

Medicine and the Mormons: A Historical Perspective

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AT THE TIME OF THE AMERICAN REVOLUTION, most medical care in America was provided either by self-taught practitioners or by those who had apprenticed under other doctors. A few doctors were immigrants from Great Britain or native sons who had trained in Great Britain, usually at the University of Edinburgh. One of these, Benjamin Rush, later a signer of the Declaration of Independence, had returned from study abroad to join the faculty of America's first medical school, later the University of Pennsylvania.¹ Rush, his associates in Philadelphia and his fellows at what is now Columbia University, produced the first academically trained doctors in America. The training in these schools improved the entire practice of medicine in America.

Theories of medical practice in Rush's time were those propounded by Galen in ancient Rome. Maintaining the four humours—blood, phlegm, yellow bile and black bile—in proper balance was considered the key to health. There was little concept of differential diagnosis of specific diseases, and most diseases were treated alike.

In 1793 Philadelphia was struck by a decimating Yellow Fever epidemic. When moderate treatment failed, Rush massively increased his two main procedures: Blood-letting "to relieve the pressures" in the body and reduce fevers, and calomel to purge the body of poisons.² Patients were often "bled to faintness," losing as much as 1.5 liters (almost 50 ounces).³ If they did not improve, they were bled again. The conspicuous salivation accompanying the recommended (toxic) dose of calomel inspired Rush to administer 80 grains or more a day.⁴

When some of Rush's critically ill patients recovered despite his treatments, Rush hailed his own success and wrote a book about it. His approach became so popular with the medical profession that his concepts dominated medical care in America for nearly 100 years. Many physicians were equally heroic with other treatments. If one dose was good, they reasoned, a dozen doses must be better.

Joseph Smith's family lived during the early period of "heroic" medicine, but they happened to have settled in a section of New England (Vermont and New Hampshire) where some aspects of heroic medicine were beginning to be challenged. From 1811 to 1813 they lived near Dartmouth College, where, in 1797, Dr. Nathan Smith had established the fourth American medical school. (He was a graduate of the third—Harvard.) Although another dominant personality in early medicine, he was not an advocate of heroic medicine. Though not averse to blood-letting and calomel, he used them sparingly, relying upon nature to help in healing. Neither were his students strong advocates of heroic medicine.

Dr. Smith had just agreed to leave Dartmouth for the newly organized Yale Medical School when an epidemic of typhoid fever, common in early America and still undifferentiated from Typhus, struck the Connecticut River Valley nearby.⁵ He stayed to assist the stricken and so was still in the vicinity when the Smith family contracted the disease. Sophronia, Hyrum, Alvin and Joseph were ill, but Joseph's case was complicated by osteomyelitis, a common complaint in those days.⁶ Dr. Nathan Smith and two other doctors from Dartmouth were called in, and it was during this period that Dr. Smith saved Joseph's leg by an operation which was not frequently used until the introduction of anesthesia many years later.

When the Smith family moved to Palmyra in 1816, heroic medicine was still in vogue, primarily through the teachings of America's second medical school, Columbia. Particularly influential was Dr. Samuel Latham Mitchill, who had founded America's first medical journal, the *Medical Repository*, and was widely known by both laymen and professionals. The professionals knew him for his journal, which generally supported heroic medicine; the laymen knew him as a colorful politician. When the Indians ceded western New York, he was on the commission that negotiated the settlement. A long term congressman, he was later a senator, representing New York in Washington. When the Erie Canal opened a few years after the Smiths arrived in Palmyra, Dr. Mitchill was the guest of Governor DeWitt Clinton on the ceremonial first trip through the canal.⁷

Lucy Mack Smith wrote that a Dr. McIntyre normally served as the Smith family physician in Palmyra-Manchester, but Dr. McIntyre was not in the vicinity on 15 November 1823⁸ when at 10 o'clock in the morning, Alvin Smith, the eldest of the Smith children, became sick with bilious colic.⁹ When Joseph Smith, Sr. could not find Dr. McIntyre, a Dr. Greenwood was brought to care for Alvin. Over his own protests, Alvin was "immediately administered . . . a heavy dose of calomel." This calomel "lodged in his stomach, and all the medicine freely administered by four very skillful physicians could not remove it." Three days later Dr. McIntyre returned, and with him four other eminent physicians, but they could not save Alvin. On 19 November 1823 Alvin Smith succumbed, apparently to the ravages of heroic medicine, and an autopsy revealed the massive dose of calomel lodged in his intestines with gangrene around it. Alvin's body, interred in Palmyra, lay undisturbed for nearly a year until it was disinterred (and reburied) to silence rumors that he had been disinterred and dissected by medical students.

Patients who survived the massive mercury poisoning of the heroic doctors often carried such permanent after-effects as loss of teeth, hair or vision and weakness of bones.¹⁰ These facts were not missed by the lay public, and about the time of Alvin Smith's death they began to rebel.¹¹ In 1825, for example, the *Richmond* (Virginia) *Inquirer* questioned the "Samson of the *Materia Medica*."

How'er their patients do complain
Of head, or heart, or nerve, or vein,
Of fever, thirst, or temper fell,
The Medicine still, is *Calomel*.
Since *Calomel's* become their boast
How many patients have they lost,
How many thousands they make ill,
Of poison, with their *Calomel*.¹²

THOMSONIAN MEDICINE

In 1769 Samuel Thomson was born in Alstead, New Hampshire. He grew up in the woods country of New Hampshire and early in life became interested in herbs, gaining information from his own experiments, old women and herb doctors.¹³ Gradually, after successfully treating his family and neighbors—and believing himself inspired of God—he became known as a doctor. He built up a large practice in New Hampshire, using as his major medication a wild plant—lobelia—which caused wrenching and vomiting.

Thomson gradually formulated his own theory of disease which, despite his claims to originality, was simply a modification of Galen's (and Rush's) humoral pathology. Thomson, however, rejected blood-letting, choosing herbs instead of calomel for purging.¹⁴ He also advocated, as had a number of other physicians, dietary moderation. He strongly condemned the use of calomel. He also advocated, as did a number of orthodox physicians, dietary moderation, and condemned strongly the use of alcohol, coffee, tea and tobacco.¹⁵ In 1809 he applied for and received a patent on his "system." The application, four years in process, was finally awarded in 1813. The first patent proved to be defective, but he received a second patent in January 1823 and a third in 1835.¹⁶

In the winter of 1819, Thomson chose an agent, a Mr. Elias Smith, to promote his system of medicine. He had already published a small book describing his practice and was selling the book and rights to his patents. Under Smith a major campaign was begun. In 1822 Thomson wrote an autobiography: *Samuel Thomson: Narrative of His Life and Medical Discoveries*.

Shortly after 19 December 1825, Thomson, armed with a letter of introduction from Dr. Benjamin Waterhouse, a Harvard professor famous for his role in bringing smallpox vaccination to America, made a pilgrimage to Dr. Samuel L. Mitchill of New York. He hoped to gain Mitchill's support for his medical system—much as did Martin Harris two years later on another subject. Although Thomson claimed that he had received Dr. Mitchill's support, there is no written evidence of support.

Nonetheless, Thomson's campaign went forward, capitalizing on the growing rebellion against heroic medicine. He sold thousands of his patent use rights for \$20.00 each, and with them a book, *Thomson's New Guide to Health; or Botanic Family Physician*, for \$2.00. The book could not be purchased without previous purchase of the right, or license, to practice his medicine.

Thomsonianism was very successful in Ohio where one agent sold five hundred rights to practice in eighteen months, and another agent, selling from Columbus, sold 4,000 rights in Ohio and neighboring states in only three and one-half years.¹⁷ By December 1833, there were 41 agents selling patent rights in Ohio alone.¹⁸ The great cholera pandemic of 1832, which reached Ohio by July, had accelerated the growth of Thomsonianism because Thomsonian practitioners appeared more successful in treating the disease. More than half the populace had apparently become advocates of Thomsonianism by 1835.

It is impossible to determine how many Mormons of the 1830s were Thomsonian practitioners, but undoubtedly there were many.

INFLUENTIAL MORMON DOCTORS

Some time after 1815, probably in 1821 when Thomson's son Samuel made his first visit to Ohio to sell patent rights and to promote Thomsonianism,¹⁹ Frederick G. Williams purchased Thomson's book and a patent right. Williams, who had worked as a pilot on Lake Erie and as a school teacher and farmer, abandoned piloting and teaching, assumed the title "Doctor," and began to practice Thomsonian medicine. He moved to Kirtland, purchased a large farm, developed an extensive medical practice, and was a man of considerable influence by 1830 when, at forty-four, he joined the Mormons. Converted by Oliver Cowdery and Parley P. Pratt, he accepted a three-week call to accompany them on their mission to the Lamanites. The three weeks turned into ten months. During much of this time Joseph Smith and his family resided in Williams' home in Kirtland.²⁰ The two finally met in August 1831 in western Missouri where Williams covenanted that he would be willing to consecrate his all to the service of the Lord. Williams was soon functioning as Second Counselor to Joseph.

Dr. Williams remained a close associate of Joseph Smith until the summer of 1837 when, during the Kirtland troubles, they quarreled. Although they were reconciled soon after, at a conference in Far West, Missouri, on 7 November 1837, Williams was replaced in the First Presidency by Hyrum Smith. Williams remained in Far West after the conference while the new First Presidency returned to Kirtland. When Church members fled from Missouri to Illinois Dr. Williams proceeded to Quincy, Illinois, where in March 1839 he found he had been excommunicated in-absentia by a church court. A year later, his membership was restored, but he remained in Quincy until his death in October 1842. His friendship with Joseph Smith continued, the two visiting each other regularly, until he died. He undoubtedly influenced Joseph to support botanic medicine, perhaps more so than any other person.

In December 1836 Brigham Young baptized his cousin, Willard Richards,

another influential Thomsonian physician. In addition to buying a patent right, Willard claimed to have taken a six-week course under Thomson himself. He had been in practice near Boston when a copy of the Book of Mormon came into his possession and he left his practice to go to Kirtland to learn more about the Church. Within six months, by June 1837 Willard was away to England as a missionary for the Church. His influence was to be felt more in later years.

In Far West another Thomsonian physician played a prominent role in the Latter-day Saint community. Dr. Sampson Avard formed the secret Danite society. Later Avard, before the Missouri courts, accused Joseph Smith and Sidney Rigdon of being responsible for the wrongs performed by the secret society. He eventually was excommunicated.

While Joseph Smith was imprisoned in Liberty Jail he entered into a correspondence with a Dr. Isaac Galland, another botanic physician. Galland was primarily a land speculator, and at a time when the Mormons were a scattered group of refugees, he offered to sell thousands of acres of land in Lee County, Iowa, and Hancock County, Illinois, for a small down payment and reasonable terms.²¹ Joseph apparently was unaware of Galland's unsavory past as frontier adventurer, promoter, and confidence man, or that he once had been indicted for perjury.

Within a few days of Smith's escape from Missouri he visited Galland at Commerce, the speculator's paper town in Hancock County, Illinois. By 1 May 1839 land purchases were underway to acquire what would soon be called Nauvoo, and large tracts across the Mississippi in Lee County, Iowa. Smith considered Galland "one of our benefactors."²² In July 1839 Dr. Galland furthered his ties with the Church by being baptized.²³ The same day he was ordained an elder by Joseph Smith. For the next eighteen months Galland served as land agent for the Church, wheeling and dealing and gathering exchange land titles for Church members. By January 1842 he had created such a mess that Joseph Smith published notice of the revocation of Galland's agency and power of attorney.²⁴ As Galland held mortgages on much of the Mormon property the situation was an especially touchy one. He seems simply to have been dropped from official cognizance—no excommunication, no disfellowshipping, just quietly made a nonperson. Galland in turn soon withdrew his fellowship and boasted of his conviction that Smith was a fraud.²⁵

As the Saints moved into the newly purchased area they soon succumbed to the "ague" and chills and fever. They already had been weakened by the rigorous midwinter trek out of Missouri and the ordeal of persecution in that state. Now they moved into an area where malaria was endemic.²⁶ Among the refugees were several other young botanic physicians, who went from bed to bed often prescribing Sappington's pills (which contained quinine).²⁷ The epidemic, however, was beyond their capabilities and, ultimately, on 22 July 1839 Joseph Smith rose from his own sickbed to go about administering to and healing all the sick in the community. The spiritual healings, in most cases, were temporary, but heal they did. It was not the first time that the

Saints had been healed by anointing and blessing, but there had been nothing on a similar scale.

Enter yet another influential doctor, but this time more "orthodox" than Thomsonian. Dr. John Cook Bennett from Washington County, Ohio, studied medicine under the preceptorship of his uncle by marriage, Dr. Samuel Prescott Hildreth of Marietta, Ohio, then the leading physician of southwestern Ohio. Licensed to practice medicine by the Medical Society of Ohio on 1 November 1825, Bennett later attended one session of medical lectures at McGill University in 1830–31. He practiced medicine in several Ohio towns, and in Wheeling (now West Virginia), until late 1832. He also had been a Methodist preacher and had become a follower of Alexander Campbell in 1830.²⁸

In 1833 Dr. Bennett was instrumental in incorporating, at New Albany, Indiana, an institution called The Christian College, and was named its first president. This was to be a coeducational school, and has been called the first such chartered college in the United States. It soon went by one of three new names: University of New Albany (Christian College); University at New Albany, Indiana; or University of Indiana.²⁹

Just forty days after the Indiana legislature had chartered the institution Bennett issued his first Doctor of Medicine degree. He also arranged to award himself an honorary Doctor of Medicine degree, possibly his only M.D. degree. Bennett was later appointed a professor in the Medical Department of Willoughby University of Lake Erie (Ohio), in September 1834 but no medical degrees were granted by the school while he was affiliated with it.

Subsequently Dr. Bennett was charged with peddling worthless M.D. degrees across Pennsylvania, Ohio, and Indiana, and his Indiana institution has been styled by one medical historian as America's first medical diploma mill. Bennett claimed that he "thoroughly examined all but those generally allowed to be qualified." He also at times called in other doctors to aid in the examinations. At the least it can be said that his idea of granting degrees by examination without regard to length of study was revolutionary and controversial.

In early 1839, while serving as an officer of the Invincible Dragoons, a militia company of Edwards, White and Wabash Counties in southeastern Illinois, Dr. Bennett wrote to Joseph Smith that "his bosom swelled with indignation" at the treatment the Saints were receiving at the hands of the Missourians, and he offered to muster an army to come to the Saints' aid. This aid was declined.³⁰

By July of 1840 Bennett was Quartermaster General of the Illinois Militia, and was living at Fairfield, Wayne County. He wrote a letter to Joseph Smith and Sidney Rigdon offering to come to Nauvoo to assist the Saints, and to join them.

He arrived in Nauvoo in August or September 1840 and immediately joined in the efforts to gain a city charter, which he has been credited with successfully piloting through the legislature. When the first municipal election was held in 1841 on the day the charter officially became state law, Dr.

Bennett was elected mayor. Two months later he was sustained at General Conference as a counselor in the First Presidency of the Church.³¹ Bennett also became Major General of the Nauvoo Legion, the militia unit created by the charter. In addition he became chancellor of the University of Nauvoo, which also was authorized by the charter.³²

Also in 1841 Bennett, who earlier had deserted a wife and children in Pennsylvania, became aware of the doctrine of plural marriage, and invoked it in the seduction of several local women. As a result he was disfellowshipped and later excommunicated, and thereafter became an avid opponent of the Mormons. In 1842 he published *The History of the Saints, or an Expose of Joe Smith and Mormonism*.

During his time among the Mormons Bennett continued to practice medicine, between his duties as mayor, major general, university chancellor and counselor to the president. Under his direction the swamps along the banks of the Mississippi, both in Nauvoo and across the river in Montrose, were drained. A ditch was dug across Nauvoo to rid the lower town of its excess water. He did everything he could to eliminate the *miasmas*, or fowl air, that were believed to cause the ague, chills and fevers which plagued the city. He also organized a Board of Health. And the general health of the community improved. In 1840 Bennett had been one of the leaders in founding the first state medical society in Illinois, and unquestionably was allied with the orthodox practice on his arrival in Nauvoo. It is impossible to ascertain how "heroic" his practice was, however, and by the time he left Nauvoo he had changed his allegiance. He later joined the faculty of Alva Curtis' Botanico-Medical Institute of Ohio, a neo-Thomsonian school, and wrote for its *Botanico-Medical Recorder*.³³

In August 1841 Dr. Willard Richards, who had been called as a member of the Quorum of the Twelve while on his mission to England, returned to Nauvoo. Shortly thereafter he was called to be chief of several clerks in the service of Joseph Smith, and began a close relationship that ended only with the death of the prophet in Carthage Jail, with Willard at his side. By November 1841 Joseph could write, "I have been searching all my life to find a man after my own heart whom I could trust with my business in all things, and I have found him—Dr. Willard Richards is the man."³⁴ Once again he had a trusted botanic doctor as a close associate.

Joseph Smith had at least two additional close relationships with doctors before he was killed. When Thomsonian Dr. Levi Richards, Willard's brother, returned from a mission in 1843, Joseph chose him as his personal physician, and praised him copiously thereafter. Joseph called him the best doctor he had ever known, and apparently developed a relationship very similar to that which he had with Willard. With Joseph's praise common knowledge in the community, Levi soon had one of the largest practices in Nauvoo.

The same year, Dr. John M. Bernhisel, an 1827 graduate of the orthodox University of Pennsylvania, came to Nauvoo. He may not have established his own practice there, for he became Joseph's clerk and friend, and lived in the prophet's home. In at least one case Bernhisel accepted a consulting

situation with a Thomsonian doctor. This is evidenced by Joseph's journal, which was being kept by Bernhisel at the time:

Friday, December 15th, 1843. I awoke this morning in good health, but was soon suddenly seized with a great dryness on the mouth and throat and sickness of the stomach and vomitted freely. My wife waited on me, assisted by my scribe and Dr. L. Richards, who administered to me herbs and . . . milder drinks.³⁵

Thus, the preponderance of doctors close to the Mormon leadership in the early years were of the botanical (Thomsonian) school. With two of these Thomsons among his closest advisers, it is not surprising that Joseph Smith was an advocate of botanic medicine, and often espoused or, when ill, sought out the familiar herbal remedies.

THE WANE OF THOMSONIAN AND HEROIC MEDICINE

Just as Joseph Smith had, almost from the beginning of the Church, difficulties in controlling unauthorized doctrinal changes, so did Samuel Thomson have problems with unauthorized variations in his medical system. Throughout his life, Thomson was adamantly opposed to the establishment of schools to teach his medicine. He wanted to keep it simple, to have it a system where householders could be their own medical practitioners. In other words he wanted a lay medical practitioner system—not "professional" medical practitioners—much as Joseph Smith advocated a lay priesthood. Very early, however, his followers insisted on professionalizing their practice, and this led to schisms and the establishment of schools to teach botanic medicine.

When Samuel Thomson died in October 1843, his sons tried to hold together his few remaining loyal supporters, but the practitioners of botanic medicine soon divided into several groups. Botanico-medical colleges sprang up throughout the Midwest and South where Thomsonianism had been strong. They did not last long, however, and by the Civil War most were defunct. A few physico-medico and reformed medical schools, descendants of Thomsonianism, existed into the 1870s, but then they, too, disappeared. Of the successors to Thomsonianism, only the eclectic schools continued into the twentieth century, with their last college, in Cincinnati, expiring in 1925.

Opposition to heroic medicine was carried on by the neo-Thomsonian groups named above, but the main attack now came from homeopathy, a medical sect similar in some ways, which was just beginning to gain a foothold in America as Thomsonianism waned. While largely a splinter of the regular profession, the homeopathic movement apparently also attracted many Thomsonsians.³⁶

During the early years of Mormonism changes were taking place within orthodox medicine also. Beyond the economic incentive for change occasioned by an increasingly hostile public, important advances were made in studying the effectiveness of various treatments. Dr. Pierre-Charles-Alexandre Louis of Paris was just then developing the techniques of bio-

statistics that could prove or disprove the efficacy of a specific treatment. He did his first research on blood-letting as a treatment for pneumonia, and when the American translation of his works, *Researches on the Effects of Bloodletting in Some Inflammatory Diseases*, was published in 1836, heroic medicine was shaken to the core. Soon every use of blood-letting was challenged. While textbooks continued to recommend it, by the 1850s it was no longer commonly used.³⁷

Calomel, however, still remained in vogue. It was true that a few orthodox physicians questioned its use, such as the distinguished Oliver Wendell Holmes.³⁸ One physician, in 1844, went so far as to accuse many of his fellows of killing their patients with lethal doses of calomel.³⁹ But for the majority of orthodox physicians, especially in the South and west of the Appalachian mountains, calomel continued to be the favorite drug. It had acquired the status of a therapeutic panacea.

Because of the tenaciousness with which the orthodox physician clung to this heroic practice, calomel became the symbol of orthodox medicine. Any move to ban it was viewed as a threat to the prestige and position of the entire profession.⁴⁰ During the Civil War a tremendous furor arose when Surgeon General Hammond, of the Union army, ordered the removal of calomel and tartar emetic from the supply table of the army.⁴¹ His Medical Inspectors had found too many "occurrences of mercurial gangrene." The order whipped up a furious action on the part of organized medicine, with the American Medical Association accusing the Surgeon General of having grossly insulted the medical profession and maligning two most valuable remedies. Secretary of War Stanton resolved the debate by sacking the Surgeon General. It was to be another fifteen years before the heroic use of calomel was completely halted.

NOTES

¹Ilza Veith, "Benjamin Rush and the Beginnings of American Medicine," *Western Journal of Medicine* 125 (July 1976): 17–27.

²Gunter B. Risse, "Calomel and the American Medical Sects During the Nineteenth Century," *Mayo Clinic Proceedings* 48 (1973): 57–64.

³Matthew J. Kluger, "The History of Bloodletting," *Natural History* 87 (November 1978): 78–83.

⁴Risse, "Calomel," p. 58.

⁵LeRoy S. Wirthlin, "Nathan Smith (1762–1828) Surgical Consultant to Joseph Smith," *BYU Studies* 17 (Spring 1977): 319–37; also "Joseph Smith's Surgeon," *Ensign* 8 (March 1978): 58–60.

⁶Lucy Smith, *Biographical Sketches of Joseph Smith, the Prophet, and his Progenitors for Many Generations* (Liverpool: S.W. Richards, 1853), pp. 52, 54.

⁷Howard A. Kelly, *A Cyclopedia of American Medical Biography*, 2 vols. (Philadelphia: Saunders, 1912) 2: 179–81.

⁸Lucy Smith, *Sketches*, p. 86; Russell R. Rich, "Where Were the Moroni Visits?" *BYU Studies* 10 (1969–70): 255–58.

⁹This may well have been a case of appendicitis, but that syndrome was not to be identified for another sixty-three years. See comments on the death of Brigham Young in Lester E. Bush,

Jr., "Brigham Young in Life and Death: A Medical Overview," *Journal of Mormon History* 5 (1978): 79–103.

¹⁰George Washington underwent many heroic medical treatments. It has been claimed that he was bled to death. He also had loss of teeth and other symptoms of mercury poisoning.

¹¹Risse, "Calomel," p. 59.

¹²*Ibid.*

¹³James Moores Ball, "Samuel Thomson (1769–1843) and his Patented 'System' of Medicine," *Annals of Medical History* 7 (1925): 144–52; Alex Berman, "The Thomsonian Movement and its Relation to American Pharmacy and Medicine," *Bulletin of the History of Medicine* 25 (1951): 405–28, 519–38.

¹⁴Berman, "Thomsonian Movement," pp. 412–13.

¹⁵Joseph F. Kett, *The Formation of the American Medical Profession* (New Haven: Yale University Press, 1968), p. 126.

¹⁶Berman, "Thomsonian Movement," p. 415–16.

¹⁷Frederick C. Waite, "Thomsonianism in Ohio," *Ohio Archeological and Historical Quarterly* 49 (1940): 322–31, 324.

¹⁸*Ibid.*, p. 324.

¹⁹*Ibid.*

²⁰Frederick G. Williams, "Frederick Granger Williams of the First Presidency of the Church," *BYU Studies* 12 (1971–72): 243–61.

²¹Robert Bruce Flanders, *Nauvoo, Kingdom on the Mississippi* (Urbana: University of Illinois Press, 1965), p. 27.

²²*Ibid.*, p. 37.

²³*Ibid.*, p. 132.

²⁴*Ibid.*, p. 133.

²⁵*Ibid.*, p. 134.

²⁶Edwin H. Ackerknecht, "Malaria in the Upper Mississippi Valley, 1760–1900," *Bulletin of the History of Medicine*, Supplement No. 4, 1945, p. 18.

²⁷Ivan J. Barrett, *Joseph Smith and the Restoration; a History of the LDS Church to 1846* (Provo: Brigham Young University Press, 1973), p. 439.

²⁸Frederick C. Waite, "The First Medical Diploma Mill in the United States," *Bulletin of the History of Medicine* 20 (November 1946): 495–504.

²⁹This institution had no connection with the University of Indiana at Bloomington.

³⁰Flanders, *Nauvoo*, p. 93; B.H. Roberts, *A Comprehensive History of The Church of Jesus Christ of Latter-day Saints, Century 1*, 6 vols. [CHC] (Salt Lake City: Deseret News Press, 1930), 2: 49.

³¹CHC 2: 69.

³²Earlier he had been involved in efforts to establish or charter several other educational institutions. Flanders, *Nauvoo*, p. 94–95, 101; CHC 2: 168–70.

³³Waite, "Diploma Mill," p. 498.

³⁴Barrett, *Joseph Smith*, p. 503.

³⁵Journal of Joseph Smith, 15 December 1843, as quoted in John Heinerman, *Joseph Smith and Herbal Medicine* (Manti, Utah: Mountain Valley Publishers, 1975), p. 29.

³⁶Kett, *American Medical Profession*, p. 139.

³⁷Leon S. Bryan, Jr., "Blood-Letting in American Medicine, 1830–1892," *Bulletin of the History of Medicine* 38 (1964): 516–29.

³⁸Oliver Wendell Holmes, "Currents and Counter-Currents in Medical Science," *Medical Essays, 1842–1882* (Boston: Houghton Mifflin, 1888), pp. 173–298.

³⁹Risse, "Calomel," p. 60.

⁴⁰*Ibid.*, p. 61.

⁴¹*Ibid.*; Alex Berman, "The Heroic Approach in 19th Century Therapeutics," *Bulletin of the American Society of Hospital Pharmacists* 11 (September–October 1954) p. 326.