁶ Whereas the chemical school sought to elucidate the ways in which chemical processes worked within the body, forming the balance between the humors, the mechanical school ascribed the physical mechanics of the observable world to that of the body and the balance of the four humors. In both schools, experimentation and observation, like in the study of physical mechanics, reigned supreme in light of this turn, acting as a standard medical practice that guided trained physicians.

As a university trained medical physician recently arrived to Boston from Scotland, Douglass had medical standards that were stricter and more conservative than that of the apprenticeship-trained Boylston, reliant on these schools and principles grounded in research. Aligning with the mechanist school, Douglass, unlike Boylston, read academic journals and took experimentation very seriously, holding medical practices and research up to the criteria agreed upon by other learned physicians through the rigors of experimentation, criteria that had evolved over several decades. Under the principles agreed upon by mechanists were most obviously humoral theory and physics, but also by extension the agreed upon premise that preventative measures were

⁶ Ibid., 33.

impossible given what was known about the mechanics of humoral theory. For physicians like Douglass, a preventative measure for disease was inconceivable, as health was known to be a balance between the humors, a balance that was tentatively considered a product of a balanced life. Physicians thus promoted moderation in everything to achieve this equilibrium. The idea of different preventative measures for different diseases was therefore unimaginable under this most basic assumption.⁷ In light of these findings, Melchert contended the rules of mechanics, of humoral theory, and of medical observation all confirmed before the introduction of inoculation that such a preventative measure was an impossibility, but further, one that went against everything physician's such as Douglas knew to be true. Therefore Douglass along with other physicians who practiced within the realm of "normal" medicine, which was every physician in Boston, could not accept inoculation, producing vehement backlash against the procedure in 1721 Boston.

While historians have argued for the significance of medical knowledge in the rejection of inoculation, historians have not observed how this medical knowledge simultaneously affected fears impressed by smallpox specific to these understandings, fears that were incompatible with those of inoculators consequently forming a heated debate. Douglass' writings paired with the other anti-inoculators' offer a glimpse into these fears that were differently impressed given personal histories including medical knowledge in addition to smallpox's collective affective potential to impress fear given past histories.

⁷ Ibid., 44.

The contagious nature of smallpox, or its ability to spread from person to person, was one of the many ways smallpox circulated and impressed. As smallpox circulated, certain emotions became associated with specific objects, these objects then able to impress emotions themselves after perpetual circulation. These symbolic objects of contagion, which could be circulated and impressed through objects both literal and figurative such as soiled bedding, relations coming down with the illness, the bodies, alive or deceased, of those who were struggling or had struggled with smallpox, among other things, were one the ways in which fear was impressed into Bostonians, but even more so for learned men such as Douglass. Douglass, like other physicians, did not understand the cause of smallpox aside from the general knowledge learned through decades of observation that smallpox spread from person to person, and was certainly a threat from outside of the body, not from within, as was the case with illnesses such as colds or fevers. With this knowledge and the fears that contagious smallpox already impressed, inoculation exacerbated and impressed upon Douglass fears of not only the spread of contagious smallpox, but also of the consequent deaths via contagion this spread invited. Inoculation would thus serve as another affective object in smallpox's arsenal, smallpox fears easily sliding onto inoculation, as it was perceived as the literal spread of contagion. But these fears proved a significant factor determining anti-inoculators stance to denounce the procedure, as they were specific and contingent upon accepted medical understandings. For Douglass and other trained individuals, inoculation did not correlate with what had long been observed and accepted as fact, enabling a fortified front against the procedure observable centuries later.

Douglass and other anti-inoculator's fear of the spread of smallpox, a significant consideration grounding their main contentions against the procedure from the onset, was one that would inevitably end the practice by late May 1722. Douglass's first article in the *Boston News-Letter*, published in the wake of Boylston's initial experiments, serves as a first instance of the fear that inoculation impressed, and how this fear catalyzed the movement against the procedure. Analyzing the known knowledge of the contagious nature of smallpox and how this impressed fear upon the physician, underlines what became a trend in anti-inoculators writings: using the contagiousness of smallpox as a contention against the procedure.

While declaring Boylston's "rashness," in his letter, Douglass decries what he terms the "propagating" of the infection in the most public areas of town, those areas within which trade and people traversed regularly, but further those areas that were not currently overrun by smallpox or infected at all.⁸ While inoculation could potentially save the life of the inoculated individual, Douglass contended that inoculated smallpox was just as infectious as the common smallpox, to be feared just as smallpox in the common way was feared. Douglass wrote in retrospect at the end of January 1722, "We soon found it *infecting*; many have dyad of the Infection received from the Inoculated, whose *Deaths* in a great measure lies at the *Inoculators Doors*."⁹ Not only was the spread of

⁸ *Boston News-Letter*, July 10, 1721, Boston MA.

⁹ William Douglass, "Inoculation of the Smallpox as Practised in Boston," 11.

infectious smallpox immoral and anxiety provoking, Douglass offered, but further
 “Poysoning and Spreading infection, are by the penal laws of England Felony.”¹⁰

Samuel Grainger makes similar remarks in his own work, “The Imposition of Inoculation as a duty religiously considered in a leter [sic] to a gentleman in the country inclin’d to admit it.” Examining inoculation as a case of conscience, or rational thought, Grainger pins religious doctrine against inoculators’ rationalizations, undermining these reasonings through religious doctrine as well. Furthering Douglass’s contention that inoculation brought harm to those not under the procedure, Grainger begins his work by reminding inoculators and anti-inoculators alike when considering inoculation “if we are careful to bring some Arguments from Scripture to maintain it, we must be equally careful that it *opposes none* of the *Divine Truths*.”¹¹ Inoculators had been adamant about not only their right to inoculate but also their obligation given what reverend William Cooper, friend and fellow clergymen to Cotton Mather, described as “the law of self-preservation” in his own work, “A Reply to the Objections Made Against Taking the Small Pox in the Way of Inoculation from Principles of Conscience: in a letter to a friend in the country.”¹² This God given law to take any means to preserve one’s own life and body, in Cooper’s estimation, included inoculation, inoculation being a procedure that could potentially save life in cities overrun with smallpox. Grainger, responding to

¹⁰ Ibid., 13

¹¹ Samuel Grainger, “The imposition of inoculation as a duty religiously considered in a leter [sic] to a gentleman in the country inclin’d to admit it ...” (Boston in N.E.: Printed for Nicholas Boone, at the sign of the Bible in Cornhill and John Edwards, at his shop at the head of King-Street, 1721; Cambridge Massachusetts: Houghton Library, Harvard University), 2.

¹² William Cooper, “A reply to the objections made against taking the small pox in the way of inoculation from principles of conscience: in a letter to a friend in the country,” (Boston: Printed for S. Gerrish in Cornhill, and J. Phillips at the Stationers Arms near the town-dock, 1730), 19.

contentions like Cooper's, agreed that "IT IS LAWFUL TO SAVE LIFE, and a *duty* incumbent upon us," but Grainger added, "the Means us'd for the preservation of mine, must no ways offend or endanger my Neighbor's safety, for it is written, *Thou shalt love thy Neighbour as thy self.*"¹³

Anti-inoculator John Williams furthered Grainger's rationale, responding to anti-inoculator fears regarding the spread of disease that inoculation propagated. Williams' work, written as an answer to several pro-inoculation pieces by Increase Mather, Cotton Mather, and another anonymous writer, used pro-inoculation motifs, like Grainger's use of scripture, to refute inoculator's contentions and rationales. Using the same hypothetical scenario that inoculators had been using to suggest the benefits of inoculation to communities under the scourge of smallpox, what I term here "the fire scenario," Williams refuted one of the leading reasons inoculators went through with the procedure. The fire scenario set the scene of a fire breaking out in Boston. The narrator's house was not yet in flames, but the neighbor's house was, and thus proved an imminent danger. Inoculators questioned, should one wait for God's providence to prevent the house from setting on fire, or should one use reason and leave the house to save one's self from personal injury or death? Of course, inoculators made clear, one would never sit idly while their neighbor's house was on fire based on the assumption that God would protect them. Therefore under this same principle, if a neighbor's house had multiple people or even one person infected with smallpox, like if the house were on fire, one could not assume that God would protect them from contracting smallpox with the disease so imminent, reason had to be used. Inoculation was an answer to these problems.

¹³ Samuel Grainger, "The imposition of inoculation as a duty religiously considered," 2.

If your neighbors were infected with smallpox, you could inoculate and save yourself like running out of the house to avoid imminent fire.

Using this same fire scenario, Williams described a different scene with the same elements. Williams suggested that instead of the neighbor's house being on fire, the narrator set his own house on fire. Although meaning well, the flames regardless spread throughout the town, injuring innocent neighbors in the process. Thus Williams made clear, setting your own house on fire was just as much against reason as staying inside of your own house while your neighbor's was on fire. Purposely infecting yourself was therefore just as harmful to the town, contagion and fire moving just as swift and proving just as dangerous as the other.¹⁴

Douglass, Grainger, and Williams all denounced inoculation due to the procedure conferring the disease in the natural way to others who were not inoculated, thus spreading the disease and proving a risk to the community, a risk that impressed and circulated fears given medical knowledge of smallpox and the spread of contagion. But their denouncing of inoculation stemmed from another major facet that affected the impression of fear. This facet, observation and experimentation, aligned with not only common medical knowledge, but also the newly evolving field of mechanical physics. Physics put experimentation and observation above all else, and eventually this tenet became an essential principal for medical knowledge, treatment, and evolution. For

¹⁴ John Williams, "Several arguments, proving, that inoculating the small pox is not contained in the law of physick, either natural or divine, and therefore unlawful: together with a reply to two short pieces, one by the Rev. Dr. Increase Mather, and another by an anonymous author, intituled, Sentiments on the small pox inoculated: and also a short answer to a late letter in the New-England Courant," (Boston: Printed and sold by J. Franklin, at his printing-house in Queen-Street, over against Mr. Sheaf's school, 1721; Cambridge Massachusetts: Houghton Library, Harvard University), 4.

Douglass, a member of the mechanist school of medicine himself, the role of experimentation and observation in medicine remained an essential principle for his entire life. Douglass exhibits his championing of experimentation and observation while discussing inoculation, a procedure that in his opinion did not have a sound experimental pedigree, and one that therefore could not gain acceptance by the medical community due to its inability to be proven through observation. Dr. Sydenham, a highly regarded British physician, was a prime example for Douglass and other learned physicians of the established way to evolve treatments for patients that physicians could use without putting people's lives at risk while experimenting and observing. Through experimentation with patients, while maintaining a sound level of efficacy in treating the patient, Dr. Sydenham had developed what was called the "cooling regimen," a treatment for those infected with smallpox. Over years, Dr. Sydenham had mastered his treatment through slight adjustments on patient after patient, evolving a sound treatment through observation while taking care not to harm those under his care. The finished result was a regimen that helped the bodies' natural inclination to expound bile, poisonous matter, through exposure to fresh air and cooler elements while avoiding physician's previous tendencies to go overboard with treatments, harming the bodies' natural inclination to heal.¹⁵

When smallpox entered Boston and inoculation came to the front as a potential treatment, physicians and other learned men feared inoculation like the ministers, Boylston, and other inoculators feared smallpox. Trained by formal education at colleges,

¹⁵ *The Works of Thomas Sydenham, M.D., on Acute and Chronic Diseases; with their Histories and Modes of Cure with Notes, Intended to Accommodate them to the Present State of Medicine, and to the Climate and Diseases of the United States, by Benjamin Rush M.D.,* (Philadelphia: Benjamin and Thomas Kite No. 20 North Third-Street, 1809).

these learned individuals looked for observable data to prove the procedure worked.

Without such data, Douglass and other educated men influenced by the evolving field of physical mechanics could not accept inoculation. Inoculation rather forged affective impressions of fear that smallpox produced, circulating smallpox's affective impressions while fashioning the climate of fear. For those with medical knowledge and knowledge of the observable physical world, smallpox fears easily slid onto inoculation while inoculation fears easily slid back onto smallpox. Inoculation thus produced affective impressions of fear as real as those smallpox produced, predicated on known medical knowledge and past histories of smallpox. The fear that inoculation impressed given this absence of observable data in conjunction with the observed, known facts of smallpox, like its contagious nature, would prove another significant factor drawing Douglass and others to refute the procedure of inoculation.

As Douglass continued to wage his war against inoculation, the fear that inoculation impressed given known smallpox knowledge and the absence of data was a determining factor in his and other anti-inoculators opposition. On multiple occasions Douglass contended that the absence of experimentation and data paired with the way data had already been recklessly obtained, inoculating whoever wanted to be without seeing first to their medical health and what was in their best interest, warranted the procedure being banned. In his letter published in January of 1722 to his physician friend abroad, Douglass accounts for the reason why he “could not *at present* comply with this novel, rash, and dubious practice.”¹⁶ For Douglass, in his own words, “All solid and sound Philosophy, that is Natural History, is founded on observations made, and

¹⁶ William Douglass, “Inoculation of the Smallpox as Practised in Boston,” 13. Emphasis added.

experiments taken of the various actions and Influences of Natural Bodys on one another,” a principle directly taken from the study of mechanical physics. And he furthered, “I was always fond to go to this kind of Knowledge, especially as it related to Humane Bodies in a Healthy or Morbid state.” But Douglass drew a line over which he would not cross with human experimentation due to “two dear characters... a Good Citizen and Good Christian” and if these “could be dispensed with,” he confessed, “I should have been pleased to see some Thousands inoculated with several other Distempers as well as the Small Pox.” In short, experimenting on people without adequate knowledge was not morally, nor experimentally, sound. But even more so, the lack of experimentation and observation on human bodies was the reason why he feared and therefore could not comply “at present” to the procedure. If experimentation were conducted and observed in a manner that was morally and scientifically sound, Douglass implied, he too could accept the practice. Inoculation would then impress confidence instead of fear.

Douglass dispersed another publication that further solidified his stance against inoculation given his fears. In the first paragraph of the introduction to the published letter, Douglass discusses “the vile Personal Abuses” that have recently spread throughout the town, and the hopes of these contentions and abuses ending after inoculators had waned in their work to inoculate. Unfortunately this was not the case, Douglass “finding them still opposing the Endeavours used to caution the Town and Country against their rash and thoughtless procedure in a *Medical Experiment* of Consequence, they continuing on their *bare Word only*, to affirm it well vouched, prudently managed, of uninterrupted Success, and that the Ministers Pretensions to

Physick is as good as that of the ablest practitioners in the land.”¹⁷ The letter, he continued, was his attempt to call out the ministers, to tell the world that the procedure was not as safe as the ministers made it out to be. Proper experimentation in Douglass’s estimation had not been conducted, inoculator’s “bare word only,” could not be trusted. But Douglass further clarified, “The Experiment was called a *Humour*, [infatuation], (Fancy or Tryal),” in his last letter, “because we are not arrived to that Degree of certainty therein, that may be requisite to denominate it an *establish’d practice*.”¹⁸ Presumably, once a “degree of certainty” had been established, the medical community could meet the practice with acceptance.

But even once some degree of experimentation had been established in Boston by early August, the *New England Courant* published an anonymous piece that denounced the procedure. The *Courant* argued that many individuals had not seriously considered inoculation, only taking into account how invasive the practice was instead of the surmounting negative data. The *Courant* described how “to the Eye,” the procedure does not appear much worse than “Bleeding” or “Blistering,” and so at first glance individuals generally accept the process seeing inoculation as trivial. But the writer suggests that this surface level analysis prohibits serious consideration of “the Evidences of its dismal consequences,” which were multiplying as more people went through the procedure.¹⁹ This dismissal of pertinent data only further impressed fears for physicians who gathered

¹⁷William Douglass, “The abuses and scandals of some late pamphlets in favour of inoculation of the small pox, modestly obviated, and inoculation further consider’d in a letter to A- S- M.D. & F.R.S. in London ...” (Boston : Printed and sold by J. Franklin, at his printing-house in Queen-Street, over against Mr. Sheaf’s school, 1722; Boston, Massachusetts: Houghton Library, Harvard University), Sequence 11.

¹⁸ Ibid., Sequence 14.

¹⁹ *The New England Courant*, August 7, 1721, Boston MA.

that even once experiments were conducted, there was no guarantee that people would carefully consider the benefits versus risks of the procedure.

Anti-inoculator's fears of inoculation given known medical knowledge and the lack of observation and experimentation extended beyond those in immediate harms way, those being inoculated and their direct contacts threatened by smallpox too. As such, Douglass attempted on several occasions to spread word of the negative effects of inoculation abroad as declarations of its infallibility and success, then unproven, were also spreading throughout the town and abroad. And as these texts spread, proving a risk to communities informed by inoculator's data, fear was impressed through their circulation given learned men's knowledge. Shortly before Douglass's letters abroad, Benjamin Franklin wrote a letter to the publisher of the *New England Courant*, his older brother James Franklin, regarding inoculation. On December 11, 1721, the letter was published in the *Courant*, discussing the various ways in which inoculation was dangerous and should be stopped while pointing out what Franklin considered the facts of the procedure thus far that were being dismissed by inoculators. Writing about Mrs. Dixwell, the first individual to die from inoculated smallpox, Franklin describes how Dixwell's death was not due to "hystericks," as Boylston had concluded, but from the procedure she had undergone. Franklin outlined his opinion of inoculator's responses to Dixwell's death, "When it pleased God to shew them that she must depart this Life, notwithstanding their Infallible Remedy; Oh! Then they turn their Tones, and say truly, she dyed of Hysterick," even though "it is as certain as the sun shines at noon in a clear Day,

that she died of the Small Pox, which she received by inoculation.”²⁰ The experiment was not “infallible” as inoculators had touted and continued to proclaim, individuals could and did die under the procedure, deaths that further impressed fear as the news circulated.

While Douglass, Grainger, Williams, and Franklin had different ways of refuting inoculators’ contentions regarding the obligation to inoculate, these anti-inoculators held firm on their contention that inoculation was the purposeful spreading of disease and thus a threat to be feared. Although Grainger and Williams use scripture and reason to denounce inoculation, like Douglass, both had the underlying medical knowledge informing their fear of contagion and its inevitable spread if the procedure continued uninhibited and without caution. But this medical knowledge also predicated anti-inoculator’s fear of inoculation as the lack of experimentation and observation, a tenet of mechanical physics that was accepted as essential to the adoption of new medical treatments, came to the forefront. As this lack of data regarding the infallibility of inoculation became public knowledge and the known contagious nature of smallpox and subsequent deaths via inoculation were exposed, inoculation only further impressed fear. Fear that inevitably catalyzed anti-inoculator’s opposition to the procedure.

Mistrust: The Affect of Church Declension

For individuals such as Douglass, medical knowledge that included humoral theory, mechanical understandings of the body, and medical observation were essential to the ways in which smallpox and inoculation impressed upon them, effecting fears that

²⁰ *The New England Courant*, December 11-18, 1721. Boston MA.

impacted their decision to denounce the procedure. While medical knowledge effected negative affective impressions of smallpox and inoculation, mistrust in religion would also play a significant role. By the beginning of the eighteenth century, the church and once esteemed ministers such as Mather were losing their clout, as religion became more insignificant and religious diversification in the form of more religious sects more prevalent. In the same way that medical knowledge affected the way smallpox and inoculation impressed individuals who had this knowledge, mistrust in religion given past impressions of betrayed confidence paired with deep set religious beliefs would also affect how individuals, those with and without medical knowledge alike, were impressed by smallpox and inoculation. These past and current impressions of mistrust and fear would ultimately predispose individuals to denounce inoculation.

Over the latter half of the seventeenth century the church had experienced declension as the children of church members who had achieved half membership status under the half-way covenant never achieved full membership. The half-way covenant, established in 1662 as a measure to draw more people into a church already in decline, never achieved its intended goal of drawing more people into the church to eventually achieve status as elect members. While the half-way covenant granted the children of elect members, those who had experienced a profound religious encounters, some of the rights of these church members. These rights included some, such as the Lord's Supper, while prohibiting others, such as the taking of communion or voting. Regardless, half-way members resisted full membership, their children, the half member's offspring, consequently were born outside the church as half membership did not grant half-status to their children. While generations passed, the church became less significant for each

generation. As such, they pulled further away from the church, releasing ministers from their long-held authority. And as a more secular, inclusive arbitrary government was established in 1689, replacing the congregational government first established in Massachusetts in 1620 that required church membership as a prerequisite for voting, the church's membership only saw further decline.²¹

Paired with these institutional changes such as the half-way covenant, over time ministers old and new saw their authority slowly stripped over the course of the latter seventeenth into the early eighteenth century as the government changed. Church memberships and the voting rights encompassed within were no longer essential to life in the colony as arbitrary government succeeded church government, sealing the fate of the church. Under the new arbitrary government, any male head of household could vote, not just the church's elect, giving the less devout public a say in political affairs while shutting out religious authority in such matters. And as such, one could now live in Boston while remaining completely outside of church control. In addition to the decline in ministerial authority given governmental change and changes in the theocracy were the multiple events where the ministers had used their power and steered the flock in the wrong direction, and the ministers' current rejection of long held religious beliefs such as God's providence and loving thy neighbor. These included the persecution of the Quakers in 1662 and the Salem Witch trials in 1692 where innocent people were put to death with not only the ministers' approval, but also their encouragement, and the ministers' dismissal of God's bringing upon sinful communities trials such as disease during the smallpox epidemic in 1721 and the role of repentance within the community to

²¹ Perry Miller, *The New England Mind*, 173-185.

dissipate these trials. All of these factors on the eve of inoculation ultimately impressed mistrust and fear, influencing the ways in which the ministers' touting of inoculation was perceived by a flock weary of ministerial authority and intervention in light of half a century of decline.

While Douglass was not a religious man and other anti-inoculators such as Grainger and Williams were not particularly devout, these men did have an interest in pointing out the ministers' flawed religious logic that undermined established tenets of theology, in the process buttressing learned men's claims of authority over ministers' diminishing authority. One of the major religious doctrines that inoculation disregarded was God's religious providence, or his deliberate intervening in the world to cast damnation on sinners, both individual and communal. Douglass had asked derisively in his initial writing on inoculation in the *Newsletter*, "how the trusting more the extra groundless Machinations of Men than to our preserver in the ordinary course of nature, may be consistent with that Devotion and Subjection we owe to the all wise Providence of GOD Almighty?"²² Douglass, though not devout, understood that the ministers had put their faith in a procedure devised by man rather than repentance and the body's natural ability to heal ordained by God, the usual "course of nature." Mather and other pro-inoculation ministers such as William Cooper, Benjamin Colman and even Boylston had suggested that inoculation was not consistent with the accepted general acts of providence such as disease, drought, and fire among other things, but rather a gift of providence, a procedure revealed to the ministers in order to avoid the ravages imposed by God through smallpox.

²² *Boston News-Letter*, July 20, 1721, Boston MA.

Despite these assertions, the public could not be so easily persuaded away from the firmly entrenched belief that God purposefully intervened in the world in order to instill repentance in sinful people and populations, a fact that could not be reconciled with newly conceived ideas of inoculation being an act of providence, as inoculation inhibited rather than encouraged repentance as the procedure eliminated fears of God's intervention. An unknown author writing under the pseudonym "Frank Scammony" furthered Douglass's questioning of how much the practice of inoculation was in accordance with God's providence after the ministers' assertions dismissed decades of past impressions of confidence affected by God's benevolence that confirmed the most effectual way to rid the population of disease was repentance. On August 17 in the *Courant* the author explained how "epidemical distempers," such as smallpox "more immediately proceed from a Divine stretched out Arm, and are sent as Judgments from an angry and displeased God." This was a fact. Thus, the writer furthered, "they require a different Physick, a different Way of Prevention being the Marks of the greatest displeasure, so they call for the greatest humiliation, the strictest observation of the duties of Repentance." Only through observed repentance and "contemplation of the Divine Judgments" could God relieve those afflicted leaving in its wake a more religiously awakened population, one cleansed not just physically, but spiritually. Scammony did not give a resounding conclusion, but alluded to inoculation inhibiting the moral initiative. While, in his estimation, the legislators calling for a fast "abounds with a true Christian Spirit and Concern disease...How far Inoculation suits with this Directory, and how far it

helps us to meet the Lord in the way of his Judgments, is beyond my Ability to determine.”²³

By the latter part of 1721 anti-inoculators such as Samuel Grainger were quick to assert rather than question or allude to the fact that inoculation went against God’s providence by eliminating all calls for repentance and removing individual and communal fears of divine persecution. Grainger agreed with inoculators “it is granted *lawful* to use means for our *preservation* from a *Desolating Judgment*,” but furthered, “provided such means be *warranted by God’s Word*.” While the ministers and other inoculators claimed that inoculation was a divine gift of God’s providence, similar to their claims that inoculation was an infallible method, Grainger prodded, “I entreat you Sir, and produce if you can, *any other appointed means* for preventing or removing a *National Judgment*, than that of a *National Repentance* and *Reformation*. And I hope you’ll allow the best means of deliverance from national calamities, are those of *Gods appointment*, not our own.”²⁴ Grainger concluded that inoculation or any other “Preventive Physick” could not possibly work against a national divine judgment, “for were it so, Wicked and Atheistical Men would have the same terms and conditions of *Security* in a *Physical Respect*, with the most Holy and Religious. And *National Judgments* would not have the designed ends for which they were sent *National Amendment*.”²⁵ The message was clear, national judgments could only be ameliorated

²³ *The New England Courant*, August 21-28, 1721. Boston MA.

²⁴ Samuel Grainger, “The imposition of inoculation as a duty religiously considered in a letter [sic] to a gentleman in the country inclin’d to admit it ...” (Boston in N.E. : Printed for Nicholas Boone, at the sign of the Bible in Cornhill and John Edwards, at his shop at the head of King-Street, 1721; Boston Massachusetts: Houghton Library, Harvard University), 4.

²⁵ *Ibid.*, 9.

and dissipated completely through national repentance and amendment from sin. In this way, inoculation could, in Grainger's opinion, override God's providence. And anything that could do so was clearly not God ordained, and thus the ministers were not to be trusted, to use Douglass's words, on their "bare word only."

As anti-inoculators forged assertions grounded in widely impressed mistrust of religious authority and opinion, current and previously formed, ministers continued to go against established religious tenets such as providentialism. In the process, the ministers fortified learned men's own authoritative claims while diminishing their own notoriety by promoting ill-fated "infatuations," further impressing mistrust and fear. These "infatuations," or pronunciations swaying the congregation in one direction or another on any given matter, included the persecution of the Quakers and the Salem Witch trial, and in Douglass's estimation now inoculation. Over the course of the inoculation debate from June 1721 to late May 1722 Douglass reiterated on several occasions how the ministers' touting of inoculation was an infatuation, a passing movement not to be trusted. On August 7 a piece by Douglass published in the *Courant* questioned, "Is this [inoculation] no more than Bleeding or Blistering? *Infatuation* I think is like to be as *Epidemick a Distemper of the Mind*, as at present the small Pox is of the natural Body."²⁶ A week later Douglass would publish once again in the *Courant* reiterating his rationale against the procedure, "Finding the Infatuation of the ingrafting of the Small Pox not altogether stifled."²⁷ By the middle of January 1722 Douglass made clear his assessment of this "infatuation" in relation to others in the past. Douglass explained:

²⁶ *The New England Courant*, August 7, 1721, Boston MA.

²⁷ *The New England Courant*, August 14-27, 1721, Boston MA.

All Countrys or Bodys Politick, (our own Mother Country not excepted) have been subject to Infatuations: These in this Country seem always to have proceeded from some of those who call themselves Sons of Levi, The Persecution of the Quakers about the year 1658, the hanging of those suspected of Witchcraft, about the year 1691, &c and Inoculation or Self-Procuring the Small Pox, in the year 1721, and to speak like an Astronomer, or rather in the manner of D. C. C. Infatuation seems to return to us after a Period of about Thirty Years, viz. From the Massachusetts-Bay being colonized Anno 1628, to the Persecution of the Quakers, Thirty Years, and so from Infatuation to Infatuation.²⁸

Past impressions during these previous “infatuations” impressed a perceived future of the ministers’ ultimately being incorrect, impressing mistrust. Douglass only vocalized this association, pointing out that the ministers had been wrong before and would likely be wrong again. By simultaneously turning over one of the most established tenets of Puritan theology, God’s intervention in the world to encourage an immoral population to repent, while highlighting previous “infatuations,” anti-inoculators emphasized how the ministers not only impressed fear and mistrust, but also degraded their already waning authority. By preying on the ministers’ past and current impressions with the public, anti-inoculators forged their own authority, while simultaneously impressing upon a public that ministers were to be feared and not to be trusted. And as the ministers continued in their pursuit to make inoculation a favored medical practice, they themselves assured that inoculation would be met with disapproval by a public weary of ministerial intervention. The ministers’ ability to impress mistrust outweighed any credibility that experimentation could, ensuring backlash.

Conclusion

²⁸ William Douglass, “Inoculation of the Small Pox Consider’d,” A2.

Even though Douglass never ceased in his dislike of Boylston or Mather, he eventually had to concede given the facts that inoculation worked. Experience reigned supreme. Impressions mattered. In 1721 as inoculation was first introduced into Boston, the communal histories related to the church and accepted medical knowledge could not allow for inoculation to be accepted, an argument historians have made. But further, inoculation could not be accepted due to the affective impressions, impressions that were ultimately significant in whether or not individuals were against the procedure. For doctors formally trained by university and those trained by apprenticeship alike, medical knowledge acquired over decades informed immediate affective impressions with inoculation. Inoculation being the giving of smallpox to oneself, all of the knowledge and affective impressions of smallpox easily slid onto inoculation. Inoculation thus became another affective object of smallpox, one that impressed fears in individuals with medical knowledge of the contagiousness of the disease in conjunction with humoral understandings of the body. In addition to immediate affective impressions of fear that inoculation fueled, the system with which inoculators experimented with inoculation only further impressed fear as the strict standards associated with medical experimentation and observation that reigned supreme due to the evolution of mechanical physics were disregarded. All of these factors fueled a climate of fear that forged the medical community's decision not to inoculate.

While medical knowledge predicated inoculation's effectiveness to impress fear, the church's decline including the wane of ministers' authority further cemented impressions of distrust that would be just as decisive in peoples' decision to refute inoculation. By 1721, the ministers had lost the control and authority they once

maintained over the population as church membership became less important to life in the colony. As the ministers began to tout inoculation, mistrust was impressed as one major religious tenet, providentialism, was altered in order to promote the procedure and their own stance, putting aside centuries of belief. As they did so, anti-inoculators were quick to use ministers' assertions to forge impressions of mistrust with the public the buttressing their own authority. But lastly, past impressions during other "infatuations," as Douglass termed them, had already affected mistrust in the public, as the ministers had been wrong before, and could surely be wrong again. As these past histories became present and alive as perceived futures, fear and mistrust was impressed.

By the time the next epidemic came to Boston in 1730, the public and even Douglass were willing to go through with or perform inoculation. While medical knowledge did not really change to warrant a drastic alteration in inoculation's impression of fear, the gathering of sound experiments and observation over the past decade had impressed confidence that the procedure worked. Douglass himself had to agree; and that data would prove significant to general public adoption by 1730. Paired with this acquired data was also a disassociation of inoculation with the church and specifically with ministers. But further, the impressions of mistrust still mattered in this disassociation. As the ministers became more distanced from the procedure, their ability to impress mistrust still thriving as their decline in authority continued, a more secular public could more easily accept inoculation. Ultimately even the staunchest opponents could accept inoculation once inoculation impressed confidence rather than mistrust, and as the ministers slowly let go.

Conclusion

The Affective Aftermath

Fear was a decisive factor in the debate surrounding inoculation in Boston in 1721-22. Whether these fears were of smallpox in the common way and the death and destruction the disease could deliver or fear of inoculation itself spreading disease in the common way, fears determined whether or not individuals would support or oppose inoculation. For individuals who promoted inoculation, fear of the death and destruction smallpox delivered in the common way in part determined their support of the procedure. While those who feared inoculation feared the practice for the lack of experimentation and observation necessary to convince those who adhered to the rules of mechanical physics of its infallibility. In addition to these distinct fears that smallpox and inoculation impressed, confidence and mistrust in religious authority were also determinants of whether individuals were for or against inoculation as the church declined, leaving some with impressions of confidence and others with impressions of mistrust. In the end, the ways in which inoculation impressed upon individuals either fears or confidence given knowledge and experience was a significant reason why the procedure generated a heated debate. And it would take a shift in the ways people were impressed given past experiences and knowledge in order for inoculation to be accepted by the more general public. By 1730, this shift had occurred as experimentation and data impressed confidence while the ministers' removal of themselves from the debate allowed more people to come into the practice without religious impressions attached.

Today, in a world where smallpox no longer exists outside of the Center for Disease Control freezers in Atlanta, Georgia and the State Research Center of Virology and Biotechnology Vector freezers in Koltsovo, Russia, smallpox no longer poses such an immediate threat as the disease once did in colonial times. And especially after eradication, smallpox no longer impresses fear as its potential as a future reality became null in the 1980s, and collective memories of past impressions with smallpox have been largely forgotten. But in a post 9/11 world, where terrorism is not only a potential threat but an expected reality, fears of smallpox have once again come to the forefront as biological warfare is an expectation rather than a threat. In light of these new perceived realities, smallpox is once again impressing fears, with questions regarding whether or not to reinstate widespread vaccination surfacing with them. Now the questions that once resounded around the procedure of inoculation are surrounding vaccination, another preventative measure that is not without risk, and is evaluated for its own risks versus benefits.

In the weeks after 9/11, newspapers began to highlight the fear impressed by events, outlining the expectant threat smallpox posed and how inadequately prepared Americans were for a biological attack. Less than two weeks after the attacks, one headline in the *New York Times* read, on September 23, "THE BIOLOGICAL THREAT: Nation's Civil Defense Could Prove to be Inadequate Against a Germ or Toxic Attack," with the subhead, "Doctors are on alert for unusual diseases and illnesses." Another *New York Times* opinion piece written by Maureen Dowd, columnist for the *Times*, published a piece titled, "Autumn of Fears," on the same day. The article read "Mr. Bush promised... to draw a line in the sand. But how do you draw a line in a maze? How can

you be definite in these mists—smallpox and anthrax and shape-shifting suicide bombers?” Just three days later the *Times* published another article that questioned the mayhem that imagined hypothetical situations catalyzed by the attacks and their affective impressions created, and the probability of these situations themselves. The author pointed out that despite the attacks and media heightening fears, “nothing that happened on Sept. 11 has changed the underlying reality that biological and chemical weapons are extremely difficult to make and disperse.”¹ Yet despite this expressed difficulty, the writer continues that, “although opinions differ widely on whether biological or chemical attacks are likely in the foreseeable future, virtually all experts agree that the United States needs to strengthen its defenses,” and approved of the official grounding of crop dusters in the days after the attacks for fears that these planes could disperse biological hazards. The message was clear: the United States is not prepared, and no matter how unlikely a biological attack, measures needed to be taken to ensure Americans’ safety.

The United States government delivered, for the most part, as measures were swiftly put in place without much debate given the fear impressed by the attacks. America’s borders were made more secure as airports cracked down on security, mail was put under higher scrutiny, and vaccines were stockpiled in the unlikely case that contagion reached and spread throughout the population. One of the vaccines stockpiled in the wake of 9/11’s affective aftermath was the smallpox vaccine; a vaccine for a disease eradicated over two decades prior. And by 2004, the United States had stockpiled some 95 million doses of the vaccine. But with the stockpile came other questions predicated on a population slowly rebelling against vaccines in the wake of scientific

¹ “The Specter of Biological Terror,” *The New York Times*, September 26, 2001, accessed April 1, 2015, <http://search.proquest.com.proxy.libraries.rutgers.edu/docview/91997334?accountid=13626>.

studies that voiced the potential connection between autism and vaccines. Should the government start compulsory vaccination for smallpox despite the disease being eradicated? And further, are the known risks of the vaccine, including but not limited to eczema, inflammation of the brain, and cardiac artery disease, worthwhile considering the risk of contracting the disease through biological warfare?²

While some argued that it was better to be safe than sorry, and others that the side effects of the vaccine itself did not warrant such action, in the end the general public did not get vaccinated despite a government program, the National Smallpox Vaccination Program, being put in place to do so in 2003. The program itself involved three phases, the first of which was to vaccinate 500,000 health personnel at hospitals across the country, who would care for sick individuals in case of a biological attack; the second of which was first response personnel, such as policemen, firemen, and paramedics, to be completed over the following year after phase one; and the third phase extended the vaccine out to the general public. But by 2004, the program slowly decayed until its existence diminished completely after only 38,000 health care workers agreed to vaccination despite government encouragement.³ For health care workers, first responders, and the general public alike, there were various concerns warranting opposition to the vaccine. In surveys done in the aftermath of the program, healthcare workers and civilians offered responses to the question, would you be willing to vaccinate for smallpox? Out of the 1,895 respondents of a survey dispersed to health care

² For information on the long-term side effects of smallpox vaccination see The Centers for Disease Control and Prevention Website, "Emergency Preparedness and Response: Smallpox," The Center for Disease Control and Prevention, accessed April 20, 2015. <http://www.bt.cdc.gov/agent/smallpox/>.

³ David M. Ackman and Daniel J. Kuhles, "The Federal Smallpox Vaccination Program: Where Do We Go From Here?," *Health Affairs*: (2003 Jul-Dec): W3-503.

workers in July 2003 and April 2004, 723, or a little over thirty-eight percent, were not willing to vaccinate themselves for health reasons. Out of these respondents, interest in protecting someone at home was the leading reason (14.8%), while more than half of respondents who declined for health reasons (54.8%) “Were somewhat or very concerned about side effects.” Even those who had no health reasons not to go through with the vaccine had hesitations, the leading reasons being “concerns about side effects (20.6%) and not feeling that the risk of outbreak was high enough (19.5%).”⁴ When the Philadelphia County District Courthouse conducted another survey in 2004 on the more general public in the city, responses were similar. Although the survey analyzed the difference between African American and White survey responders, the overall response is still clear. When two different surveys were conducted, one asking if respondents would go through with pre-vaccination before a smallpox outbreak, and one asking if respondents would vaccinate in a post-outbreak situation to cut off the transmission of the disease through cutting off the supply of available hosts, individuals both white and black were more willing to vaccinate in a post-outbreak scenario. Whereas 66% of white respondents were willing to receive pre-vaccination along with 54 % of blacks, 84% of white and 88% of blacks agreed to vaccination given a post-outbreak scenario.⁵ Those conceiving of smallpox alive and well as a future reality, like the inoculators in 1721

⁴ Pascale M. Wortley et al, “Healthcare Workers Who Elected Not to Receive Smallpox Vaccination,” *American Journal of Preventive Medicine*, 30:3 (March 2006): 258–265.

⁵ Ellyn Micco et al, “Differential Willingness to Undergo Smallpox Vaccination Among African-American and White Individuals,” *Journal of General Internal Medicine* 19.5 Pt 1 (2004): 451–455. *PMC*. Web. 8 Apr. 2015.

Boston, were therefore more willing to vaccinate than those only perceiving a threat paired with the known risks, like anti-inoculators.

After decades without smallpox in conjunction with the fear the vaccine itself impressed, the power of smallpox to impress fear diminished, even in light of the attacks on 9/11. Like the debate surrounding inoculation in 1721-22 Boston, impressions paired with individual knowledge were significant influences for people determining whether or not to vaccinate. Both individual and communal past and present affective impressions continually circulated and impressed by disease therefore matter in debates surrounding preventative measures and treatment. But further, affective impressions matter for not only decisions regarding disease, but also decisions revolving around polarizing issues or moments of trauma more generally. Future work could examine the ways in which affective objects and their impressions were significant in the past, and are significant now in current events. Some such events include the attacks on 9/11 briefly discussed here and the political decisions made directly in its aftermath, the current vaccination and police brutality debates, or looking back, prohibition in the early twentieth century, the American revolution in the eighteenth, and King Philip's war in the seventeenth. For example, liquor and drunkenness likely impressed confidence and happiness in some while fear in others during prohibition. The American Revolution likewise probably impressed different emotions for different people, the British impressing confidence in some and fear in others for various reasons. And lastly, King Philip's war, a very deadly war between the local Indians and Puritan settlers, impressed fear all around, likely effecting how individuals interacted with one another on multiple issues. By reevaluating these events with an eye towards the ways in which affective impressions were

significant, new insights can be potentially gained, opening avenues through which to view and evaluate emotions and emotional climates.

Bibliography

Primary Works Cited

Biographical Sketch of Dr. Boylston. Philadelphia: s.n., 1815. Countway Library of Medicine: Harvard University.

Boston Gazette, July 15, 1721. Boston, MA.

Boston Gazette, July 31, 1721. Boston, MA.

Boston News-Letter, December 19-26, 1720. Boston, MA.

Boston News-Letter, July 10, 1721. Boston, MA.

Boston News-Letter, July 10-17, 1721. Boston, MA.

Boston News-Letter, July 20, 1721. Boston, MA.

Boston News-Letter, May 27, 1721. Boston, MA.

Boston News-Letter, Nov. 20-27. Boston, MA.

Boston News-Letter, Sept. 4-11, 1721. Boston, MA.

Boston News-Letter, Sept. 18-25, 1721. Boston, MA.

Boylston, Zabdiel. *An historical account of the small-pox inoculated in New England, upon all sorts of persons, whites, blacks, and of all ages and constitutions: with some account of the nature of the infection in the natural and inoculated way, and their different effects on human bodies : with some short directions to the unexperienced in this method of practice*. London: Printed for S. Chandler, at the Cross-Keys in the Poultry, MDCCXXVI [1726]; Boston: Re-printed at Boston in N.E. for S. Gerrish in Cornhil, and and T. Hancock at the Bible and Three Crowns in Annstreet, MDCCXXX [1730].

Cooper, William. "A reply to the objections made against taking the small pox in the way of inoculation from principles of conscience: in a letter to a friend in the country." Boston: Printed for S. Gerrish in Corn-hill, and J. Phillips at the Stationers Arms near the town-dock, 1730.

Diary of Cotton Mather, Volume II. New York, United States of America: Frederick and Ungar Publishing and Co.

Diary of Samuel Sewall, 1674-1729, Vol. V. Boston: Massachusetts Historical Society, 1878.

Douglass, Willaim. "Inoculation of the Smallpox as Practised in Boston, Consider'd in a Letter to A— S— M.D. & F.R.S. In London." Boston: Massachusetts Historical Society, 1936.

Douglass, William. "The abuses and scandals of some late pamphlets in favour of inoculation of the small pox, modestly obviated, and inoculation further consider'd in a letter to A- S- M.D. & F.R.S. in London ..." Boston: Printed and sold by J. Franklin, at his printing-house in Queen-Street, over against Mr. Sheaf's school, 1722.

Fisher, John D., M.D. *Description of the Distinct, Confluent, and Inoculated Smallpox, Varioloid Disease, Cowpox, and Chickenpox*. Boston: Wells and Lilly, Court Street, 1829.

Grainger, Samuel. "The imposition of inoculation as a duty religiously considered in a leter [sic] to a gentleman in the country inclin'd to admit it ..." Boston in N.E.: Printed for Nicholas Boone, at the sign of the Bible in Cornhill and John Edwards, at his shop at the head of King-Street, 1721.

Mather, Cotton. *An account of the method and success of inoculating the small-pox, in Boston in New-England*. London: Printed for J. Peele, MDCCXXII [1722].

Mather, Cotton. *Some account of what is said of inoculating or transplanting the small pox*. Boston: Sold by S. Gerrish at his shop in Corn-Hill, 1721.

New England Courant, August 7, 1721. Boston, MA.

New England Courant, August 14-27, 1721. Boston, MA.

New England Courant, August 21-28, 1721. Boston, MA.

New England Courant, December 11-18, 1721. Boston, MA.

Publick Occurences, September 25, 1690. Boston, MA.

Stamford Mercury, November 9, 1721. Stamford, Lincolnshire.

"The Specter of Biological Terror." *The New York Times*, September 26, 2001, accessed April 1, 2015.
<http://search.proquest.com.proxy.libraries.rutgers.edu/docview/91997334?accountid=13626>.

The Works of Thomas Sydenham, M.D., on Acute and Chronic Diseases; with their Histories and Modes of Cure with Notes, Intended to Accommodate them to the Present State of Medicine, and to the Climate and Diseases of the United States, by Benjamin Rush M.D. Philadelphia: Benjamin and Thomas Kite No. 20 North Third-Street, 1809.

Thirteenth Report of the Record Commissioners, Records of the Select Men 1716-1736. Boston: Rockwell and Churchill, City Printers, 1885.

Williams, John. "Several arguments, proving, that inoculating the small pox is not contained in the law of physick, either natural or divine, and therefore unlawful: together with a reply to two short pieces, one by the Rev. Dr. Increase Mather, and another by an anonymous author, intituled, Sentiments on the small pox inoculated: and also a short answer to a late letter in the New-England Courant." Boston: Printed and sold by J. Franklin, at his printing-house in Queen-Street, over against Mr. Sheaf's school, 1721.

Secondary Works Cited

Ackman, David M. and Daniel J. Kuhles. "The Federal Smallpox Vaccination Program: Where Do We Go From Here?" *Health Affairs* (2003 Jul-Dec): W3-503.

Ahmed, Sara. *The Cultural Politics of Emotion*. New York: Routledge, 2004.

Blake, John B. "The Inoculation Controversy in Boston: 1721-1722." *The New England Quarterly* 25:4 (Dec., 1952): 489-506.

Burton, John B. "'The Awful Judgments of God upon the Land': Smallpox in Colonial Cambridge, Massachusetts." *The New England Quarterly* 74:3 (Sept., 2001): 495-506

Centers for Disease Control and Prevention. "Emergency Preparedness and Response: Smallpox." Accessed April 20, 2015. <http://www.bt.cdc.gov/agent/smallpox/>.

Fenn, Elizabeth. *Pox Americana: The Great Smallpox Epidemic of 1775-82*. New York: Hill and Wang, 2001.

Gronim, Sara Stidstone. "Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century." *Bulletin of the History of Medicine* 80:2 (2006): 247-268.

Hall, David D. *World of Wonder, Days of Judgment: Popular Religious Belief in Early New England*. Cambridge Massachusetts: Harvard University Press, 1989.

- Hopkins, Donald R. *Princes and Peasants: Smallpox in History*. Chicago and London: The University of Chicago Press, 1983.
- James, Harold. "The New York Stock Market Crash of 1929." In *Fear Across the Disciplines*, edited by Jan Pamper and Benjamin Lazier, 132-147. Pittsburg, PA: University of Pittsburg Press, 2012.
- Kass, Amalie M. "Boston's Historic Smallpox Epidemic." *Massachusetts Historical Review* Vol. 14 (2012): 1-51.
- Kennedy, Lawrence W. *Planning the City Upon a Hill: Boston Since 1630*. Amherst: The University of Massachusetts Press, 1992.
- Melchert, Dennis Don. *Experimenting on the Neighbors: Inoculation of Smallpox in Boston in the Context of Eighteenth Century Medicine*. Iowa City, Iowa: University of Iowa Press, 1974.
- Micco, Ellyn, Andrea D Gurmankin, and Katrina Armstrong. "Differential Willingness to Undergo Smallpox Vaccination Among African-American and White Individuals." *Journal of General Internal Medicine* 19:5 Pt 1 (2004): 451-455.
- Miller, Perry. "The Judgment of the Smallpox" in *The New England Mind: From Colony to Province*. Cambridge, MA and London, England: The Belknap Press of Harvard University Press, 1953: 345-366.
- Minardi, Margot. "The Boston Inoculation Controversy of 1721-1722: An Incident in the History of Race." *The William and Mary Quarterly* Third Series, 61:1 (Jan., 2004): 47-76.
- Morgan, Edmund. *The Puritan Dilemma*. Toronto and Boston: Little Brown and Company, 1958.
- "Nova Et Vetera. The Great Plague of Marseilles." *The British Medical Journal* 1:2054 (May 12, 1900): 1172-1173.
- Rosenberg, Charles E. *The Cholera Years: The United States in 1832, 1849, and 1866*. Chicago and London: The University of Chicago Press, 1962, 1987.
- Selected Letters of Cotton Mather, compiled with commentary by Kenneth Silverman*. Baton Rouge: Louisiana State University Press, 1971.
- Ulrich, Laurel Thatcher. *Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650-1750*. New York and Toronto: Oxford University Press, 1982.

Van De Wetering, John E. "God, Science, and the Puritan Dilemma." *The New England Quarterly* 38:4 (Dec., 1965): 494-507.

Van De Wetering, Maxine. "A Reconsideration of the Inoculation Controversy." *The New England Quarterly* 58:1 (Mar., 1985): 46-67.

Wortley, Pascale M., Benjamin Schwartz, Paul S. Levy, Linda M. Quick, Brian Evans, and Brian Burke. "Healthcare Workers Who Elected Not to Receive Smallpox Vaccination." *American Journal of Preventive Medicine* 30:3 (March 2006): 258–265.

Curriculum Vitae

Hannah C. DeGenova

Born

June 19, 1991.

Pomona, New Jersey.

Education

Secondary School

Southern Regional High School, 2005-2009.

Manahawkin, NJ.

College

Drew University, 2009-2013.

Madison, NJ.

Bachelor of Arts in History with Honors.

Publications

Carried Aside Into the Pathes of Darkness: Puritan Church and Court Sanctions in Colonial Massachusetts. Madison, New Jersey: Drew University, 2013.