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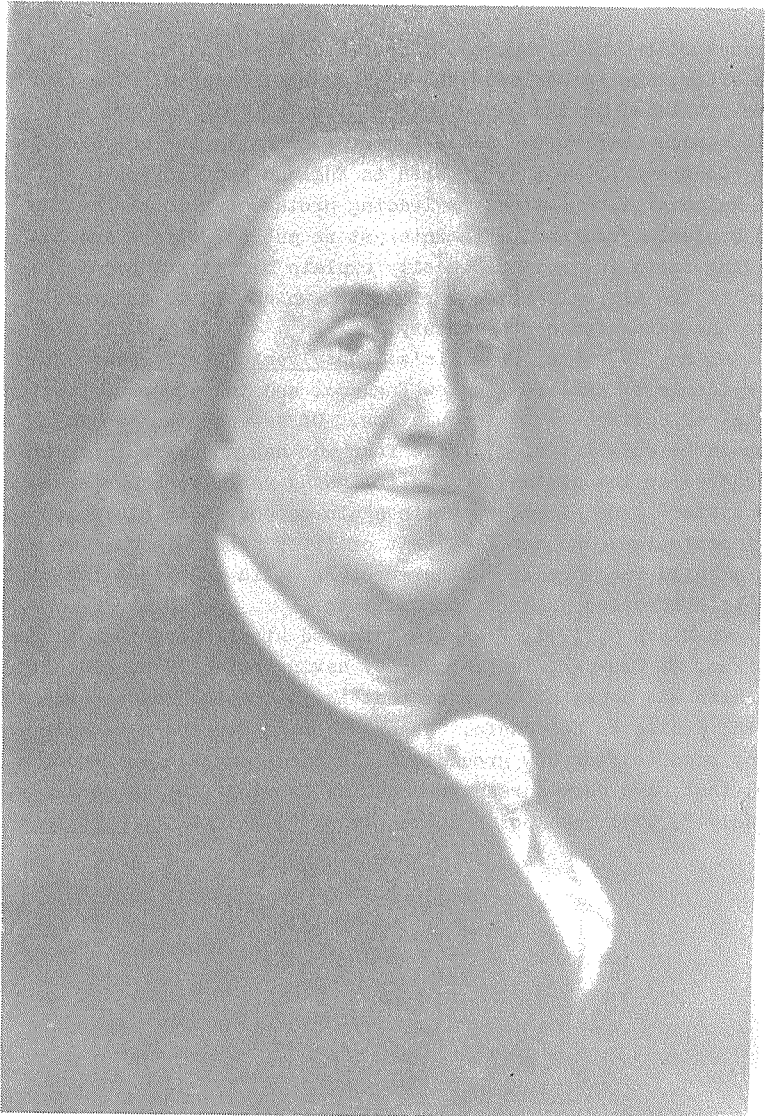
Benjamin Franklin and the Inoculation Controversy

by

Kathe Palermo Gwozdz

Smallpox was an epidemic disease which terrified civilizations for centuries. Its virulence, swiftness in spreading, and permanent scarring touched every level of society, giving no one peace of mind. Variolation, the term applied to inoculation, was the first effective method used to protect against smallpox. It involved the transfer of pus from a smallpox sore to an incision in the skin of a non-infected person, producing a mild case of smallpox. Once the victim had contracted the disease, he was immune from further infection. The practice was first used about 1720, and its use continued into the nineteenth century, even after the introduction of vaccination.¹

The practice of variolation in England was encouraged by several factors. The success of variolation in Greece and Turkey was described in letters to the Royal Society, and Lady Mary Montagu, whose husband was the British ambassador to Turkey, urged subsequent experimentation, which gained the

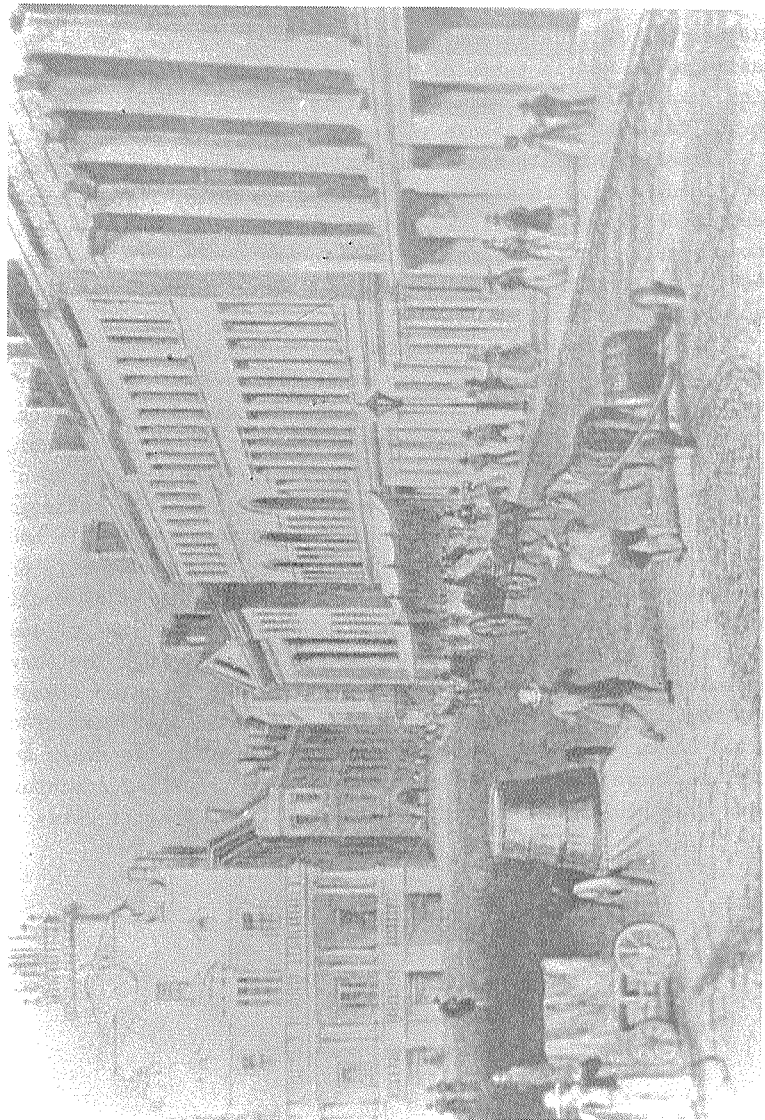


support of the royal family. Soon it became fashionable among the elite, and it was endorsed by the Royal Society. Two reports were published in the Philosophical Transactions in 1714 and 1716, which came to the attention of leaders in the colonies.²

Controversy soon arose both in England and America over the value of inoculation. A leading protagonist in the battle was Benjamin Franklin. His interest in public welfare and his abiding faith in "science" easily explain his active participation in the imbroglio over variolation which was to continue into the late eighteenth century.

On May 14, 1730, Franklin's Pennsylvania Gazette described an epidemic of smallpox in New England, and included information on the effectiveness of inoculation. Of seventy-two people inoculated only two died, while four who had not been inoculated succumbed to the disease.³ The following year, in a letter to his sister, Jane Mecom, Franklin again demonstrated his faith in inoculation. He asserted that of fifty people inoculated all but a child recovered. Furthermore, Franklin felt that the child had been infected prior to inoculation.⁴

On March 4, 1731, Franklin informed his readers that a leading citizen, J. Growdon, led the way by having himself inoculated. Franklin was upset at the fact that the operation was considered by the public to be unsafe. He stated that Growdon's example was "mentioned to show how groundless all those extravagant Reports are, that have been spread through the Province to the contrary."⁵ By July 8, 1731 smallpox had, according to Franklin's Gazette,



claimed 288 Philadelphians, 64 of whom were Negroes. This loss was regarded not in terms of human lives, but in terms of economics. Each Negro was valued at thirty English pounds; "the Loss to the City in that Article is near £2000."⁶

Franklin himself had a personal experience with smallpox and inoculation. In a memorandum dated April 18, 1746, Franklin described how he had his two-and-a-half-year old daughter, Sally, inoculated against smallpox. Franklin had apparently learned a lesson, as earlier his son had died of smallpox before he could be inoculated.⁷

As an advocate of inoculation and as editor of the Pennsylvania Gazette, Franklin was open to inquiries from interested people. For instance, William Vassall, who was then in Boston, wrote Franklin about inoculation. He evidently had been considering a trip to New York to be inoculated but Franklin assured him that the operation could be done in Philadelphia.⁸ He asserted that in the last smallpox epidemic one hundred sixty people had been inoculated, most of whom were children. Of those, only one child had died. Again Franklin explained the death as a result of an ailment present before inoculation, since at the time of death the child exhibited no smallpox symptoms. Even though the current epidemic was mild compared to the previous one, Franklin stated that the physicians "agree, that those who have taken the Infection in the Common Way here, have not generally had the Distemper so light as those that were inoculated..." "The principal Advantages I see in Inoculation," Franklin declared, "are, that it gives an

Opportunity of laying hold of a favourable Season...to go thro' the Distemper...And that, the Time being fix'd for the Operation, you can prepare the Body by Temperance and a little Physic."⁹

If Vassall did not wish to make the trip from Boston to New York or Philadelphia, Franklin offered to send the inoculation matter by mail, "cork'd up tight in a small Phial."¹⁰

Franklin even described the method of inoculation: "a Dry Scab or two will communicate the Distemper by Inoculation, as well as fresh Matter taken from a Pustule and kept warm till apply'd to the Incision."¹¹

Poor Richard's Almanack of 1750 once again demonstrated Franklin's attempt to change the public attitude toward smallpox inoculation. He told his readers that after it had been proven safe by experimentation on convicts, the two English princesses, Amelia and Carolina, were inoculated. Because of this success among the nobility, Franklin applauded the "good sense" of the Europeans. He considered it "impious" to reject a Method discovered to Mankind by God's good Providence, whereby 99 in 100 are saved."¹²

Franklin commented on the way smallpox affected the Indians. He said that it hit them especially hard because of the "Closeness and Hardness of their Skins."¹³ Franklin added an incidental bit of news about a missionary in Peru. The Indians of that region had been plagued by smallpox and the missionary, hearing about the wonders of inoculation, tried it on the Indians. Because of its tremendous success, both the missionary and his religion were held in higher esteem by the natives.¹⁴

In a letter dated September 13, 1750, Franklin cautioned his friend, Samuel Johnson, to put off a visit to Philadelphia until the spring, when the smallpox epidemic would be over. At the time of his letter only children were afflicted, but the doctors were inoculating as many as possible to keep the disease from spreading.¹⁵ In the same month, Franklin wrote that he expected that the Reverend Samuel Cooper of Boston would delay a forthcoming visit because of the epidemic.¹⁶ Evidently the course of action for combating smallpox had been determined; inoculation of the population allowed the disease to run its course among the people within a confined and predictable time period.

Some of Franklin's correspondents did not agree with his views on inoculation, or were afraid to submit to it. In a letter of October 25, 1750, Franklin admonished Samuel Johnson for not submitting to inoculation and told him that as a result their business would have to be transacted by mail, as smallpox struck Philadelphia "every 4 or 5 years."¹⁷

Smallpox was such a serious problem in the city that in 1752 the Pennsylvania Assembly Committee used mortality figures as a method of determining the growth of the city. In 1722, 188 citizens had succumbed to smallpox, and from 1738 to 1744, an average of 454 per year died of the disease, an increase which "shews the great Increase of Inhabitants to that Time."¹⁸

Smallpox continued to be a topic of correspondence. Again in June of 1756, Franklin informed Jane Mecom that "The Small Pox is beginning in Town by Inoculation, but has not otherwise spread

as yet; those who have been Inoculated not being yet in the ripe state to communicate Infections. We have only a Negro Child to have it."¹⁹ In the same letter Franklin told of the Governor's warning against bringing Indians into town who had not previously contracted smallpox.

In reference to the Indians, an interesting letter was sent to Franklin by Timothy Horsfield, a Moravian from Bethlehem, Pennsylvania. Horsfield complained of problems in dealing with Indians who had contracted smallpox. Upon returning from a peace conference, one Indian, John Smaling, was discovered to be ill and was placed in a shed to prevent the spread of disease. He was well-cared-for, having been brought to the house of a man named Clows where he could be kept warm, nourished, and nursed back to health. The problem arose when Smaling's relative arrived on the scene. Poor Horsfield did not know quite what to do. As Horsfield said: "...they Behave as if they thought the White People was now obligd to do Every thing for them they require, and Indeed it is too Much so. I do assure you, Gentlemen, I cannot Explain to you the trouble and Vexation the Brethren and My Self have with these Savage Wretches and if more Comes I dont Know what we Shall do."²⁰ The Moravians had been charitable, but their patience had worn thin, and their primary fear was that the "savage" Indians would corrupt their own converts. Smallpox indeed created problems, and this was one example of the social complications brought on by infection with smallpox.

Another social repercussion occasioned by smallpox concerned

the problems to be faced in finding quarters for the British troops in 1756. Although the Pennsylvania Assembly disapproved of having to house the troops, and there seemed to have been a severe lack of room; the fatal blow was the news that smallpox raged among the soldiers. In December of 1756, after a great deal of delay, arrangements were made by the Assembly to have the troops inoculated and then quartered in special annexes which were being set up near the military hospital.

As a preface to Dr. Heberden's Pamphlet on Inoculation, Franklin compiled a brief history of the inoculation controversy in New England. He described the various methods tried in America (removal of the sick, guarding of their houses, and so on) before inoculation was finally accepted, demonstrating the effects of each on the duration and spread of the disease. Controversy continued, with the opponents of inoculation vociferously condemning it, and the surgeons minimizing deaths from inoculation. As a result of the conflict, special commissions were established in 1752 to investigate inoculation statistics in each ward of Philadelphia.²¹ The results of this investigation fully supported Franklin's views on inoculation:

Had the Small-pox in the common way,		Of these died	
Whites	Blacks	Whites	Blacks
5059	485	452	62
Received the distemper by Inoculation,		Of these died	
Whites	Blacks	Whites	Blacks
1974	139	23	7

Franklin explained that inoculation was first practiced in Boston in 1720 and it was not until 1730 that it was brought to Philadelphia. In a personal inquiry he discovered that of the first eight hundred inoculated in Philadelphia, only four died. Inoculation was safer in Philadelphia than in Boston, which Franklin attributed to the fact that the Bostonians tried to keep smallpox out for as long as possible, thereby increasing susceptibility to the disease when it finally struck.

Even though inoculation had proven successful, there was still doubt among the common people, which, Franklin believed, was to be expected. Their fear was of the "lawfulness" of the practice; if one member of the extended family was opposed to inoculation, that was sufficient to warrant its condemnation. The rationale was that if a disaster occurred the individual choosing inoculation would have to face the wrath of the entire family. Franklin believed that the clergy could have a great effect in dispelling such fears. Another popular objection was based on the cost of inoculation, which for a large family could be considerable. Franklin suggested that physicians write pamphlets instructing parents on the preparation, dressing, and treatment of inoculation, in order that they might perform the operation themselves, thus saving the physician's fee. Because of this suggestion Dr. Heberden wrote such a pamphlet which was distributed in the colonies.²²

The final coup de gr[^]ace in the battle of inoculation occurred when Boston banned inoculation because it spread infection; then, in 1764, the city was hit by an epidemic. After this turn of

events, the ban was lifted.²³

The merits of inoculation were strongly debated in the eighteenth century but the fact remains, as John Duffy, the medical historian, states, "Not only did variolation serve as a relatively effective check upon smallpox in the colonies, but it also paved the way for the immediate acceptance of vaccination both in England and in America."²⁴ Even though Edward Jenner's close-of-the-century discovery of vaccination provided a more reliable preventative, variolation continued to be used into the nineteenth century.

Franklin strongly supported inoculation as a means of controlling epidemic smallpox. Through his newspaper, The Pennsylvania Gazette and Poor Richard's Almanack, he advocated inoculation, believing that its discovery was ordained to save mankind from a dreaded disease. Because of Franklin's political affiliations and connections with noted physicians, both in America and abroad, he had access to a great deal of information concerning inoculation. His concern for social welfare was demonstrated by his attempts to educate the public in the methods employed in inoculation, as well as to convince the people that inoculation was less to be feared than the smallpox itself.

Footnotes

- ¹John Duffy, Epidemics in Colonial America, (Baton Rouge: 1953), 24.
- ²Ibid., 24-5.
- ³The Pennsylvania Gazette, May 14, 1730, cited in Leonard W. Labaree, The Papers of Benjamin Franklin, (New Haven: 1959), I, 186-7.
- ⁴Benjamin Franklin to Jane Mecom, Philadelphia, June 19, 1731 cited in Labaree, The Papers of Benjamin Franklin, I, 200-1.
- ⁵The Pennsylvania Gazette, March 4, 1731, cited in Labaree, The Papers of Benjamin Franklin, I, 214.
- ⁶The Pennsylvania Gazette, July 8, 1731, cited in Labaree, The Papers of Benjamin Franklin, I, 217.
- ⁷Memorandum, 1746, cited in Labaree, The Papers of Benjamin Franklin, III, 74.
- ⁸Benjamin Franklin to William Vassall, Philadelphia, May 29, 1746, cited in Labaree, The Papers of Benjamin Franklin, III, 79.
- ⁹Ibid., 78-9.
- ¹⁰Ibid., 79.
- ¹¹Ibid.
- ¹²Poor Richard Improved, 1750, cited in Labaree, The Papers of Benjamin Franklin, III, 445.
- ¹³Ibid.
- ¹⁴Ibid.

- 15 Benjamin Franklin to Samuel Johnson, Philadelphia, September 30, 1750, cited in Labaree, The Papers of Benjamin Franklin, IV, 63.
- 16 Benjamin Franklin to Jane Mecom, Philadelphia, September 20, 1750, cited in Labaree, The Papers of Benjamin Franklin, IV, 64.
- 17 Benjamin Franklin to Samuel Johnson, Philadelphia, October 25, 1750, cited in Labaree, The Papers of Benjamin Franklin, IV, 71.
- 18 Pennsylvania Assembly Committee: Report on the State of the Currency, August 19, 1752, cited in Labaree, The Papers of Benjamin Franklin, IV, 346.
- 19 Benjamin Franklin to Jane Mecom, Philadelphia, June 10, 1756, cited in Labaree, The Papers of Benjamin Franklin, VI, 452.
- 20 Timothy Horsfield to the Provincial Commissioners, Bethlehem, November 29, 1756, cited in Labaree, The Papers of Benjamin Franklin, VII, 32.
- 21 Preface to Dr. Heberden's Pamphlet on Inoculation, cited in Labaree, The Papers of Benjamin Franklin, VIII, 282.
- 22 Ibid., 284-5.
- 23 John Duffy, Epidemics in Colonial America, (Baton Rouge: 1953), 64-6.
- 24 Ibid., 42.