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A Latter-day Disease: Mormons and Cholera in the Nineteenth Century

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Abstract

Nineteenth-century America saw the emergence of two seemingly parallel entities - the epidemic disease of cholera and the Church of Jesus Christ of Latter-day Saints, better known as the Mormon faith. To understand the intersection of Mormons and cholera, one must look within the interdisciplinary framework of Civil War-era history, religion, and epidemiology. Cholera epidemics in 1832 and 1849 coincided with the mass Mormon migration west, causing great suffering and death for Mormons traveling by land and sea. While their westward exodus exposed them to cholera, their religious teachings also contributed to why they contracted the disease. The Word of Wisdom, their religious doctrine received as a revelation from God, prohibited the consumption of "hot drinks," referring to boiled water, tea, and coffee, and "strong drinks," referring to alcoholic beverages. These drinks all have anti-cholera properties, and if consumed, could have alleviated cholera's impact among the Mormon population and protected them from infection. In this paper, I will examine the unique relationship between cholera and the Mormon faith, and I will argue two specific tenets - that cholera helped shape Mormon history demographically and geographically, and that the Mormon religion itself affected this group's understanding of the disease and also made them more vulnerable to contracting and succumbing to it.

Keywords

mormons, cholera, joseph smith, disease, epidemic

Disciplines

Epidemiology | History of Religion | History of Science, Technology, and Medicine

Comments

Written for HIST 425: Seminar in the American Civil War

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A Latter-day Disease:
Mormons and Cholera in the Nineteenth Century

Alexandra Wein

HIST 425: Seminar in the Civil War

Dr. Jim Downs

May 6, 2024

*I affirm that I will uphold the highest principles of honesty and integrity in all my endeavors at
Gettysburg College and foster an atmosphere of mutual respect within and beyond the
classroom.*

Nineteenth-century America saw the emergence of two seemingly parallel entities - the epidemic disease of cholera and the Church of Jesus Christ of Latter-day Saints, better known as the Mormon faith. To understand the intersection of Mormons and cholera, one must look within the interdisciplinary framework of Civil War-era history, religion, and epidemiology. Cholera epidemics in 1832 and 1849 coincided with the mass Mormon migration west, causing great suffering and death for Mormons traveling by land and sea. While their westward exodus exposed them to cholera, their religious teachings also contributed to why they contracted the disease. The Word of Wisdom, their religious doctrine received as a revelation from God, prohibited the consumption of “hot drinks,” referring to boiled water, tea, and coffee, and “strong drinks,” referring to alcoholic beverages. These drinks all have anti-cholera properties, and if consumed, could have alleviated cholera’s impact among the Mormon population and protected them from infection. In this paper, I will examine the unique relationship between cholera and the Mormon faith, and I will argue two specific tenets - that cholera helped shape Mormon history demographically and geographically, and that the Mormon religion itself affected this group’s understanding of the disease and also made them more vulnerable to contracting and succumbing to it.

Nineteenth-century Mormon migrants encountered cholera in two main situations - while migrating west by land, as they crossed the Mormon Trail and Overland Trail, and while migrating west by sea, as European Mormon converts made the transatlantic crossing and subsequently journeyed up the Mississippi River after making port in New Orleans.¹ After founding the religion in 1830 in upstate New York, Joseph Smith led church members to a new settlement in Nauvoo, Illinois, in 1839. After Smith’s assassination, Brigham Young took over,

¹ Patricia Rushton, “Cholera and Its Impact on Nineteenth-Century Mormon Migration,” *Brigham Young University Studies* 44, no. 2 (2005): 134.

leading the Mormons to Utah's Great Salt Lake Valley in 1847. Cholera was a constant threat for Smith, Young, and all other ancillary Mormon migrants in the mid-1800s.²

On land, cholera could be spread if Mormon pioneer companies defecated near or in the same water that they drank from. Since the cholera bacteria thrives in still bodies of water, Mormons who drank from a contaminated body of water along the trail risked contracting the disease. Cholera was more common in the summer months than in the winter, and by the time pioneers crossed the trail in July and August, many of the bodies of water they encountered had already been polluted by that season's cholera from previous companies of migrants.³ The uptick in trade and migration in the nineteenth century is precisely what led to the cholera bacteria spreading throughout America - as people migrated west, so did cholera. By sea, cholera could be easily spread if the ship's water or food supply became contaminated, and because these ships would be isolated in the middle of the ocean for several weeks at a time, it was hard to contain a cholera outbreak.

Cholera forced Mormons migrating west to take alternate routes to avoid the deadly disease that continuously claimed the lives of Latter-day Saints traveling by land and by sea. Between 1849 and 1868, many Mormons switched from the Mormon Trail, a 1,300-mile path from Nauvoo, Illinois, to Salt Lake City, Utah, to the Overland Trail, an adjacent trail that was shorter and avoided the North Platte River, where many Mormons had contracted cholera.⁴ The Overland Trail also had less reported incidences of cholera outbreaks. Many Mormons were eager to move west in order to escape cholera outbreaks in their towns, while other Mormons delayed their journeys as they recovered from the disease. The rapid westward expansion of the

² Benjamin E. Park, *Kingdom of Nauvoo: The Rise and Fall of a Religious Empire on the American Frontier* (New York: Liveright Publishing Company, 2020), 8.

³ Rushton, "Cholera and Its Impact," 130.

⁴ *Ibid*, 137.

railroads, which followed the route of the Overland Trail, also allowed Mormons a safer way to go west and lower their chances of getting cholera, and most migrated west via train after the mid-1860s. The 1866 cholera epidemic, as well as ensuing cholera outbreaks in the late nineteenth and early twentieth centuries, affected the Mormons to a lesser extent, as their mass westward exodus had taken place prior to that.⁵

Mormons traveling west by sea, both across the Atlantic and up the Mississippi, were also forced to amend their travel plans due to cholera outbreaks. In 1854, church leader Brigham Young requested that the transatlantic crossing ships, which usually docked in New Orleans, should now instead choose eastern port cities such as Boston, New York, and Philadelphia, in order to avoid cholera on the Mississippi River route. Young expressed to his son-in-law in England, “If we can have our emigration come to the eastern cities and the northern route, it will be much relieve [to] our Brethren from sickness and death which I am very anxious to.”⁶ Both church leaders and members were acutely aware of the prevalence of cholera in America, and they strived to avoid the disease the best that they could with the knowledge they had at the time. This factor further builds on the complex relationship between nineteenth-century Mormons and cholera and reveals how one disease had the power to reroute thousands of covered wagons and ships and greatly impact the course of these Mormon migrants’ lives and journeys.

Mormons were more affected by cholera than other pioneer populations because of the fact that the Mormon faith taught church members to have many children. Mormon culture is centered around the family, as they are taught that families are eternal and that they will all be reunited in the afterlife. Children and the elderly are at greater risk for cholera, as Mormon

⁵ Roger P. Blair, “‘The Doctor Gets Some Practice’: Cholera and Medicine on the Overland Trails,” *Journal of the West* 36, no. 1 (January 1997): 55.

⁶ Rebecca Bartholomew, *Audacious Women: Early British Mormon Immigrants* (Salt Lake City: Signature Books, 1995), 164.

scholar Patricia Rushton explains, writing, “One of the distinguishing characteristics of Mormon immigrant companies was that they were predominantly made up of families, which would include a high proportion of the very young and very old, thus Mormon companies were at higher risk than others for disease ... Infant mortality was high. Six out of seven [Mormon British immigrant] women experienced the death of a child.”⁷ When facing the loss of a child, Mormon families took comfort in their faith and leaned on this Latter-day Saint belief of “eternal families.”

The Church of Jesus Christ of Latter-day Saints taught that in order for families to be together forever, they had to be sealed in the Mormon temple - the husband sealed to his wife, and the children sealed to their parents, for “families sealed together in the temple have the promise that if they remain faithful, they will be together for eternity.”⁸ Explaining the core principle of the gospel, the Church declares, “When we are married in the temple, we are married for time and eternity. If we keep our covenants with the Lord, our families will be united eternally as husband, wife, and children. Death cannot separate us.”⁹ Mormons all hope to gain access to the Celestial Kingdom, the highest kingdom of glory in heaven, “and in order to obtain the highest, a man must enter into this order of the priesthood [meaning the new and everlasting covenant of marriage]; And if he does not, he cannot obtain it.”¹⁰ Marriage and eternal families are at the core of the Mormon faith, and they consistently placed emphasis on the family in order to please Heavenly Father.

⁷ Rushton, “Cholera and Its Impact,” 139.

⁸ “Duties and Blessings of the Priesthood: Basic Manual for Priesthood Holders, Part A: The Eternal Family,” The Church of Jesus Christ of Latter-day Saints, accessed March 8, 2024, <https://www.churchofjesuschrist.org/study/manual/duties-and-blessings-of-the-priesthood-basic-manual-for-priesthood-holders-part-a/gospel-principles-and-doctrines/lesson-35-the-eternal-family?lang=eng>.

⁹ “Gospel Principles: The Family Can Be Eternal,” The Church of Jesus Christ of Latter-day Saints, accessed March 3, 2024, <https://www.churchofjesuschrist.org/study/manual/gospel-principles/chapter-36-the-family-can-be-eternal?lang=eng>.

¹⁰ Joseph Smith, *The Doctrine and Covenants of the Church of Jesus Christ of Latter-day Saints* (Salt Lake City: Intellectual Reserve, Inc., 2013): 131:2-3.

Nineteenth-century Mormons had a very distinct perspective on not just disease and sickness, but especially on cholera, as they interpreted it as a punishment from God. When the spread of cholera reached these members of the Church of Jesus Christ of Latter-day Saints, they began “proclaiming the pestilence to be the wrath of God.”¹¹ They believed that a cholera-invoking God must be an unhappy God, and whoever contracted cholera was a sinful person whose actions had made God unhappy. At first, Mormons thought that God was only punishing “gentiles,” the Latter-day Saints’ term for non-Mormons, with cholera: “The Lord even punished those who refused baptism. Brother Algernon Sidney Gilbert, keeper of the Lord’s store in Independence, received word that his brother died of cholera in St. Louis. He had refused to join the Church.”¹²

Chaos, confusion, and fear ensued when Mormons themselves began coming down with cholera, although they tried to find a way to rationalize it: “Whenever a God-fearing stalwart died, it caused consternation among the faithful, a consternation invariably allayed by reports that this usually praiseworthy man either harbored some secret vice or had indulged in some unwonted excess. To die of cholera was to die in suspicious circumstances.”¹³ Mormons also believed that cholera was sent by God as a modern-day Great Flood, in order to dispose of the “obdurate and incorrigible” and “to drain off the filth and scum which contaminate and defile human society,” rendering the ones who were spared or survived the equivalent of passengers on Noah’s Ark.¹⁴

In the summer of 1834, the Zion’s Camp expedition encountered a severe cholera outbreak. Mormon leader and prophet Joseph Smith led a cohort of several hundred church

¹¹ R.T. Divett, “His Chastening Rod: Cholera Epidemics and the Mormons,” *Dialogue* 12, no. 3 (1979): 9.

¹² Divett, “His Chastening Rod,” 12.

¹³ *Ibid.*, 9.

¹⁴ Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1987), 41.

members in order to help their exiled Latter-day Saints brethren in Missouri reclaim their land. Zion's Camp was spurred by a revelation that Joseph Smith had from God - the same kind of revelations that catalyzed the founding of the Mormon faith, as well as the Mormon exodus west. Mormons in Zion's Camp blamed the cholera attack on "rain followed by hot weather at a time when there was much new plowed soil [which] gave rise to the pestiferous miasmata which resulted in congestive fever and cholera."¹⁵ Zion's Camp became the first reference to cholera in the Latter-day Saint community, occurring two years after the commencement of the 1832 cholera epidemic and one year after the 1833 revelation that Joseph Smith received from God, in which the Word of Wisdom was created. This religious text has an important connection to cholera and will be discussed in the later pages.

In Joseph Smith's personal diary, he attributed cholera not to miasmatic reasons, but to supernatural ones, linking the outbreak with his expedition members' morality. Smith wrote, "I said the Lord had revealed to me that a scourge would come upon the camp in consequence of the fractious and unruly spirits that appeared among them, and they should die like sheep with the rot."¹⁶ Joseph Smith then noted that the wicked would be cured of cholera "if they would repent and humble themselves before the Lord, the scourge, in great measure, might be turned away; but, as the Lord lives, the members of this camp will suffer for giving way to their unruly temper."¹⁷ Smith attempted to heal his constituents through prayer, but soon discovered that he himself was powerless in the face of the unknown disease. Striving to retain his authority as God's omniscient prophet, Smith justified his failure to heal, as he described, "I attempted to lay on hands for their recovery, but I quickly learned by painful experience, that when the great

¹⁵ J.S. Chambers, *The Conquest of Cholera: America's Greatest Scourge* (New York: Macmillan, 1938), 136.

¹⁶ Joseph Smith, *History of the Church of Jesus Christ of Latter-day Saints: Period I, History of Joseph Smith, the Prophet, by Himself* (Salt Lake City: Deseret News Press, 1948), 80.

¹⁷ Smith, *History of the Church*, 80.

Jehovah decrees destruction upon any people, and makes known his determination, man must not attempt to stay his hand. The moment I attempted to rebuke the disease I was attacked, and had I not desisted in my attempt to save the life of a brother, I would have sacrificed my own.”¹⁸

Cholera-afflicted Mormons experienced runny, rice water-like diarrhea, the hallmark of the disease, which leads to an electrolyte imbalance, causing kidney failure and later, shock, coma, sepsis, and death. Other symptoms included abdomen pain, vomiting, nausea, weakness, and muscle cramps.¹⁹ As historian Jim Downs explains, “Cholera was a particularly horrific disease because of its mysterious behavior, seeming unpredictability, and violent symptoms; it could seep into a community without any warning and leave people dead within hours.”²⁰ Mormons, especially those out on the open frontier, without access to proper sanitation, hospitals, or even the comforts of home, experienced extreme suffering in the face of cholera throughout the course of the 1800s.

Treatments for cholera were primitive at the time because there was not a proper understanding of the pathology of the disease, so there could not be an accurate corresponding treatment. Additionally, medicine in the nineteenth century had not yet caught up to the modern practices that would grow during the latter part of the 1800s and well into the twentieth century. The heroic school of medicine adopted Dr. Benjamin Rush’s successful yellow fever treatments, since they assumed that cholera was also spread via miasma, or “bad air.” This treatment included giving the patient calomel, also known as mercurous chloride, and “a tablespoon dose was administered each hour until the patient got well or died.”²¹ According to *The Lancet*, “Death rates in untreated patients with severe cholera can exceed 70%.”²² Doctors were also

¹⁸ Ibid, 114.

¹⁹ Jason B. Harris et al., “Cholera,” *The Lancet* 379, no. 9835 (June 2012): 2470.

²⁰ Jim Downs, *Maladies of Empire: How Colonialism, Slavery, and War Transformed Medicine* (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2021), 75.

²¹ Divett, “His Chastening Rod,” 9-10.

²² Harris et al., “Cholera,” 2469.

advised to bleed the patient until they fainted, which came from humor theory, which dictated that the body contained four humors - blood, phlegm, yellow bile, and black bile - and that they had to be kept in balance in order to maintain a patient's health. The botanic school of medicine, however, treated their patients with doses of lobelia and bayberry to induce vomiting, followed by a bowel-cleansing enema, and then alternating rounds of steaming and chilling the body. Botanic medicine patients were more likely to survive than heroic medicine patients, "but neither method of treatment was very satisfactory. Both merely allowed the disease to run its course."²³

Zion's Camp ended up having a relatively low death rate compared to neighboring areas in the Midwest, with 33% of the men in the camp contracting cholera, and 19% of them dying from it. In order to save face at Zion's Camp, "The dead were buried at night in an attempt to keep secret the number of their losses and the fact that cholera was in their camp. By burying the bodies in the creek bank they unknowingly ensured the contamination of the creek."²⁴ The Mormons' concealment of the cholera outbreak was influenced by two factors - they did not want to alarm the other Mormons in Zion's Camp, and they also did not want the possibility of cholera to deter other Mormons from migrating west. Cholera threatened Mormon migration and the expansion of the Latter-day Saints as both a people and as a religious group.

Initially, Mormons believed that cholera only affected non-baptized individuals who were not part of the Church of Jesus Christ of Latter-day Saints. Then, they thought that cholera only affected Mormons who had secretly sinned or acted in a wicked manner. Now, however, as cholera ravaged amongst the Mormon population in a nondiscriminatory manner, Mormons found themselves in need of another narrative in order to explain how the disease chose its victims, and even the divine prophet Joseph Smith was at a loss. Later on, the Mormon school of

²³ Divett, "His Chastening Rod," 10.

²⁴ Ibid, 11.

thought shifted to the idea that surviving cholera built character and prepared them for greater things in life. For example, if a young boy survived cholera as he headed west, then he was better equipped to lead his community and his family when he reached adolescence. The story of cholera had encountered several permutations through the years, and “while in Zion’s Camp cholera was considered a consequence of sin or punishment for lack of commitment to responsibilities in the Church, by the late 1840s cholera was seen as a trial to be endured and not as a punishment.”²⁵ It was only years later, when the *Vibrio cholerae* bacterium was officially discovered - first by Filippo Pacini in 1854, and then by Robert Koch in 1883 - that the supernatural and miasmatic theories pertaining to cholera began to dissipate as the bacteriological revolution finally gave answers to the Mormon people.

In the 1830s, 1840s, and even 1850s, Mormons still were unaware of the true causes of cholera. An 1850-era guidebook for emigrant women advised, “some people hold the radically different idea that cholera is transmitted by bad water ... however it's doubtful that it actually causes cholera.”²⁶ Some emigrants believed that beans caused cholera, which led to beans being outlawed in several overland companies heading west, meanwhile, “Other common theories of causation of the disease held by the emigrants, besides poor water quality, included diet, climate, night air, evening mists, and overindulgence in alcohol.”²⁷ The miasma theory had yet to give way to the germ theory, so additionally, “no one thought to boil water to kill the disease,” because the knowledge that there was a specific *Vibrio cholerae* bacterium in the water did not yet exist, and boiling water as a means of sanitation was not a universally widespread occurrence.

²⁵ Rushton, “Cholera and Its Impact,” 139.

²⁶ Terry Brown, “An Emigrant’s Guide for Women, 1850 Edition,” *American West* 7, no. 5 (September 1970): 15.

²⁷ Robert W. Carter, “‘Sometimes When I Hear the Winds Sigh’: Mortality on the Overland Trail,” *California History* 74, no. 2 (Summer 1995): 148.

If migrants did happen to boil water and ended up killing the cholera bacteria, then it was a happy accident. Historian R.T. Divett notes, “Instead, doctors theorized that cholera was spread by the miasmas of bad air and prescribed higher altitudes with plenty of cross breezes. But cholera struck there too. The cause of Asiatic Cholera was totally unknown.”²⁸ Jim Downs mentions the 1866 cholera outbreak and describes how it “further troubled doctors as some moved toward a nascent form of epidemiology to understand how cholera spread in the water, while others remained skeptical of this scientific approach and continued to draw on earlier understandings that emphasized social appearance, morality, and other subjective factors as the cause of disease transmission.”²⁹ Mormons were one of the demographics who pinned cholera’s seemingly-random transmission and attack on morality, although their definition of it continued to shift throughout the nineteenth century.

The complex relationship between cholera and Mormons deepened when the prophet Joseph Smith received another revelation from God on February 27th, 1833, while in Kirtland, Ohio. This revelation, brought on after Smith sat down to ponder upon his brethren using tobacco, revealed to him the Word of Wisdom. He subsequently transcribed this revelation as a list of acceptable and non-acceptable behavior for the members of the Church of Jesus Christ of Latter-day Saints, in order to achieve good health and live a life that would please God. If Mormons followed these commandments, God revealed that they “shall receive health in their navel and marrow to their bones; And shall find wisdom and great treasures of knowledge, even hidden treasures; And shall run and not be weary, and shall walk and not faint. And I, the Lord, give unto them a promise, that the destroying angel shall pass by them, as the children of Israel,

²⁸ Divett, “His Chastening Rod,” 9.

²⁹ Jim Downs, *Sick from Freedom: African-American Illness and Suffering during the Civil War and Reconstruction* (New York: Oxford University Press, 2012), 163.

and not slay them. Amen.”³⁰ This list comprises Section 89 of the *Doctrine and Covenants*, a volume of revelations given by God that exists as part of the scriptural canon of the Church and acts as an open-ended addendum to *The Book of Mormon* itself.

The origins of *The Book of Mormon* go back to 1823, when a seventeen-year-old Joseph Smith, residing in Palmyra, New York, had a vision of the angel Moroni, who told him that God had important plans for him and that he needed to go to the nearby hill Cumorah and dig up and translate a set of golden plates. These golden plates were published in English in 1830 and known as *The Book of Mormon*, which became the official religious text of Joseph Smith’s homegrown religion.³¹ The subheading on the front cover of *The Book of Mormon* reminds readers that this text is “another testament of Jesus Christ,” as the book is seen as a third part to the Christian Bible’s Old Testament and New Testament. Mormons consider themselves to be Christians, and they follow the teachings of Jesus Christ, believing in one God.³²

The Word of Wisdom correlates to epidemic cholera because it prohibits the consumption of drinks that could have protected Mormons from contracting the disease as they migrated west. The Word of Wisdom warns against the ingestion of wine, “strong drinks,” and “hot drinks.” Wine is self-explanatory, while “strong drinks” refers to other alcoholic beverages such as beer, whisky, brandy, and gin. “Hot drinks” was interpreted by the Church as meaning coffee and tea specifically, in addition to any assorted hot beverage.³³

Although boiled water helps to curtail cholera, Mormons are advised that “hot drinks are not for the body or belly,” as the Word of Wisdom teaches them that their salvation and morality

³⁰ Joseph Smith, *The Doctrine and Covenants of the Church of Jesus Christ of Latter-day Saints* (Salt Lake City: Intellectual Reserve, Inc., 2013): 89:18-21.

³¹ Benjamin E. Park, *American Zion: A New History of Mormonism* (New York: Liveright Publishing Corporation, 2024), 33.

³² Joseph Smith, *The Book of Mormon: Another Testament of Jesus Christ* (New York: J.O. & Wright Co., 1860), Moroni 6:1-4.

³³ The Church of Jesus Christ of Latter-day Saints, *Journal History of the Church of Jesus Christ of Latter-day Saints*, May 26, 1835.

hinge upon the successful following of these revelatory rules.³⁴ Hot drinks are commonly heated up until they boil, with the most popular examples being the beverages of tea and coffee, both of which were common for nineteenth-century pioneers on the trail. In 1849, John Snow, the British physician who is known as the father of epidemiology, published the essay “On The Mode and Communication of Cholera,” in which he correctly theorized that cholera symptoms occurred in the digestive system and that the disease was spread through water that contained cholera-contaminated feces. In 1855, he published an expanded, book-length second edition several months after the Broad Street cholera outbreak, which took place in the late summer of 1854 and assisted him in proving his hypothesis in a real-world setting. Snow utilized the knowledge that another gastrointestinal disease, dysentery, was “propagated by the drinking of water containing excrementitious matters,” and that “the typhoid fever with ulceration of the small intestines - is also propagated in the same way as cholera ... by the contamination of the water of a well which [a fever-afflicted family] used.”³⁵

Additionally, Snow noted that the disease was able to flourish in the summer because “the English people, as a general rule, do not drink much unboiled water, except in warm weather. They generally take tea, coffee, malt liquor, or some other artificial beverage.”³⁶ The act of boiling water can disinfect the liquid and purify it of contaminants, such as the cholera bacteria, so unboiled water had a greater risk of being polluted. Snow explained, “Where pump-wells and other limited supplies of water happen to be contaminated with the contents of the drains and cess pools, there is a greater opportunity for the disease to spread at a time when unboiled water is more freely used.”³⁷ In 1862, Louis Pasteur, a French chemist who invented

³⁴ Smith, *Doctrine and Covenants*, 89:9.

³⁵ John Snow, *On the Mode and Communication of Cholera* (London: John Churchill, 1855), 128.

³⁶ Snow, *Communication of Cholera*, 117.

³⁷ *Ibid*, 118.

pasteurization, discovered that heat killed germs in a liquid, and that heat was the result of the boiling process. In 1866, the first boil-water advisory, titled “Cholera and Water,” was released in East London and stated, “The Inhabitants of the District within Cholera Is Prevailing, are earnestly advised Not To Drink Any Water Which Has Not Previously Been Boiled. Fresh Water ought to be Boiled every Morning for the day’s use, and what remains of it ought to be thrown away at night.”³⁸

Two factors isolated westward-bound Mormons from the epiphanies and warnings about the spread of cholera and the importance of boiling water. First, John Snow’s discovery and the propagation of water-boiling advisories occurred slightly after the largest influx of Mormon migrants in the 1830s and 1840s. Mormons were still migrating west on the Mormon and Overland Trails in the 1850s and into the late 1860s, when the transcontinental railroad changed the modality of Mormon migration.³⁹ The propagation of knowledge about cholera, its transmission, and the ways to protect against the disease were increasing at the very time that westward Mormon migration was slowing down, with these two seemingly separate correlations briefly intersecting at the middle of the nineteenth century.

Second, John Snow’s work and the boiling water advisories occurred in England, across the world from the American West, where the Mormons were expanding across the frontier and growing their religion. Intercontinental communication was not as advanced as it is in the modern era, so it took quite a while for news to travel west. If a book was published about cholera in London, it could take several months or years for it to be disseminated amongst emigrating Mormons in the West. The Word of Wisdom was received in 1833 and widely

³⁸ Thomas W. Ratcliff, “East London First Cholera Boil Water Advisory,” August 1, 1866, Wellcome Library, <https://wellcomecollection.org/works/n2ykxrzm>.

³⁹ M. Hamlin Cannon, “Migration of English Mormons to America,” *The American Historical Review* 52, no. 3 (April 1947): 455.

published and circulated in 1835, almost two decades prior to John Snow's thesis on cholera.⁴⁰ This means that Mormons, unless they were rebellious or ignorant enough to still consume hot drinks after the revelation had been circulating for a few years, were at an increased risk of cholera compared to their non-Mormon counterparts, on the frontier or otherwise. This vulnerability to cholera was a direct result of their religious doctrine.

Several specific beverages amongst the category of the God-prohibited "hot drinks" included tea and coffee, both of which, in addition to being boiled, contained unique cholera-fighting properties. These effects were not researched and published until the late twentieth century, but they are worth noting, as it reinforces my argument that the Mormon faith negatively impacted its members by making them more susceptible to cholera, since the Word of Wisdom barred the consumption of these drinks. In 1991 and 1992, there were two research studies performed by Japanese doctors at the Showa University School of Medicine, the Kitasato Institute Hospital, and the Mitsui Norin Company Food Research Laboratories. These studies, titled, "The Protective Activity of Tea against Infection by *Vibrio Cholerae* O1," and "The Protective Activity of Tea Catechins against Experimental Infection by *Vibrio Cholerae* O1," respectively, discovered that specific properties in black tea and later, green tea, do indeed protect against cholera in both *in vitro* and *in vivo* settings. The initial study was done *in vitro*, testing the tea's anti-cholera properties in an isolated test-tube environment with hamster ovary cells, and the scientists followed this up the next year with a study done *in vivo*, testing their proven hypothesis this time in a living organism - in this case, mice. The 1991 study concludes, "Our results indicated that black tea extract had a vibriocidal activity, inhibited the activities of [cholera haemolysin] and [purified cholera toxin], and protected cholera infection in an animal

⁴⁰ Clyde Ford, "The Origin of the Word of Wisdom," *Journal of Mormon History* 24, no. 2 (Fall 1998): 130.

model. We have recently shown that tea has bactericidal activities against various Gram-positive and Gram-negative bacteria that cause diarrhoeal diseases.”⁴¹

The scientists, led by Masako Toda, theorized that the protective quality of the black tea was most likely a result of the “catechins and theaflavins” because these substances were proven to have “both bactericidal and anti-toxin activities.”⁴² Toda et al. put their catechin hypothesis to the test a year later, this time with green tea as their selected tea, deducing, “Our results indicated that tea catechins inhibit the activity of cholera toxin, and protect against cholera infection in an animal model ... the present results further demonstrated that catechin was one of the components responsible for the protective activity of tea against cholera infection.”⁴³ The Japanese scientists also remark that “effectiveness of the catechins could be expected to be achieved in the human small intestine,” and additionally, they recommend that tea extract be added to the oral rehydration therapy that is currently used to treat cholera patients. They also surmise that tea “might be a candidate for preventive and therapeutic agent against cholera and that tea will be more widely used in developing countries in the future.”⁴⁴

In *The Ghost Map*, author Steven Johnson contextualizes tea-drinking within the frame of the 1854 Broad Street cholera outbreak and details another important property of tea, noting, “Brewed tea possesses several crucial antibacterial properties that help ward off waterborne diseases: the tannic acid released in the steeping process kills off those bacteria that haven’t already perished during the boiling of the water.”⁴⁵ Johnson also recalls the effects of tea a century prior, observing, “The explosion of tea drinking in the late 1700s was, from the

⁴¹ Masako Toda et al., “The Protective Activity of Tea against Infection by *Vibrio Cholerae* O1,” *Journal of Applied Bacteriology* 70, no. 2 (February 1991): 109.

⁴² Toda et al., “Protective Activity of Tea,” 111.

⁴³ M. Toda et al., “The Protective Activity of Tea Catechins against Experimental Infection by *Vibrio Cholerae* O1,” *Microbiology and Immunology* 36, no. 9 (1992): 1001.

⁴⁴ Toda et al., “Protective Activity of Tea,” 112.

⁴⁵ Steven Johnson, *The Ghost Map: The Story of London’s Most Terrifying Epidemic - and How It Changed Science, Cities, and the Modern World* (New York: Riverhead Books, 2006), 95.

bacteria's point of view, a microbial holocaust. Physicians observed a dramatic drop in dysentery and child mortality during the period. The antiseptic agents in tea could be passed on to infants through breast milk."⁴⁶ As the above examples prove, tea could have been the Mormons' ally in protecting against cholera on the American frontier, but the Word of Wisdom got in the way of this, rendering God's word - received via revelation to the prophet Joseph Smith - as a death sentence.

Another divinely-prohibited "hot drink" that could have acted as an anti-cholera agent on the Mormon and Overland Trails is coffee, as there is promising new research stating that coffee has the potential to fight the *Vibrio cholerae* bacterium. In 2022, scientists in Thailand, led by Anchalee Rawangkan, investigated nine coffee extracts, containing varying levels of chlorogenic acid, caffeic acid, and caffeine, in order to test their antibacterial properties in relation to *V. cholerae*. Their findings suggest that caffeic acid "might be the most effective treatment for drug-resistant *V. cholerae* as it reduced bacterial growth ... via disrupting membrane permeability ... this is the first report showing that coffee beans and coffee by-product extracts are an alternative for multidrug-resistant *V. cholerae* treatment."⁴⁷ This research, although in its infancy, adds another compelling layer to the "hot drinks"-cholera dichotomy that is at the core of my thesis.

Another important facet of the Word of Wisdom revelation is the ban on "strong drinks," which refers to alcoholic beverages, including beer, wine, brandy, gin, whiskey, bourbon, and wine. The Mormon doctrine explicates, "That inasmuch as any man drinketh wine or strong drink among you, behold it is not good, neither meet in the sight of your Father ... And, again,

⁴⁶ Johnson, *The Ghost Map*, 95.

⁴⁷ Anchalee Rawangkan et al., "Potential Antimicrobial Properties of Coffee Beans and Coffee By-Products Against Drug-Resistant *Vibrio Cholerae*," *Frontiers in Nutrition* 9 (April 2022): 1-2.

strong drinks are not for the belly, but for the washing of your bodies.”⁴⁸ Joseph Smith transcribed God’s word as meaning that consuming “strong drinks” negatively affects one’s morality, but it is curious that the Word of Wisdom recommends strong drinks to wash one’s body with. This can be interpreted as knowledge that alcohol helped “clean” the body, even if people did not understand its antiseptic properties at the time, or this can refer to other properties of alcohol in topical body care, aromatic or otherwise. In eighteenth-century America and beyond, alcohol could also be included in many beauty products, making up various “exotic washes prescribed for the skin, compounded of ingredients like almonds, milk, lemon juice, white wine, attar of rose, and lavender.”⁴⁹ These beautifying washes were advertised in newspapers with the promise of making “the Skin soft, smooth and plump, it likewise takes away Freckles, Redness, Sunburnings, or Pimples, and cures Postules, Itching, Ringworms, Tetter, Scurf, and other like Deformities of the Face and Skin.”⁵⁰ However, the Word of Wisdom reiterates that “hot drinks” are not for the belly *or* the body. Although this nineteenth-century Mormon health code might seem excessive, it sought to mark the covenant between Mormons and God by differentiating them from cultural norms of the time. This exists in the same vein as other religious commandments across other religions, such as the Jewish commandment to keep kosher.

By abstaining from alcohol, nineteenth-century Mormons were also putting themselves at an increased risk for contracting cholera, since the disease thrived in unboiled water, which would have been the liquid of choice if coffee, tea, and alcohol were all prohibited. During the London Broad Street cholera outbreak of 1854, men who worked in a brewery on the street

⁴⁸ Smith, *Doctrine and Covenants*, 89:5-9.

⁴⁹ Richard L. Bushman and Claudia L. Bushman, “The Early History of Cleanliness in America,” *The Journal of American History* 74, no. 4 (March 1988): 1233.

⁵⁰ Bushman and Bushman, “Cleanliness in America,” 1233.

escaped contracting cholera because they were given a daily beer allowance, leading them to consume beer and not the contaminated water from the nearby well. Even though they used cholera-contaminated water in their brewing process, the boiling and fermentation involved killed the bacteria, rendering the beer safe. This practice works because “the antibacterial properties of beer - and all fermented spirits - originate in the labor of other microbes, thanks to the ancient metabolic strategy of fermentation.”⁵¹ Early Native Americans unknowingly protected themselves from disease by consuming these fermented beverages, and “they drank the waste discharged by yeasts so that they could drink their own waste without dying in mass numbers. They weren’t aware of it, of course, but in effect they had domesticated one microbial life-form in order to counter the threat posed by other microbes ... the strategy persisted for millennia, as the world’s civilizations discovered beer, then wine, then spirits - until tea and coffee arrived to offer comparable protection against disease without employing the services of fermenting microbes.”⁵²

There is evidence that awareness of alcohol’s anti-cholera properties existed during the Mormon migration of the mid-nineteenth century, but Latter-day Saints refused these “strong drinks” due to their faithful observance of the Word of Wisdom. In an April 10th, 1849 letter, Orson Spencer, a Mormon working on a Mississippi River steamboat, recalled, “The cholera prevails in New Orleans and river towns to a considerable extent. It pleads with emigrants to hasten forward to the mountains for safety. Several deaths occur during every passage to St. Louis. We have already buried seven persons, and one or two lie waiting for the same rite.”⁵³

⁵¹ Johnson, *The Ghost Map*, 104.

⁵² *Ibid*, 104.

⁵³ *Letter from Orson Spencer*, April 10, 1849, *Saints by Sea: Latter-day Saint Immigration to America*, <https://saintsbysea.lib.byu.edu/mii/account/1580?sweden=on&netherlands=on&europe=on&mii=on&keywords=cholera+twenty-four&scandinavia=on>.

Spencer then describes that migrants would “overcharge their stomachs with brandy in order to keep off the cholera, to which course, they are often advised by strangers,” but he believed that “a free use of strong drink, to which the emigrant is tempted after long restrictions at sea, is disastrous and often fatal.”⁵⁴ Spencer went on to brag that the company under his charge on this particular journey “thus far excited the admiration of all observers for their extraordinary cleanliness and good order, and wonderful measure of health ... I suppose that all nations are destined to encounter the pestilence [cholera] and the righteous will barely escape it. Yet we can say truly the Lord is a God of might, and his eye is over the righteous for good.”⁵⁵ Spencer was unwavering in his faith that if he and his charges stayed on the righteous Latter-day Saint path - and adhered to the Word of Wisdom, abstaining from sins such as “strong drinks” - that God would deliver them unharmed up the river “on the long journey to the valley of the Great Salt Lake.”⁵⁶

In 2011, two microbiologists at the Raigmore Hospital in Inverness, Scotland, published a study researching the effects that three separate forms of alcohol - gin, red wine, and ethanol - had on the *Vibrio cholerae* bacterium. Inverness experienced a cholera outbreak in 1832, and advisories were published encouraging people to drink fermented and distilled liquors in moderation. Janet S. Guthrie and Darrel O. Ho-Yen reference the nineteenth-century belief that “‘cholera brandy’ was one of the many unproven cures or preventive measures against the disease,” and seek to reexamine the cholera-alcohol interaction.⁵⁷ They discovered that “*V. cholerae* did not survive in 20% gin at 1 hour, 18.75% gin at 6 hours and 15% gin at 26 hours. Similar survival times were found with the equivalent concentrations of ethanol ... *V. cholerae*

⁵⁴ Letter from Orson Spencer.

⁵⁵ Letter from Orson Spencer.

⁵⁶ Ibid.

⁵⁷ Janet S. Guthrie and Darrel O. Ho-Yen, “Alcohol and Cholera,” *Journal of the Royal Society of Medicine* 104, no. 3 (March 2011): 91.

did not survive in 6.25% wine at 30 min; its bactericidal effect may be attributable to polyphenols.”⁵⁸ Alcohol’s bactericidal effect on cholera is another reason why Mormons were placed at an unfair advantage of fighting the disease in contrast with their secular counterparts.

Another intersection of cholera, alcohol, and religion pertains to the production and function of gastric acid. Regarding the pathogenesis of the disease, it is known that “after ingestion of *V cholerae*, most of the bacteria are killed by gastric acid. Surviving organisms colonise the small intestine and elaborate cholera toxin, the major virulence factor for pathogenic strains.”⁵⁹ According to a 1993 study by S. Chari, S. Teysen, and M.V. Singer, “Alcoholic beverages with low ethanol content (beer and wine) are strong stimulants of gastric acid secretion and gastrin release, the effect of beer being equal to the maximal acid output. Beverages with a higher ethanol content (whisky, gin, cognac) do not stimulate gastric acid secretion or release of gastrin.”⁶⁰ If one were to consume lower-concentrated alcoholic beverages, they would secrete more gastric acid, and therefore have more protection against cholera. Conversely, if one were to consume highly-concentrated alcoholic beverages, their gastric acid secretion, and subsequently, their gastrointestinal protection against cholera, would be decreased. Connecting this point back to religion, “In 1832 the incidence of cholera was seen to be higher in the heavy drinker than among the general population. Some saw this higher incidence as Divine retribution.”⁶¹ The “heavy drinker” refers to someone consuming large amounts of highly-concentrated alcohol, such as whisky or gin, in comparison to the “moderate” drinker, who would only consume mild amounts of lower-concentrated alcohol, such as wine or beer. On the spectrum of heavy and moderate drinkers, Mormons were diametrically opposed

⁵⁸ Guthrie and Ho-Yen, “Alcohol and Cholera,” 91.

⁵⁹ Harris et al., “Cholera,” 2467.

⁶⁰ S. Chari, S. Teysen, and M.V. Singer, “Alcohol and Gastric Acid Secretion in Humans,” *Gut* 34, no. 6 (June 1993): 843.

⁶¹ Guthrie and Ho-Yen, “Alcohol and Cholera,” 91.

with both, as their faith, as inscribed in the Word of Wisdom, discouraged the consumption of any of these “strong drinks.”

Cholera affected Mormon migrants during the 1832, 1849, and 1866 American epidemics, but the disease’s quantifiable impact is less clear than its qualifiable one. While it is known that thousands of Mormons died of cholera during the nineteenth century, most secondary and primary sources are inherently vague. Academic literature on the Mormon-cholera connection, as well as firsthand letters and diary entries from Mormon migrants of the period, struggle to contextualize Mormons and cholera in terms of numerical values. Most diary entries pertaining to this are very similar - they mention a cholera outbreak in their town or camp, they mention the names of a few people who died, they might mention the number of graves - but I have found that these primary sources give a very microcosmic overview, merely describing the “situation of suffering and how that suffering impacted the journal writer.”⁶² Adding to the confusion is the fact that all the sources attempt to measure the death toll by different means - some describe it in numbers, some in percentages, some in fractions, some in generalizations. Some journal entries give single-digit numbers, and others report figures in the thousands. This makes it difficult to piece all the data together to form a larger picture of cholera’s footprint on Mormon migration. Take for example the diary entry of William Snow, a Mormon pioneer who migrated west from Nebraska to Utah in 1850. In late June, he wrote, "Clark Campbell aged 26 years Died with Cholra also a little girl of Geo Catlins 4 years old ... we encamped for the night here 2 children died with cholra ... we remained in camp Br Joseph Pring Taken with cholera & Died Same Evening this weath Evening camp th came to gether prayed for health of camp."⁶³

⁶² Rushton, “Cholera and Its Impact,” 131.

⁶³ William Snow, *Trail Diary of Mormon Pioneer William Snow*, June 21 - July 4, 1850, *Digital Public Library of America*, <https://dp.la/primary-source-sets/mormon-migration/sources/1596>.

This diary entry represents what most Mormons' accounts of encountering cholera looked like, give or take specific details.

There are several reasons for the inaccurate recordkeeping and incomplete mortality records of Mormon migrants in the mid-nineteenth century - reasons that are based on both the public health practices of the time and the narratives that Latter-day Saint leaders wanted to propagate. On the Mormon and Overland trails, there were not any established hospitals or medical clinics, let alone ones that maintained accurate records. Many deaths went under-reported because some Mormon families could not afford to bury their deceased loved ones, while other Mormon families buried their dead in secret and without notifying church leadership. There was also a lack of formal, organized cemeteries on the western frontier, so Mormon bodies were buried in a variety of places, and sometimes the families did not even remember where the gravesites were or in what territory. Rushton explains, "There may have been hesitancy on the part of Church leadership to admit that disease and death were a constant presence for LDS migrant companies lest Saints be deterred from gathering."⁶⁴ Mormon leaders feared that cholera would prevent more Mormons from migrating west to Utah, which would directly impede the Latter-day Saint mission of growth and proselytization. This is precisely why most of the comments about cholera deaths are described in indefinite quantities such as "many," "a few," "some," or "an unusual number."

Another diary entry that is a good example of Mormon-cholera records comes from John Martin, a Mormon pioneer, who emigrated from Liverpool, England, to New Orleans, Louisiana, on the ship *The Ashland*. He subsequently traveled up the Mississippi River and procured work in St. Louis burying bodies, and he notes that in 1849, cholera caused the death of two-fifths of all the Latter-day Saints who journeyed up the river at the start of their westward migration.

⁶⁴ Rushton, "Cholera and Its Impact," 132.

Martin wrote, “The death rate was very great for three months. Three of us were kept busy running light wagons and we took two loads a day each and four dead bodies on each wagon at a time ... the average paupers we buried daily was 24. The other two drivers were stricken down with the cholera and one died with it, but I did not get it.”⁶⁵ Martin’s statistics present a vague idea of the amount of cholera deaths on the Mississippi River in February, March, and April of 1849 - if he buried 24 bodies a day, that would amount to around 2,100 dead after three months, and Martin was not the only corpse-handler in the region.

In terms of scholarships regarding the quantity of Mormon cholera deaths, historian Roger P. Blair estimates that in the 1832 and 1849 epidemics combined, there was a death toll of around 150,000, whereas in the 1866 epidemic, the death toll was only about 50,000. Blair assesses the loose data, stating, “The number of deaths from cholera on the overland trek West can never be accurately known; estimating losses from diary accounts or reminiscences is inherently difficult.”⁶⁶ Blair then summarizes that there is a greater takeaway from cholera’s impact on Mormons, expressing that “the number that died during the 1849-1854 epidemic is less important than recognizing that the number was great and that the risk faced by the embarking emigrants was immense.”⁶⁷

Many other Mormon-cholera scholars also echo Blair’s emphasis on qualifiable data while making generalizations about cholera’s impact. Robert W. Carter notes that while disease caused nine out of ten deaths on the Overland Trail, “cholera was the most common and the most deadly.”⁶⁸ B.H. Roberts affirms this, writing, “Cholera was prevalent in all companies of

⁶⁵ *Autobiography of John Martin*, February 6, 1849 - April 18, 1849, *Saints by Sea: Latter-day Saint Immigration to America*, <https://saintsbysea.lib.byu.edu/mii/account/117?sweden=on&netherlands=on&europe=on&mii=on&keywords=cholera+ashland&scandinavia=on>.

⁶⁶ Blair, “Doctor Gets Some Practice,” 65.

⁶⁷ *Ibid*, 65.

⁶⁸ Carter, “Hear The Winds Sigh,” 146.

immigrating Mormons who came up the Mississippi River and crossed the plains.”⁶⁹ Lastly, Shane A. Baker conveys the monopoly that cholera had on westward migration, proclaiming, “Cholera was the leading cause of death among immigrants on the Oregon-California Trail between 1840-60 and presented a similar threat to LDS immigrants on the Mormon Pioneer Trail. Exposure to the disease remained a prevalent risk that was not fully overcome until rail travel shortened the trip, thus making it much safer.”⁷⁰

In my research, I discovered that the field of experts on the link between Mormons and cholera is quite niche, with a large majority of scholars being associated with Brigham Young University, which was founded by the Church of Jesus Christ of Latter-day Saints. Many of these scholars’ journal articles reference each other, and I have found that this community functions almost as a feedback loop of Mormon-cholera scholarship. I would try to trace a statement made in one secondary source, which would often lead me to a citation pointing to another one of my secondary sources, and in turn, that source would end up quoting another one of my sources. This echo chamber mostly pertained to the quantity of Mormon deaths due to the cholera, because as I mentioned earlier, the exact number is unclear.

Several of these cholera-researching scholars are Mormons themselves, which comes as no surprise, as the Mormon culture encourages its members to take a strong interest in their own family history, as well as the history of the Mormon people as a whole. The Church, both in past and modern times, has urged the Latter-day Saint population to preserve their own life stories by writing in journals, scrapbooking, and preserving photographs and family artifacts. In 2014, Elder David A. Bednar, a church leader who is a member of the Quorum of the Twelve Apostles,

⁶⁹ B.H. Roberts, *A Comprehensive History of the Church of Jesus Christ of Latter-day Saints, Century I* (Salt Lake City: Deseret News Press, 1930), 79.

⁷⁰ Shane A. Baker, “Illness and Mortality in Nineteenth-Century Mormon Immigration,” *Mormon Historical Studies* 2, no. 2 (Fall 2001): 86.

prompted Latter-day Saints to use social media to spread the word of the gospel, and he encouraged them to share “messages filled with righteousness and truth” that can “sweep the earth as with a flood.”⁷¹ Even back in the 1800s, Mormons were relentless in documenting every step of their westward journeys through letters, diaries, newspapers, manifests, and also books and autobiographies. The relentless pursuit of Latter-day documentation contains two motives: one, to preserve family history because Mormons believe that families are eternal and are the most important thing in this world, and two, to proselytize and spread the gospel to all non-Mormons across the globe. All of that is to say that Mormons know how to preserve their history and heritage, and I had no shortage of primary and secondary sources when I embarked on my research journey.

In addition to many libraries, archives, and bodies of scholarly work pertaining to Mormon history, one unique resource that I found was the Utah Mormon Pioneer Overland Travel Database.⁷² It is estimated that between 70,000 and 80,000 Mormons migrated west between the years of 1847 and 1868, and the database contains 60,000 of these migrants and is actively working on obtaining the other 10,000 to 20,000 records. The database, also called the Pioneer Database or Biographical Database, lists all the companies of migrants who traveled west during the mass Mormon exodus, and within those companies, there is a plethora of transcribed primary sources pertaining to the specific Latter-day Saints in each group and their accompanying stories, documents, diaries, letters, newspaper articles, and more.⁷³ Cholera is mentioned in many of these primary sources and helps the modern historian piece together the

⁷¹ The Church of Jesus Christ of Latter-day Saints, “Elder David A. Bednar - To Sweep the Earth as with a Flood,” August 19, 2014, video,

<https://www.churchofjesuschrist.org/study/manual/how-to-share/sweep-as-with-a-flood?lang=eng>.

⁷² “Church History Biographical Database: All Pioneer Companies,” The Church of Jesus Christ of Latter-day Saints, accessed March 1, 2024, <https://history.churchofjesuschrist.org/chd/list?subtype=pioneer-company>.

⁷³ “Utah Mormon Pioneer Overland Travel Database, 1847-1868,” FamilySearch, accessed February 21, 2024, <https://www.familysearch.org/search/collection/2517340>.

fascinating entanglement of this newborn nineteenth-century religion and this notorious nineteenth-century disease. The database was created by Melvin L. Bashore, H. Dennis Tolley, and the BYU Pioneer Mortality Team, who state that of the reported causes of deaths they encountered in their research, “over 50% list cholera or diarrhea as cause of death.”⁷⁴ Another helpful database was the Mormon Immigration Index and BYU’s Saints by Sea database, which contain data and primary sources on the 94,000 Mormon converts who crossed the Atlantic and Pacific Oceans in order to gather with the Saints in North America between 1840 and 1890.

My research and argument add something new to the field because while I have found literature on Mormons, on cholera, on Mormons contracting cholera, and on the anti-cholera properties of boiled water, tea, coffee, and alcohol, I have yet to find a piece of academic literature combining all of these facets and discussing the connection between the prohibited beverages of the Word of Wisdom and the beverages’ anti-cholera properties - properties that could have aided more Mormon migrants in surviving their journeys west. My argument was formed because of my knowledge of the Mormon faith and of cholera itself, and after reading many secondary sources and analyzing a myriad of primary sources, I was able to craft my own unique thesis that complements the work of Mormon-cholera scholars while interjecting my own questions, answers, and evidence into this special body of work.

This paper exists at the nexus between history, religion, and science, set across the backdrop of nineteenth-century America during the dawn of the Civil War. God sent the Mormons cholera, which harmed them. God also sent the Mormons the Word of Wisdom revelation, which was supposed to protect them, but as I argue, unknowingly made them more susceptible to contracting cholera. Why did Joseph Smith’s revelations from God never go

⁷⁴ Melvin L. Bashore, H. Dennis Tolley, and BYU Pioneer Mortality Team, “Mortality on the Mormon Trail, 1847-1868,” *BYU Studies Quarterly* 53, no. 4 (2014): 122.

beyond the present day? Why wasn't the revelation about germ theory? And can religion and medicine coexist in the modern era, or do they often cancel each other out? A lot of Mormon history and its adjacent historiography comes across like a public relations campaign, afraid to pry into a modern religion which shares many of its roots and rituals with Freemasonry. Who is asking the hard question if the majority of scholars who write about the Church of Jesus Christ of Latter-day Saints are members themselves and affiliated with Brigham Young University? As historian Marvin S. Hill observes, "It would seem that the historiography of Mormonism has been plagued by too much emotion, too much description and too little interpretation ... the greatest bulk has been confined within bounds more or less set by the church."⁷⁵ Through exploring the ways in which the Mormon people were harmed by both their religious doctrine and the disease itself, I hope that this paper can add to the scholarly canon of nineteenth-century Mormons and cholera and fill in another missing piece of their distinctive history.

⁷⁵ Marvin S. Hill, "The Historiography of Mormonism," *Church History* 28, no. 4 (December 1959): 425.

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