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An Empire of Remedy

Vaccination, Natives, and Narratives in the North American West

ABSTRACT In 1832, the United States began an extensive program to vaccinate Indians against smallpox. The program reached roughly 50,000 Indians both friendly and hostile to U.S. authorities. The program was far-reaching because more than they feared Indians, Americans feared the smallpox virus. Their terror was palpable in narratives published in the 1830s. In addition, as narratives from the period make clear, rather than thinking of diseases such as smallpox as providential scourges that would clear the way for U.S. settlement, officials offered the smallpox vaccine to Indians in an effort to win their goodwill, and detach them from alliances with Britain or Mexico (both of whom also offered vaccine to the Indians). Finally, as the U.S. began its tentative first moves into the West, narratives about vaccinating Indians helped Americans convince themselves that they were not simply conquerors but healers. KEYWORDS smallpox, vaccination, narrative, Isaac Knight, Kickapoo, Douglas Houghton, Ojibwa, James O. Pattie, Mexico, California

In early October 1832, a U.S. physician, Meriwether Martin, met with a large group of Lakotas at their camp southeast of the Black Hills and offered to vaccinate them against smallpox. During the course of his journey from St. Louis to the Lakota country, Martin had vaccinated more than four hundred natives whom he had encountered at several Indian agencies and villages on the Missouri River. At the Lakota camp, about nine hundred Lakotas likewise agreed to the treatment. Martin administered the vaccine hurriedly, as the Lakotas were eager to break camp and go in search of bison before the last remnants of the large summer herds dispersed for the winter. Their impatience notwithstanding, many stayed in camp long enough to be treated by Martin, who wrote that those who received the vaccine "appeared thankful for the opportunity of avoiding the fate of many of their neighbors."[1]

1. Meriwether Martin to Lewis Cass, November 28, 1832, Letters Received, Office of Indian Affairs, Record Group 75, Microcopy 234, Roll 750, National Archives and Records Administration, Washington, D.C.

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Indeed, the Lakotas believed that there was good reason to receive the vaccine. In the first third of the nineteenth century, tens of thousands of Native Americans perished in smallpox epidemics that spanned the North American continent—part of a process of depopulation dating to the sixteenth century that the environmental historian Alfred Crosby has termed European "ecological imperialism."[2] Lakota "winter counts"—pictographic records of the notable events of the year—record outbreaks of smallpox in 1779, 1780, 1798, 1801, 1810, and 1818.[3] The Lakotas were well aware that in 1830, two years before Martin's visit, roughly ten thousand Pawnees, the Lakotas' neighbors (and often rivals) to the south, had died during a smallpox outbreak.[4] The readiness of many Lakotas to be vaccinated—embracing a European medical innovation to counteract the spread of an Old World disease—reflected natives' ability to adapt to and thus outlast European ecological imperialism.[5]

2. For "ecological imperialism" see Alfred W. Crosby, Jr., *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (New York: Cambridge University Press, 1986). Crosby's earlier works include *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Ct.: Greenwood Press, 1972); and "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation of America," *William and Mary Quarterly* 33, no. 2 (April 1976): 289–99. On ecological invasions and the importance of disease in human history, Crosby was indebted to two older works: Charles Elton, *The Ecology of Invasion by Plants and Animals* (London: Chapman and Hall, 1958); and Hans Zinsser, *Rats, Lice, and History* (Boston: Little, Brown, 1935).

3. Garrick Mallery, "Pictographs of the North American Indians," *Fourth Annual Report of the Bureau of American Ethnology, 1882–83* (Washington, D.C.: Government Printing Office, 1886), 89–146; Mallery, "Picture Writing of the American Indians," *Tenth Annual Report of the Bureau of American Ethnology, 1888–89* (Washington, D.C.: Smithsonian Institution, 1893), 266–328, esp. 308. 313, 317. Mallery relied on the winter counts of Lone Dog, a Yanctonai, and Battiste Good, a Brulé Lakota. See also Linea Sundstrom, "Smallpox Used Them Up: References to Epidemic Disease in Northern Plains Winter Counts, 1714–1920," *Ethnohistory*, 44 (Spring 1997): 305–43.

4. For the outbreak among the Pawnees, see John Dougherty, Letter from the Secretary of War, 30 March 1832, H. Doc. No. 190, 22nd Cong., 1st Sess. For outbreaks in the early nineteenth-century Great Plains, see Russell Thornton, *American Indian Holocaust and Survival: A Population History since 1492* (Norman: University of Oklahoma Press, 1987), 91–94, 130; E. Wagner Stearn and Allen E. Stearn, *The Effect of Smallpox on the Destiny of the Amerindian* (Boston: Bruce Humphries, 1945), 72–94; Gregory R. Campbell, "Plains Indian Historical Demography and Health," *Plains Anthropologist*, 34 (May 1989).

5. For Indians' adaptations and cultural borrowing, see Gary C. Anderson, *Kinsmen of Another Kind: Dakota-White Relations in the Upper Mississippi Valley, 1650–1862* (Lincoln: University of Nebraska Press, 1984); James Merrell, *The Indians' New World: Catawbas and their Neighbors from European Contact through the Era of Removal* (Chapel Hill: University of North Carolina Press, 1989); Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650–1815* (New York: Cambridge University Press, 1991); Daniel H. Usner, Jr., *Indians, Settlers, and Slaves in a Frontier Exchange Economy: The Lower Mississippi Valley Before 1763* (Chapel Hill: University of North Carolina Press, 1992); Eric Hinderaker, *Elusive Empires:*

The Lakotas were not the only natives to be vaccinated in the 1830s. Over the course of the decade, American physicians vaccinated at least thirty-nine thousand and perhaps as many as fifty-four thousand Indians (keeping count of the number who filed past physicians to receive the vaccine proved difficult). Altogether, physicians administered the vaccine to between 10 and 15 percent of the native population of the United States.[6] Nor were Americans alone in offering to vaccinate native North Americans. The government

Constructing Colonialism in the Ohio Valley, 1673–1800 (New York: Cambridge University Press, 1999); Andrew C. Isenberg, *The Destruction of the Bison: An Environmental History* (New York: Cambridge University Press, 2000); Daniel K. Richter, *Facing East from Indian Country: A Native History of Early America* (Cambridge, Ma.: Harvard University Press, 2001).

6. Russell Thornton estimated that there were 600,000 Indians living in the United States (including territories that would be added to the United States) in 1800. That number declined to 250,000 by 1890. In the 1830s, the United States did not yet include Texas, New Mexico, or California. These places were home to dense native populations; California alone, according to Thornton, had a native population of 210,000 in 1834. According to Gary Clayton Anderson and Don D. Fowler, there were conservatively perhaps another 50,000 natives in Texas and New Mexico. See Russell Thornton, *American Indian Holocaust and Survival*, 43, 109, 133; Albert L. Hurtado, *Indian Survival on the California Frontier* (New Haven: Yale University Press, 1988); Gary Clayton Anderson, *The Conquest of Texas: Ethnic Cleansing in the Promised Land, 1820–1875* (Norman: University of Oklahoma Press, 2005), 4; Don D. Fowler, *A Laboratory of Anthropology: Science and Romanticism in the American Southwest, 1846–1930* (Salt Lake City: University of Utah Press, 2010).

Native population decline between 1800 and 1890 was not consistent—much of it likely took place after 1837, beginning with the smallpox epidemic of 1837–1840. The highest population in the smaller United States of 1832 was roughly 340,000. J. Diane Pearson estimates that the number of Indians vaccinated was between 39,000 and 54,000; if the number vaccinated was at the low end, it was 11 percent of the total native population; at the high end, between 15 and 16 percent. Estimates of Native American population prior to 1492, and of the extent of population decline up until the end of the nineteenth century, have been subject to longstanding scholarly debate. In the early twentieth century, the ethnologist James Mooney put the native population of North America in 1492 at just over one million. Estimates have crept upward since then, peaking at 18 million in the work of Henry F. Dobyns. Other high estimates include those of Thornton and David Stannard. David Henige offers the most notable critique of the newer, higher estimates. See J. Diane Pearson, "Lewis Cass and the Politics of Disease: The Indian Vaccination Act of 1832," *Wicazo Sa Review* 18 (Fall 2003): 14–17; James Mooney, *The Aboriginal Population of America North of Mexico* (Washington, D.C.: Smithsonian Institution, 1928); Henry F. Dobyns, *Their Number Become Thinned: Native American Population Dynamics in Eastern North America* (Knoxville: University of Tennessee Press, 1983); Thornton, *American Indian Holocaust and Survival*; David Stannard, *American Holocaust: The Conquest of the New World* (New York: Oxford University Press, 1993); David Henige, "On the Contact Population of Hispaniola: History as Higher Mathematics," *Hispanic American Historical Review* 58 (May 1978): 217–37; Henige, "Their Numbers Become Thick: Native American Historical Demography as Expiation," in *The Invented Indian: Cultural Fictions and Government Policies*, ed. James Clifton (New Brunswick: Transaction Publishers, 1990), 169–91. For a survey of the historians' debate, see John D. Daniels, "The Indian Population of North America in 1492," *William and Mary Quarterly*, 49, no. 2 (April 1992): 298–320.

of Mexico vaccinated California Indians in the 1820s.[7] The Hudson's Bay Company began vaccinating Canadian natives in 1837.[8] Vaccination of colonized indigenes was not limited to North America. The Swedish government began compulsory vaccination of the Saami in 1816.[9] On the northern Pacific island of Hokkaido, the Japanese government initiated a program to vaccinate the indigenous Ainu in the 1850s.[10]

Most Swedes and Japanese regarded the Saami and Ainu, respectively, as savages, just as most Americans had little regard for Indians. Indeed, the U.S. vaccinations occurred during the very decade when the United States program of Indian removal was at its height (just as in Sweden, for instance, the Saami vaccination program paralleled a policy of forced assimilation). In between military campaigns against the Creeks, Shawnees, Arikaras, Sauk and Fox, Seminoles, and others, the U.S. government forcibly removed tens of thousands of natives, including the Cherokees, Choctaws, Ottawas, and Potawatomis, from territories east of the Mississippi River to reservations in the trans-Mississippi West.[11] In this context, one might suspect that Martin and other physicians who vaccinated Indians were lone do-gooders. Yet, like the vaccinators in Sweden, Japan, and Mexico, he was a government agent. Martin operated under the auspices of an 1832 federal law directing the

7. Sherburne F. Cook, "Smallpox in Spanish and Mexican California, 1770–1845," *Bulletin of the History of Medicine* 7 (February 1939): 29–43.

8. Paul Hackett, "Averting Disaster: The Hudson's Bay Company and Smallpox in Western Canada during the Late Eighteenth and Early Nineteenth Centuries," *Bulletin of the History of Medicine* 78 (2004): 575–609, repr. in David Freeland Duke, ed., *Canadian Environmental History: Essential Readings* (Toronto: Canadian Scholars Press, 2006), 173–94.

9. Peter Sköld, "Escape from Catastrophe: The Saami's Experience with Smallpox in Eighteenth- and Early-Nineteenth-Century Sweden," *Social Science History* 21 (Spring 1997): 1–25.

10. Brett L. Walker, "The Early Modern Japanese State and Ainu Vaccinations: Redefining the Body Politic, 1799–1868," *Past and Present* 163 (May 1999): 121–60.

11. See Michael D. Green, *The Politics of Indian Removal: Creek Government and Society in Crisis* (Lincoln: University of Nebraska Press, 1985); Green and Theda Perdue, *The Cherokee Nation and the Trail of Tears* (New York: Penguin, 2007); Anthony F.C. Wallace, *The Long, Bitter Trail: Andrew Jackson and the Indians* (New York: Hill and Wang, 1993); Anderson, *The Conquest of Texas;* John M. Faragher, "'More Motley Than Mackinaw': From Ethnic Mixing to Ethnic Cleansing on the Frontier of Lower Missouri, 1783–1833," in *Contact Points: American Frontiers from the Mohawk Valley to the Mississippi, 1750–1830,* ed. Andrew R.L. Cayton and Frederika Teute (Chapel Hill: University of North Carolina Press, 1998), 304–26. For the Ainu, see Walker, *The Conquest of Ainu Lands: Ecology and Culture in Japanese Expansion, 1590–1800* (Berkeley: University of California Press, 2006); for the Saami, see Noel Broadbent, *Lapps and Labyrinths: Saami Prehistory, Colonization, and Cultural Resilience* (Washington, DC: Smithsonian Institution Press, 2010).

Office of Indian Affairs to vaccinate Indians.[12] This incongruity demands an explanation: why would the U.S. government embark on an extensive vaccination program when at the same time it sought to remove natives from the eastern United States to the trans-Mississippi West and project its sovereignty west to the Pacific?

Understanding the vaccination program in the United States begins with recognizing the tenuousness of the U.S. presence in the West in the 1830s. While the removal policies of the 1830s foreshadowed the eventual military defeat and legal subjugation of Indians, in 1832 when Congress passed the Indian Vaccination Act, the United States maintained a relatively weak presence in the West. There, it was forced to contend not only with powerful, autonomous native groups but with competing British and Mexican empires. Above all, Americans had to contend with smallpox itself—a fearful disease for Americans as well as for natives. For many Americans, the fear of smallpox outweighed the fear of Indians. Moreover, vaccination was a way for the United States to win the goodwill of western Indians and thus detach them from alliances with competing imperial powers. Not least of all, vaccination allowed Americans to shore up their own anxieties about expansion and to present themselves to natives (and to themselves as well) as beneficent. Americans' fears and sense of powerlessness in the face of natives, imperial competitors, and smallpox impelled them to vaccinate the Indians of the West.

Most western and Native American historians have simply ignored the vaccination program; it is tempting to think that the program receives so little mention because it does not fit neatly into the paradigms of manifest destiny and Indian removal that dominate historians' understanding of the period.[13] Rather than explain the vaccination program in the context of U.S. weaknesses and fears, the few historians who have sought to explain the vaccination program have tried to align the program with the U.S. conquest

12. *United States Statutes at Large*, 5 May 1832, 22nd Cong., 1st Sess., Ch. 75 (Washington, DC: Government Printing Office, 1937), 514–15.

13. See, for instance, Roy Harvey Pearce, *Savagism and Civilization: A Study of the Indian and the American Mind* (Baltimore: Johns Hopkins University Press, 1965); Richard Drinnon, *Facing West: The Metaphysics of Indian-Hating and Empire-Building* (Minneapolis: University of Minnesota Press, 1980); Reginald Horsman, *Race and Manifest Destiny: The Origins of American Racial Anglo-Saxonism* (Cambridge: Harvard University Press, 1981); Anders Stephanson, *Manifest Destiny: American Expansion and the Empire of Right* (New York: Hill and Wang, 1995); Walter Nugent, *Habits of Empire: A History of American Expansion* (New York: Alfred A. Knopf, 2008); Amy S. Greenberg, *Manifest Destiny and American Territorial Expansion: A Brief History with Documents* (New York: Bedford/St. Martin's, 2012).

of the West—a conquest that, they imply, though not complete until the 1890s, was a foregone conclusion in the 1830s. Americans, according to this view, feared and hated Indians; they welcomed Indians' deaths by whatever means because the disappearance of Indians opened the continent to U.S. settlement. Antebellum Americans supposedly shared the view of John Winthrop, the first governor of Massachusetts, who wrote in 1634 that "the natives, they are all neere dead of the small Poxe, so as the Lord hathe cleared our title to what we possess."[14] Winthrop's notion of smallpox as a providential scourge persisted in the minds of many Americans well into the nineteenth century. In 1851, the popular historians John Warner Barber and Elizabeth Barber suggested that an illness, probably smallpox, had been visited upon the Indians of Massachusetts in the early 1620s by an angry God in punishment for the Indians' alleged practice of enslaving or killing shipwrecked European sailors.[15]

If the United States was destined to overspread the continent, and diseases such as smallpox were the providential instrument of this manifest destiny, why then would Americans try to arrest the spread of smallpox among the Indians? In the opinion of those handful of historians who have studied the program, they did not truly try, despite the stated aim of the program. In this context of the celebration—even sanctification—of Indian deaths, historians have presented the vaccinations of the 1830s as little more than a cynical exercise. Russell Thornton, in his encyclopedic study of American Indian population decline since 1492, characterized the vaccination program as

14. John Winthrop to Nathaniel Rich, May 22, 1634, Gilder Lehrman Collection, Gilder Lehrman Institute of American History, New York, N.Y. Those who argued that Winthrop's view represented colonists generally included Pearce, *Savagism and Civilization*; Crosby, *The Columbian Exchange*, 41; Thornton, *American Indian Holocaust and Survival*, 71; Drinnon, *Facing West*; Horsman, *Race and Manifest Destiny*. For more recent versions, see Stannard, *American Holocaust*; Wallace, *The Long, Bitter Trail;* Wallace, *Jefferson and the Indians: The Tragic Fate of the First Americans* (Cambridge, Mass.: Belknap Press, 2001). By the end of the nineteenth century, American physicians and scientists explained the depopulation of Indians owing to disease as an unavoidable example of the survival of the fittest. See David S. Jones, *Rationalizing Epidemics: Meanings and Uses of American Indian Mortality since 1600* (Cambridge: Harvard University Press, 2004), 2.

15. John Warner Barber and Elizabeth G. Barber, *Historical, Political, and Pictorial American Scenes* (Cincinnati: J.H. Jackson, 1851), 123–24. For providentialism in colonial, revolutionary, and antebellum American thought and culture, see Nicholas Guyatt, *Providence and the Invention of the United States, 1607–1876* (Cambridge: Cambridge University Press, 2007). It was, in fact, European colonists who routinely enslaved natives in the seventeenth and eighteenth centuries. See Alan Gallay, *The Indian Slave Trade: The Rise of the English Empire in the American South* (New Haven: Yale University Press, 2003).

a failure, because of a "lack of interest on the part of United States officials" in having Indians vaccinated.[16] Yet the program's extent belies that claim. While the number of Native Americans vaccinated in the 1830s may seem small, it compares favorably to other medical programs that targeted remote and dispersed native populations. A smallpox inoculation program aimed at the children of Guanajuato, Mexico, in 1797, for instance, reached only 19 percent of the province's children, and less than 10 percent of the children in rural districts, where the population was scattered.[17] Fortunately, for a vaccination program to be successful, the vaccine need not reach everyone in any one group. The unvaccinated could be protected from contagion if they remained within a group in which many had been vaccinated—a form of protection epidemiologists call "herd immunity."[18]

Straining like Thornton to fit vaccination within the larger context of American conquest, J. Diane Pearson argued that federal officials withheld the vaccine from Indians who resisted removal or were otherwise hostile to the United States. Pearson's argument is based on her reading of a single sentence written by Lewis Cass, the secretary of war, in a letter to an agent in the Office of Indian Affairs. After delegating the agent to direct the vaccination program on the Missouri River, Cass added that he should not "send a Surgeon higher up the Missouri than the Mandans, and I think not higher than the Aricaras." Yet, this cynical reading of vaccination does not ring true: Cass immediately followed the sentence by suggesting that the agent might later extend the vaccination program farther upriver.[19] Moreover, physicians

16. Thornton, *American Indian Holocaust and Survival*.

17. Angela T. Thompson, "To Save the Children: Smallpox, Inoculation, Vaccination, and Public Health in Guanajuato, Mexico, 1797–1840," *The Americas* 49 (April 1993): 439–40.

18. For a discussion of the concept of "herd immunity," see J.R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620–1914* (New York: Cambridge University Press, 2010), 44. For the effects of the vaccination program in preventing higher mortality during an outbreak of smallpox in North American in 1837–40, see Michael K. Trimble, "The 1832 Inoculation Program on the Missouri River," in *Disease and Demography in the Americas*, ed. John W. Verano and Douglas H. Ubelaker (Washington, DC: Smithsonian Institution Press, 1992), 257–64.

19. See Pearson, "Lewis Cass and the Politics of Disease," 14–17. Both Jones, *Rationalizing Epidemics,* 114–117, and Barbara Alice Mann, *The Tainted Gift: The Disease Method of Frontier Expansion* (Santa Barbara, Calif.: ABC-CLIO, 2009), 25, follow Pearson's argument. After writing that the vaccination program should stop at the Mandan villages in 1832, Cass wrote that in regards to further vaccinations, "The proper time for this service will be determined by you, and will depend upon the most convenient opportunity for finding the Indians collected together." For the full document that Pearson quotes, see Cass to Dougherty, 9 May 1832, Letters Sent, Office of Indian Affairs, Record Group 75, Microcopy 21, Roll 8, National Archives and Records Administration. In January 1833, Elbert Herring, the Commissioner of Indian Affairs, likewise indicated that the

routinely offered the vaccine to native groups such as the Ojibwas whose relationship to the United States was icy; the purpose of the medical diplomacy was warmer relations.

If, according to these historians, Americans did not truly want to vaccinate Indians, then according to others, such as Paul Kelton, Indians did not truly want to be vaccinated, either. Kelton has argued that by the 1820s, vaccination was part of a "culture war" aimed at undermining the traditions of native healers.[20] Kelton applauded natives who declined to be vaccinated, while offering no explanation for the many who received the vaccine. His perspective, in its unwillingness to recognize fully the ways in which many natives incorporated some Euro-American medical practices—what historians of medicine call "hybridity"—casts native healing practices as culturally static.[21] Far from being static, native healers readily adopted remedies they perceived to be effective. Kelton himself noted that in the eighteenth century, the Cherokees and other natives in the Southeast incorporated the practice of quarantine from colonists to arrest the spread of smallpox.[22] More poignantly, at Fort Clark on the Missouri River in August 1837, at the height of a smallpox epidemic among the Mandans, the trader Francis Chardon reported that one Mandan, desperate to prevent his child from falling ill, adopted the practice of inoculation from Americans and improvised a version of the procedure: "An Indian Vaccinated his child, by cutting two small pieces of flesh out of his arms, and two on the belly – and then taking a Scab from one, that was getting well of the disease, and rubbing it on the wounded part, three days after, it took effect, and the child is perfectly well."[23] The

program would be resumed in order to vaccinate Indians it had not reached in its first season. See Herring to Cass, 31 January 1833, "Vaccination-Indians," H. Doc. No. 82, 22nd Cong., 2nd Sess.

20. See Paul Kelton, "Cherokee Medicine and the Smallpox Outbreak of 1824," in *Indigenous Knowledge and the Environment in Africa and North America,* ed. David Gordon and Shepard Krech III (Athens: Ohio University Press, 2012), 151–70.

21. For medical hybridization, see Rebecca Marsland, "The Modern Traditional Healer: Locating 'Hybridity' in Modern Traditional Medicine, Southern Tanzania," *Journal of Southern African Studies* 33 (December 2007): 751–65. For hybridity, see Homi Bhabbha, *The Location of Culture* (New York: Routledge, 1994); Robert J.C. Young, *Colonial Desire: Hybridity in Theory, Culture, and Race* (New York: Routledge, 1995); Marwan M. Kraidy, *Hybridity, or the Cultural Logic of Globalization* (Philadelphia: Temple University Press, 2005. The concept of hybridity owes a debt to William H. McNeill on cultural diffusion. See William H. McNeill, *The Rise of the West: A History of the Human Community* (Chicago: University of Chicago Press, 1991) [1963].

22. Kelton, "Avoiding the Smallpox Spirits: Colonial Epidemics and Southeastern Indian Survival," *Ethnohistory* 51 (Winter 2004): 45–71.

23. Francis A. Chardon. *Chardon's Journal at Fort Clark, 1834–1839*, ed. Annie Heloise Abel (Pierre, S.D., 1932), 133.

Mandan father, like the nine hundred Lakotas Martin vaccinated in 1832, were among the many Indians willing to risk incorporating a medical practice from a different culture if it promised to be effective against smallpox.

The vaccination program was neither so facile as to undermine native healers nor so cynical as merely to reward cooperative natives and punish hostile ones. Those interpretations presume a preponderance of U.S. power. Yet, the vaccine program is best understood in light of manifold U.S. weaknesses: the vulnerability of Americans to smallpox and the inability of Americans to realize their claim to sovereignty in the West. Americans articulated their fears of smallpox as well as their thwarted ambitions for expansion in stories they told of encountering smallpox on the frontier. Narrative provided a structure that allowed Americans to give voice to their fears and at the same time contain them.[24] The historian Jill Lepore has argued that New England colonists and their descendants made sense of the terrors they experienced during King Philip's War—a conflict between natives and colonists in which roughly five thousand of the latter died—through the manipulation of language and narrative.[25] According to the literary critic David Shuttleton, eighteenth-century English smallpox narratives were a means of expressing and containing fears of the disease. Like Indian captivity narratives, a genre that also allowed for the expression of fears of Indians, smallpox narratives both articulated and resolved fears of the disease.[26] In the 1830s, narratives were vehicles for Americans to express their fears of smallpox, natives, and their own expansion into the West. Three such narratives of vaccination, all published between 1831 and 1839—a captivity narrative of a boy captured by the Kickapoos, a journal of an expedition to the Ojibwas, and a travelogue of a journey to California—both explained and shaped American actions.

24. "To be understood, "according to the historian Joanne Bourke, "individuals communicating their fears need to conform to certain narrative structures, including genre, syntax, form, order, and vocabulary." Bourke, "Fear and Anxiety: Writing about Emotion in Modern History," *History Workshop Journal* 55 (Spring 2003): 120.

25. Jill Lepore, *The Name of War: King Philip's War and the Origins of American Identity* (New York: Knopf, 1998). Likewise, the historian Alan Taylor has argued that settlers in frontier New York in the early nineteenth century carried with them stories that emphasized the dangers of the wilderness; these stories encouraged settlers to destroy forests and wildlife. Taylor, "'Wasty Ways': Stories of American Settlement," *Environmental History* 3 (July 1998): 291–310.

26. Both captivity and smallpox narratives adhered to a pattern of torment, steadfastness, and recovery: a secularized version of the Christian narrative of redemption. David E. Shuttleton, *Smallpox and the Literary Imagination, 1660–1820* (Cambridge: Cambridge University Press, 2007), 28–31, 42–66.

Fear manifested itself in American smallpox narratives in three ways. First, smallpox was the scourge not only of Indians, but of Americans. While Indians comprised the majority of smallpox victims in the first part of the nineteenth century, Americans who had long lived in isolation from Old World disease pools—especially settlers in the North American backcountry who had never been exposed to the virus—were just as vulnerable to the disease. Narratives emphasized this shared vulnerability and encouraged vaccination as a public health measure. Secondly, the United States had to contend for sovereignty not only with autonomous native groups but with competing European imperial powers. Journals and narratives highlighted this competition, encouraging Americans to recognize that in this multilateral borderland, the United States could not simply impose its will; rather it should employ vaccination to try to win the allegiance of natives against competing imperial powers. Thirdly, Americans embarked upon the vaccination program to rationalize their expansion into the West. In vaccination narratives, Americans sought to convince not only the natives of their good intentions but themselves, to show that they would be pacific and would bring benefits to the natives. Eager to draw a contrast between themselves and competing empires, Americans sought to vaccinate Indians to protect themselves both from the virus and from the perception that, as conquerors, they were no better than Britain or Mexico. The American empire, Thomas Jefferson infamously declared in 1780, would be "an empire of liberty."[27] In the 1830s, it was also an empire of medical remedy: through vaccination, Americans hoped to convince themselves, in the face of Indian removal and their encroachments into Mexican territory, of the safety, certainty, and benignity of the American body politic.

I

Smallpox is an affliction that is both deadly and relatively easy to transmit. The *Variola* virus that caused smallpox usually traveled through the air and entered new hosts through the respiratory tract, but it could also spread if

27. Thomas Jefferson wrote that "we shall divert through our own Country a branch of commerce which the European States have thought worthy of the most important struggles and sacrifices, and in the event of peace on terms which have been contemplated by some powers we shall form to the American union a barrier against the dangerous extension of the British Province of Canada and add to the Empire of liberty an extensive and fertile Country thereby converting dangerous Enemies into valuable friends." Jefferson to George Rogers Clark, December 25, 1780, *Papers of Thomas Jefferson*, vol. 4 (Princeton: Princeton University Press, 2004): 327–38.

a potential host came into contact with a fresh smallpox scab or pustule. Once the disease found a new host, it incubated for ten to fourteen days before manifesting itself as intense pain, fever, an eruption of pox sores on the surface of the body, and, in one-third to one-half of cases, death. The only carriers of smallpox are human beings, and because a significant proportion of smallpox hosts died before they could pass the disease along to someone else, the disease was endemic only in places where the population was relatively dense, such as in early modern European cities. There, between the sixteenth and eighteenth centuries, smallpox settled in and became an endemic childhood disease—80 percent of its victims were under ten years of age. Most western Europeans were exposed to the virus as children; those who survived the exposure acquired lifelong immunity.[28]

Most adult European colonists who first arrived in the Americas possessed immunity to smallpox. Yet natives, who had no previous exposure to the disease, died in large numbers when the smallpox virus arrived in the New World beginning in the sixteenth century. Smallpox returned every few decades, afflicting everyone who had been born since the previous epidemic.[29] By the end of the eighteenth century, however, although Indians still comprised the majority of the victims of smallpox in North America, many persons of European descent born in the Americas were, by virtue of their isolation from Old World disease pools, as vulnerable to smallpox as Indians. This was especially true in the backcountry, where many Americans grew to adulthood without having been exposed to smallpox. Such settlers were, in an epidemiological sense, Native Americans. Between 1775 and 1782, the disease killed an estimated 130,000 North Americans—natives, colonists, and slaves alike—in outbreaks from the British Atlantic colonies to central Mexico, the Puget Sound region, and Hudson's Bay.[30]

28. See Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999); Joel N. Shurkin, *Invisible Fire: The Story of Mankind's Victory over the Ancient Scourge of Smallpox* (New York: Putnam, 1979), 25–27; Ian Glynn and Jennifer Glynn, *The Life and Death of Smallpox* (New York: Cambridge University Press, 2004).

29. For native depopulation, see Crosby, *Ecological Imperialism*; Noble David Cook, *Born to Die: Disease and New World Conquest, 1492–1650* (New York: Cambridge University Press, 1998); Dobyns, *Their Number Become Thinned*.

30. For smallpox during the American Revolution, see Elizabeth Fenn, *Pox Americana: The Great Smallpox Epidemic of 1775–82* (New York: Hill and Wang, 2001), esp. 259–77. See also Sherburne F. Cook, "The Smallpox Epidemic of 1779 in Mexico," *Bulletin of the History of Medicine* 7 (July 1939), 940.

The relative remoteness of eighteenth-century Americans from the centers of exposure to smallpox in European cities disposed some to experiment with smallpox inoculation—a treatment that preceded vaccination. A physician inoculated a patient by making an incision in the patient's arm and introducing into the incision a small amount of fluid from the pustule of a smallpox victim. If the inoculation worked, the patient would develop a mild case of smallpox and acquire an immunity to even the most virulent strains of the disease.[31] Benjamin Franklin, impressed by the procedure, advocated for general inoculation in Philadelphia in 1759.[32] In Marblehead, Massachusetts, from 1773 to 1774, the urban poor's desire for general inoculation to protect them during an outbreak of smallpox merged with nascent revolutionary politics, leading a mob to destroy an inoculation hospital reserved for the wealthy.[33] Yet inoculation was a gamble for those who submitted to it. In 1758, Jonathan Edwards, having recently accepted an appointment as the president of the College of New Jersey (later Princeton University), underwent smallpox inoculation to protect him from an outbreak of the disease. The fifty-four-year-old Edwards was either too weak to endure the inoculation or simply unlucky—he died within a month of the procedure.[34]

31. William H. McNeill, *Plagues and Peoples* (New York: Vintage, 1976), 221–22.

32. William Heberden and Benjamin Franklin, *Some Account of the Success of Inoculation for the Small-pox in England and America Together with Plain Instructions, by Which Any Person May Be Enabled to Perform the Operation and Conduct the Patient through the Distemper* (London: W. Strahan, 1759).

33. Andrew M. Wehrman, "The Siege of 'Castle Pox': A Medical Revolution in Marblehead, Massachusetts, 1764–1777," *New England Quarterly* 82 (September 2009): 385–429. In eighteenth-century America, local communities often resisted inoculation programs for fear that the contagion would spread. See Philip Ranlet, "The British, Slaves, and Smallpox in Revolutionary Virginia," *Journal of Negro History* 84 (Summer 1999), 217–26; Ann M. Becker, "Smallpox in Washington's Army: Strategic Implications of Disease during the American Revolutionary War," *Journal of Military History* 68 (2004): 381–430. Sporadic local resistance happened because inoculation had its risks. In 1721, for instance, smallpox struck Boston: of the 10,670 inhabitants of the city, 6,006 contracted the disease and 850 died. The influential minister Cotton Mather advised inoculation, but Boston physicians disagreed about the efficacy of the procedure: sometimes it left patients immune, sometimes it had no effect, and sometimes it actually contributed to the spread of the disease when inoculated patients transmitted the live virus to new hosts. Indeed, inoculation in Boston in 1721 may have facilitated the outbreak rather than contained it. Gerald N. Grob, *The Deadly Truth: A History of Disease in America* (Cambridge: Harvard University Press, 2002), 73; Perry Miller, *The New England Mind: From Colony to Province* (Cambridge: Harvard University Press, 1953), 345–66. For a recent look at inoculation in Boston in 1721, see Margot Minardi, "The Boston Inoculation Controversy of 1721: An Incident in the History of Race," *William and Mary Quarterly* 61, no. 1 (January 2004): 47–76.

34. George M. Marsden, *Jonathan Edwards: A Life* (New Haven: Yale University Press, 2004), 491–96. For the inoculation procedure, see William G. Rothstein, *American Physicians in the Nineteenth Century: From Sects to Science* (Baltimore: Johns Hopkins University Press, 1992), 29–32.

One early nineteenth-century Indian captivity narrative simultaneously reflected Americans' fears of smallpox, inoculation, and Indians. The *Narrative of the Captivity and Suffering of Isaac Knight from Indian Barbarity* casts the ten-year-old Knight as both a victim of smallpox treatment and as an unintentional instrument of its transmission. The narrative begins with a seemingly innocuous detail: in 1793, Knight's parents had their son vaccinated against smallpox when the disease appeared near their home in Henderson County, Kentucky. On the face of it, this important detail of the story is incorrect. A physician vaccinated a patient by introducing via incision not smallpox matter but cowpox (also called kinepox), a virus that is not dangerous to humans but nonetheless confers immunity to smallpox. Edward Jenner, the English physician who discovered that an infection of cowpox makes one immune to smallpox, did not however publish his first treatise on vaccination until 1798, and vaccinations did not reach the United States until the beginning of the nineteenth century.[35] The author of Isaac Knight's narrative certainly meant inoculation, but many nineteenth-century Americans often used the terms interchangeably, and Knight dictated the narrative four decades after the events he described occurred, by which time vaccination had replaced inoculation.

Shortly after receiving the treatment, Knight, together with four other boys, were set upon by a group of Kickapoos and Potawatomis. The Indians killed two of the boys and forced the other three, including Knight, to return with them in captivity to the Illinois country.[36] Between the early seventeenth and mid-nineteenth centuries, Indians captured thousands of settlers. Depleted by epidemics of smallpox and other diseases, Indians often adopted captured children in an effort to replenish their populations. As a result of over a century of captivities and intermarriages, by the late 1820s, the Great Lakes region had a Métis (mixed ancestry) population of between ten and fifteen thousand. Yet there was no single pattern of captivity. Some captives might be ritually executed to atone for losses in conflicts with the colonists.

35. Edward Jenner, *An Inquiry into the Causes and Effects of* Variolae Vaccinae*, or Cow-Pox* (London: Sampson Low, 1798). The historian R.E. Razzell challenged the conventional understanding of Jenner's work, arguing that Jenner did not vaccinate his subjects with cowpox but unwittingly inoculated them with a weak form of smallpox. See Razzell, *Edward Jenner's Cowpox Vaccine: The History of a Medical Myth* (Firle: Caliban Books, 1977). For a persuasive critique of Razzell's thesis, see J. Michael Lane's review in *The Journal of Economic History* 37 (December 1977): 1086–87.

36. Hiram A Hunter, *A Narrative of the Captivity and Suffering of Isaac Knight from Indian Barbarity* (Evansville, 1839), 18.

Young women captives might eventually marry within the village, while other captives were kept as servants or held for only a short time before being ransomed. Some captive children were awarded as replacements to households that had recently lost a child to disease. Many captives—particularly those who were especially young when captured or well-treated by their captors—resisted repatriation.[37]

Not so Knight. Although some of the Indians treated him with kindness, he described his captivity as an ordeal. Such a description was typical of Indian captivity narratives, one of the most popular American literary genres in the eighteenth and early nineteenth centuries.[38] Yet Knight's captivity narrative departs from the usual form in a significant way: within a week of his capture, he fell ill with smallpox. In a sense, for Knight to become ill with smallpox ten days or so after being inoculated showed that the inoculation worked as it should: he developed a mild form of the disease from which he was meant to recover and gain immunity. Yet as Knight's narrative reveals, it was this aspect of inoculation—intentional exposure to the disease—that made eighteenth-century Americans wary of the procedure. Few of Knight's fellow Kentucky settlers may have known of the fate of Jonathan Edwards in 1758, but most had heard similar tales of inoculations gone wrong. Knight attempted to disguise the nature of his illness. He was spared when an old woman in the village took pity on him and nursed him back to health. Yet shortly after Knight began to recover from his illness, the disease appeared among the Kickapoos. Although the disease had broken out in the Ohio Valley generally and could have reached the Indians by any number of means, Knight did not doubt that he was the source of the outbreak among the Kickapoos. One of his first victims was the old woman who had nursed him back to health. He wrote: "The death of this humane and motherly old squaw gave the Author of this Narrative most unpleasant feelings, and was the cause of much distressing exercise of mind." The old woman was an exception, however. In

37. For the Métis, see Jacqueline Peterson, "Many Roads to Red River: Métis Genesis on the Great Lakes Region, 1680–1815," in *The New Peoples: Being and Becoming Métis in North America,* ed. Peterson and Jennifer H. Brown (Lincoln: University of Nebraska Press, 1985), 63. For a notable tale of resistance to repatriation, see John Demos, *The Unredeemed Captive: A Family Story from Early America* (New York: Vintage, 1994).

38. See Greg Sieminski, "The Puritan Captivity Narrative and the Politics of the American Revolution," *American Quarterly* 42 (March 1990): 35–56; Pauline Turner Strong, *Captive Selves, Captivating Others: The Politics and Poetics of Colonial American Captivity Narratives* (Boulder, Colo.: Westview Press, 1999); Linda Colley, *Captives: Britain, Empire, and the World* (New York: Anchor, 2004).

general, Knight relished having transmitted the virus to the Kickapoos, writing, he "hoped that some of the most cruel and barbarous of them would die with it." His only fear was that he might be discovered as the carrier of the illness.[39]

In a startling departure from typical captivity narratives, in which the captives are victims who are redeemed by their faith, in Knight's tale the helpless captive became a remorseless bringer of death, and his captors became his victims. Knight was in effect an embodiment of the smallpox virus itself: a foreign presence within the village but largely unnoticed and seemingly too small to be the cause of such suffering. A gruesome incident in Knight's narrative both confirms his role as the secret bringer of death to the Indians and firmly separates the narrative from the Indian captivity genre. With so many Kickapoos sick and dead, it fell to Knight to care for a year-old child. Although the baby was the grandchild of the old woman who had herself cared for Knight, he nonetheless resented the extra responsibility, and suffocated the child with a blanket.[40] The episode inverts both the moral lesson of a typical captivity narrative and the sympathy of readers. In many other narratives, captives describe how Indians murdered infant captives, either because the infant would slow them on their march, or because they reasoned the baby was ill.[41]

On the surface, Knight's narrative seems to celebrate the extermination of Indians in a manner little different from the way some British officers considered starting a smallpox epidemic among their Indian enemies during the Seven Years' War. According to the historian Elizabeth Fenn, Anglo-American forces in the Seven Years' War employed the smallpox virus as an instrument of conquest, making gifts of smallpox-infected blankets to Indians and thus engaging in an eighteenth-century form of germ warfare. The question for Fenn was not whether the British wished for enemy natives to die of smallpox, but whether the British General Jeffrey Amherst managed to transmit the disease to the Indians successfully, or, as she put it, "Did he or didn't he?"[42]

39. Hunter, *The Captivity and Suffering of Isaac Knight,* 15.

40. Ibid., 16.

41. For instance, such a murder was included in the narrative of Sarah Ann Horn, a captive of the Comanches whose account was published in 1839—the same year that Knight's narrative appeared. Sarah Ann Horn, *A Narrative of the Captivity and Suffering of Mrs. Horn* (St. Louis: Kremle, 1839), in *Comanche Bondage: Beale's Settlement and Sarah Ann Horn's Narrative*, ed. Carl C. Rister (Glendale: Clark, 1955).

42. Elizabeth Fenn, "Biological Warfare in Eighteenth-Century North America: Beyond Jeffrey Amherst," *Journal of American History* 86 (March 2000): 1552–80.

Knight was, likewise, an instrument of germ warfare. Yet a closer reading of Knight's narrative reveals deeper ambiguities. Knight's depiction of the Kickapoos is not uniform; some of them he presents in a sympathetic light. While readers of the narrative are initially encouraged to think that the Kickapoos are the villains of the story, within a few pages they are shown as victims who are far less frightening than the smallpox virus that Knight carries. The ambiguous depiction of the Indians reflects the evolution of Knight's thinking. As a boy captive of the Kickapoos in the 1790s, Knight relished bringing death to the Indians. Yet he experienced a religious awakening before dictating his story in the 1830s, and came to regret his role in the deaths of the Indians.[43]

Published in 1839, Knight's narrative reveals a quite different understanding of smallpox and Indians than the views of the eighteenth-century British officers whom Fenn analyzed. Most of those British officers, born in Europe, had likely been exposed to smallpox as children and survived it. Although the Seven Years' War long preceded the advent of the germ theory of disease, the British knew from experience that a person once exposed to the disease was immune. They could contemplate using the smallpox virus as a weapon against their enemies in the American epidemiological hinterland, secure in the knowledge that the disease would not rebound upon them. In fact, Amherst issued his orders from New York City; his subordinate at Fort Pitt, Colonel Henry Bouquet, had never had smallpox.[44] Although he may not have realized it, Bouquet, like Knight and other backcountry settlers, was as vulnerable to smallpox as the Indians.

The sense of shared vulnerability is the key to understanding Knight's narrative. Indians were not the only Americans to die in smallpox epidemics in the nineteenth century. In Philadelphia, over six hundred people died of smallpox between 1807 and 1817. In New York, nearly three hundred died in an outbreak in 1815–16. To prevent a smallpox outbreak from spreading from Indians to American settlements, the federal government began considering the vaccination of Indians. In 1818, Lt. Col. William Trimble returned from a tour through Comanche territory and urged the federal government to vaccinate the Indians.[45] In 1820, Josiah Meigs and other physicians petitioned Congress to create a "National Vaccine Institution." They emphasized that the disease

43. Hunter, *The Captivity and Suffering of Isaac Knight,* 34.

44. Fenn, *Pox Americana*, 28. For Bouquet, see Ranlet, "The British, the Indians, and Smallpox: What Actually Happened at Fort Pitt in 1763?," *Pennsylvania History* 67 (Summer 2000): 427–41.

45. William A. Trimble to John C. Calhoun, August 7, 1818, in *The Papers of John C. Calhoun, Vol. III, 1818–1819*, ed. W. Edwin Hemphill (Columbia: University of South Carolina Press, 1967), 16.

was undiscriminating: "the rich and the poor, the old and the young, are alike liable to this disease. It is not confined to any particular place, but pervades alike our cities and villages." Moreover, Meigs and the other physicians added, the disease did not distinguish between Indians and settlers: "Neither are the untutored natives of our land secure from this plague; it is frequently carried into their camps and villages."[46] In advocating widespread vaccination, the physicians understood that any effective program against smallpox must include Indians, or else the virus would persist. Local physicians in the antebellum West understood as well that an effective vaccination program must be as undiscriminating as the smallpox virus itself. Thus, in 1809, a St. Louis physician announced in the *Missouri Gazette* that he would vaccinate "indigent persons, paupers, and Indians" free of charge.[47]

In 1830, an outbreak of smallpox among several Indian communities that bordered American settlements and trade routes prompted the federal government to create its vaccination program. The disease devastated the Pawnees whose villages were located along the Republican River in the central Great Plains. John Dougherty, the Indian agent at Cantonment Leavenworth described the suffering of the Pawnees in language similar to that in Knight's narrative. He wrote that the Pawnees "were dying so fast, and taken down at once in such large numbers, that they had ceased to bury their dead, whose bodies were to be seen, in every direction, laying about in the river, lodged on the sand bars, in the hog weeds around their villages, and in their corn cashes; others again were dragged off by hungry dogs into the prairie." The epidemic also spread to the neighboring Otoes, Omahas, and Poncas. At the same time, the disease erupted among the Ottawas and Potawatomis of Ohio, according to James Jackson, an Indian agent on the Maumee River.[48] None of the affected groups lived in isolation from U.S. settlement. The Pawnees' villages were near to the heavily traveled Santa Fe Trail between western Missouri

46. "An Act to Encourage Vaccination," 27 February 1813, *Laws of the United States from the 4th of March, 1789, to the 4th of March, 1815*, vol. 4 (Philadelphia: John Birent and W. John Dunae, 1815–1845), 508–9; Josiah Meigs, et al., "Memorial," 1 January 1820, H. Doc. No. 29, 16th Cong., 1st Sess. See also Sylvanus Fansher, "Memorial," 18 April 1838, H. Doc. No. 385, 25th Cong., 2nd Sess. For Washington's inoculation order, see Fenn, *Pox Americana*, 93–95; Becker, "Smallpox in Washington's Army," 381–430.

47. Madge E. Pickard and R. Carlyle Buley, *The Midwest Pioneer: His Ills, Cures, and Doctors* (New York: Henry Schuman, 1946), 23.

48. Dougherty to William Clark, 29 October 1831, and James Jackson to Cass, 16 March 16 1832, H. Doc. No. 190, 22nd Cong., 1st Sess.

and New Mexico. More than ten thousand settlers lived in Ohio, Indiana, and Michigan in the area near the Maumee River. When the Indian agents pressed their superiors for a vaccination program, their implication was obvious: an epidemic of smallpox in these regions threatened U.S. settlement and commerce.

Like Knight, who called the Kickapoo woman who nursed him back to health "humane," Indian agents and missionaries who lobbied for vaccination couched their appeal in the language of humanity. In 1818, Trimble called the vaccination of the Comanches a course "dictated by humanity."[49] Douglas Houghton, a physician employed to vaccinate the Ojibwas in 1832, argued that "every motive of humanity toward the suffering Indian" argued for extending the vaccination program to further native groups.[50] Isaac McCoy, a Baptist missionary to the Potawatomi and Ottawa, wrote to Secretary of War Lewis Cass that the "claims of humanity" demanded that the government rescue "thousands of men and women and children from this awful calamity."[51] Both McCoy and Cass were ardent proponents of Indian removal. For them, "humanity" meant not a body of rights but rather was part of a vocabulary of sentimentality. Their humanitarian appeals were combined with graphic descriptions of bodily suffering in a form that was, according to the cultural historian Karen Halttunen, part of an emerging Anglo-American middle-class literary culture of sentimentality. Graphic descriptions of pain—the flogging of sailors or slaves, for instance—became an essential part of the literary genre of humanitarian reform.[52] Like familiar narrative genres, the language of humanity was a way for McCoy and others to express their own fears of smallpox. That they pressed for a vaccination program in the language of humanity hardly meant that the United States had abandoned its goals for removing natives from the path of U.S. settlement. Rather, like Knight, they had come to understand that where the smallpox virus was concerned, Indians and Americans shared a common vulnerability.

49. William A. Trimble to Calhoun, August 7, 1818, *Papers of John C. Calhoun, Vol. III,* 16.

50. Houghton to Henry Schoolcraft, September 21, 1832, in *Schoolcraft's Expedition to Lake Itasca: The Discovery of the Source of the Mississippi*, ed. Philip P. Mason (Lansing: Michigan State University Press, 1958), 303.

51. Isaac McCoy to Cass, 23 March 1832, H. Doc. No. 190, 22nd Cong., 1st Sess.

52. Karen Haltutunen, "Humanitarianism and the Pornography of Pain in Anglo-American Culture," *American Historical Review*, 100 (April 1995): 303–34.

II

Following the passage of the Vaccination Act, numerous physicians appointed by the U.S. government dispersed among dozens of Native American groups from the Great Lakes to the Upper Missouri River to vaccinate Indians against smallpox. Though undoubtedly an effort by the federal government to win the Indians' goodwill and perhaps even their allegiance to the United States, the program was not—however paradoxical it may seem—culturally hegemonic. To understand that paradox, one must distinguish, as anthropologists do, between "directed" and "permissive" acculturation. The former type characterizes the forced assimilation of reservation boarding schools in the late nineteenth century, for instance. The latter type characterized the adaptations natives made freely, such as accommodations to fur traders. The vaccination program belonged to the latter type. As long as natives remained autonomous, their acculturation was permissive: they could accept or reject what the Americans offered them.[53]

In administering the vaccine program, rather than directing his subordinates from Washington, the secretary of war, Lewis Cass, was forced to defer to his agents in the field.[54] In turn, agents delegated the execution of the program to physicians who could do little more than administer the vaccine to the available and the willing. For instance, Meriwether Martin, after reaching Leavenworth on the Missouri River in August 1832, hoped to vaccinate the Shawnees, but never reached them. Instead, after vaccinating some Iowas at the Leavenworth agency and a handful of Otoes he encountered at a trading post, he proceeded to a Lakota encampment, where skeptical leaders only permitted him to proceed with the vaccinations after he had demonstrated the procedure on the children of his interpreter. He was slowed by a shortage of vaccine and was forced to harvest new medicine from the arms of some of the children he had vaccinated. (Indeed, in the early nineteenth century, the primary obstacle to an effective vaccination program was finding a way to transport the cowpox lymph over long distances without the lymph becoming inert. Harvesting the live virus from

53. See Robert F. Berkhofer, "Protestants, Pagans, and Sequences among North American Indians, 1760–1860," *Ethnohistory* 10 (Summer 1963): 201; Isenberg, "'To see inside of an Indian': Missionaries and Dakotas in the Minnesota Borderlands," in *Conversion: Old Worlds and New,* ed. Kenneth Mills and Anthony Grafton (Rochester, N.Y.: University of Rochester Press, 2003), 218–40.

54. Cass to Dougherty, May 9, 1832, Letters Sent, Office of Indian Affairs, Record Group 75, Microcopy 21, Roll 8, National Archives and Records Administration.

patients recently vaccinated proved to be the most reliable method.[55]) When Martin visited the Dakotas—kinspeople of the Lakotas—they refused vaccination entirely. Through October, he visited several Lakota and Yanctonai bands but was frustrated that many of the members of the bands he visited were absent—they had gone deep into the Great Plains for the seasonal bison hunt.[56]

While some native groups such as the Dakotas refused the vaccine, many Indians eagerly received the medicine. Elbert Herring, the commissioner of Indian affairs, reported in December 1832 that the Indians vaccinated by physicians in his bureau "have manifested an anxious desire to secure to themselves the benefits and protections of the process of vaccination."[57] Historians of medicine in the 1980s argued that vaccination programs aimed as much to extend the power of the state as to prevent disease.[58] Certainly the vaccination program in the 1830s was part of an effort to incorporate Indians, at least in a public health sense, into the American body politic: vaccinated Indians would not spread smallpox to vulnerable U.S. settlers. Yet Martin's experience also accords with the recent work of historians of medicine, who argue that nineteenth-century vaccination efforts cannot be seen as orderly, top-down programs; both local physicians and intended recipients of the vaccine, not to mention the microbe itself, exercised decisive agency and control over the process.[59]

55. Andrea Rusnock, "Catching Cowpox: The Early Spread of Smallpox Vaccination, 1798–1810," *Bulletin of the History of Medicine* 83 (Spring 2009): 17–36; and Micheal J. Bennett, "Smallpox and Cowpox under the Southern Cross: The Smallpox Epidemic of 1789 and the Advent of Vaccination in Colonial Australia," *Bulletin of the History of Medicine* 83 (Spring 2009): 37–62.

56. Martin to Cass, November 28, 1832, Letters Received, Office of Indian Affairs, Record Group 75, Microcopy 234, Roll 750, National Archives and Records Administration.

57. Elbert Herring, "Remarks on Statement D," in Andrew Jackson, "Message From the President of the United States to the Two Houses of Congress," H. Doc. No. 2, 22nd Cong., 2nd Sess., 175. See also Herring to Cass, 31 January 31 1833, H. Doc. No. 82, 22nd Cong., 2nd Sess., 2.

58. See Claudia Huerkamp, "The History of Smallpox Vaccination in Germany: A First Step in the Medicalization of the General Public," *Journal of Contemporary History* 20 (October 1985): 617–35. This interpretation of vaccination remains among European historians, particularly those who focus on the resistance to compulsory vaccination in late nineteenth-century Britain. See Stanley Williamson, *The Vaccination Controversy: The Rise, Reign, and Fall of Compulsory Vaccination for Smallpox* (Liverpool: Liverpool University Press, 2007); Nadia Durbach, *Bodily Matters: The Anti-Vaccination Movement in England, 1853–1907* (Durham: Duke University Press, 2005).

59. Sanjoy Bhattacharya and Niels Brimnes, "Simultaneously Global and Local: Reassessing Smallpox Vaccination and Its Spread, 1789–1900," *Bulletin of the History of Medicine* 83 (Spring 2009): 1–16.

Natives could either reject the vaccine or receive it without abandoning traditional medical practices. A smallpox outbreak near the Cherokees in 1824 is instructive: by the mid-1820s, Cherokee society was divided between those highly acculturated to U.S. norms and others who adhered to Cherokee traditions—and a large number who fell somewhere between these two extremes. When smallpox threatened to appear in Cherokee country in the spring of 1824, some three hundred Cherokees sought protection by submitting to traditional cures—a series of rituals and the consumption of an herbal tea—while about one hundred and fifty others, particularly those who attended a Moravian mission school, received the vaccine from the missionaries. Many Cherokees reasoned that the safest course of action was a hybrid one: to take the medicines offered by both the Moravians and those traditional Cherokees whom the Moravians called "sorcerers." The missionaries' journals made repeated references to converts who disappointed the Moravians by availing themselves of both medicines.[60]

The openness of many natives to smallpox vaccination became a key to U.S. diplomacy in the West in the 1830s. The West was a multi-lateral borderland where Britain and Mexico contested the U.S. claim to sovereignty. In the 1830s, Hudson's Bay Company fur traders based in Canada operated with impunity in U.S. territory in the Great Lakes region and northern Great Plains. The United States, though it banned foreign fur traders from its territory, was powerless to stop the commerce. Similarly, when the United States purchased Louisiana from France in 1803, Spain disputed the extent of Louisiana, claiming that the territory amounted to nothing more than a narrow strip of land on the west bank of the Mississippi

60. Edmund Schwarze, *History of the Moravian Missions among Southern Indian Tribes of the United States* (Bethlehem, Pennsylvania, 1923), 174–75; William G. McLoughlin, *Cherokee Renascence in the New Republic* (Princeton, N.J.: Princeton University Press, 1986), 380, 385; Kelton, "Cherokee Medicine and the Smallpox Outbreak of 1824," in *Indigenous Knowledge and the Environment*, ed. Gordon Krech, 151–70. Jenner's innovation in the treatment of smallpox gave physicians in Jacksonian America an effective treatment for one of the most fearsome diseases of the era, but in other respects medicine in the 1830s United States remained dominated by the humoral paradigm that dated to Greek antiquity. Treatments for most ailments involved exorcising bodily humours through bloodletting, emetics, laxatives, or perspirants. Physicians ascribed outbreaks in the 1830s of diseases such as malaria and cholera to the atmosphere, or intemperance, or both. Carl J. Pfeiffer, *The Art and Practice of Western Medicine in the Early Nineteenth Century* (Jefferson, N.C.: McFarland, 1971); Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962), 40–81; Rosenberg, *Explaining Epidemics and Other Studies in the History of Medicine* (New York: Cambridge University Press, 1992); Conevery Bolton Valencius, *The Health of the Country: How American Settlers Understood Themselves and the Land* (New York: Basic Books, 2004).

River between St. Louis and New Orleans. The United States and Spain agreed to a border between Louisiana and New Spain in 1819, but the border question remained unsettled until the conclusion of the Mexican-American War in 1848. In the first decades of the nineteenth century, both Spain and the United States sponsored government expeditions into the disputed Great Plains as demonstrations of sovereignty. Meriwether Lewis and William Clark's expedition on the Missouri and Columbia rivers, Zebulon Pike's expeditions on the Mississippi and Arkansas rivers, and other U.S. forays into its western territory were matched by Spanish expeditions into its northern territory, such as the expedition led by Facundo Melgares, who explored the central Great Plains in 1811. Such exploring parties distributed not only gifts—horses, firearms, cloth, and metal implements—but flags and medals, the symbols of allegiance in native diplomacy. Natives, in turn, shifted their allegiances and played one imperial power against the other, hoping to maintain their autonomy by keeping all claims to sovereignty (other than their own) tenuous and dependent on their good will.[61]

In this context, the smallpox vaccine was another gift intended to engender the good will of the Indians. In his instructions to Lewis before he embarked on his journey into this contested region in 1804, Thomas Jefferson emphasized that he should do his utmost to sway the Indians to the loyalty of the United States, and particularly to bring with him some vaccine. He wrote: "inform those of them with whom you may be, of it'[s] efficacy as a preservative from the small-pox; & instruct & incourage them in the use of it."[62] In 1819, Secretary of War John Calhoun referred the leader of another Missouri River expedition, Stephen Long, to Jefferson's instructions to Lewis; and in 1820, a private vaccination advocate shipped a box of vaccine to the

61. David J. Weber, *Spanish Frontier in North America* (New Haven: Yale University Press, 1992), 292–93; Isenberg, "The Market Revolution in the Borderlands: George Champlin Sibley in Missouri and New Mexico, 1808–1826," *Journal of the Early Republic* 21 (Autumn 2001), 445, 456. For the borderlands, see White, *The Middle Ground*; Hinderaker, *Elusive Empires*; Jeremy Adelman and Stephen Aron, "From Borderlands to Borders: Empires, Nation-States, and the Peoples in Between in North American History," *American Historical Review* 104 (June 1999): 814–41.

62. Jefferson to Meriwether Lewis (June 20, 1803), in *Letters of the Lewis and Clark Expedition with Related Documents, 1783–1854*, ed. Donald Jackson (Urbana: University of Illinois Press, 1978), 61–66. Pearson described Jefferson's instructions as the use of "imperial medicine to advance colonization and the politicization of Western medicine among indigenous populations." Pearson, "Medical Diplomacy and the American Indian: Thomas Jefferson, the Lewis and Clark Expedition, and the Subsequent Effects on American Indian Health and Public Policy," *Wicazo Sa Review* 19 (Spring 2004), 105–30.

Long expedition's physician, Edwin James, "for the purpose of introducing vaccination among the Indians."[63]

The passage of the Indian Vaccination Act in 1832 formalized the policy of medical diplomacy that Jefferson and Calhoun had urged on western explorers such as Lewis and Long. When Henry Schoolcraft, an agent to the Ojibwas, embarked on a diplomatic mission on the Upper Mississippi River in the summer of 1832, he brought a physician, Douglas Houghton, with him to administer vaccine to the Indians under the terms of the new law. Schoolcraft hoped that vaccination would help detach the Ojibwas, whose territory west of Lake Superior straddled the border between the United States and Canada, from the competing influence of the British. The Ojibwas had been allies of the British in Canada before the War of 1812; they had fought alongside the British against the United States during the war; and in the years following the conflict, they continued to look to the north for material support, traveling every year to British garrisons where they received gifts of firearms, ammunition, and alcohol in return for promises of support. They were not firm allies of the British, however; rather, they successfully played the British and Americans against each other, extracting gifts and concessions from both. The British traders were both more experienced at dealing with the Ojibwas and more generous: they distributed twenty times more goods than the United States.[64]

Houghton's 1832 journal of his vaccination mission, an unremitting tale of unease and powerlessness, reflects the weakness of the U.S. position in the northern Great Lakes. He was overwhelmed by the marshy, densely wooded environment of the upper Great Lakes, describing rapids that destroyed canoes, impassable forests, and portages through swamps where one was knee-deep in mud. "Musqitoes attacked us in hordes," he wrote. Still more

63. Edwin James, *Account of an Expedition from Pittsburgh to the Rocky Mountains, Performed in the Years 1819, 1820* (London: Longman, Hurst, Rees, Orme, and Brown, 1823), in *Early Western Travels, 1748–1846*, ed. Reuben Gold Twaites (Cleveland: Clark, 1904), vol. 14, 38, vol. 15, 202. See also Lewis Edwards to Maj. Stephen H. Long, May 27, 1819, in *The Papers of John C. Calhoun, Vol. IV: 1819–1820,* ed. W. Edwin Hemphill (Columbia: University of South Carolina Press, 1969), 80. The vaccine was drenched en route to James and proved useless.

64. W. Sheridan Warrick, "American Indian Policy in the Upper Old Northwest Following the War of 1812," *Ethnohistory* 3 (Spring 1956): 109–25; Donald L. Fixico, "The Alliance of the Three Fires in Trade and War, 1630–1812," *Michigan Historical Review* 20 (Fall 1994): 1–23; Bruce M. White, "'Give Us a Little Milk': The Social and Cultural Meanings of Gift Giving in the Lake Superior Fur Trade," *Minnesota History* 48 (Summer 1982): 60–71. For the extent of the Ojibwa trade with the Hudson's Bay Company, see Journal of Lieutenant James Allen, July 17, 1832, in *Schoolcraft's Expedition*, ed. Mason, 209.

unnerving to Houghton were the customs of the Ojibwas he encountered. At Cass Lake, he witnessed a scalp dance: three Dakota scalps, "decked fantastically with the feathers of the war eagle . . . were supported like so many flags upon sticks by three girls who continued dancing with all the relatives of the disceased." The Ojibwas' "singing & dancing & their shouts together with the drum upon which they were constantly tapping were extremely annoying." Most frightening to Houghton were the reports that Dakotas, the Ojibwas' enemies, were waiting at certain points on the Mississippi to ambush Schoolcraft's party.[65]

Houghton vaccinated over two thousand Ojibwas, despite having little enthusiasm for the job. He was surprisingly churlish about the popularity of vaccination among the Ojibwas. "I find the vaccination of the Indians an irksome task, chiefly in consequence of the great numbers," he wrote to his brother in June 1832. "When I commence operating they crowd around me with their arms ready, and anxiously wait their turn."[66] For Houghton—given the real attacks by mosquitoes and imagined attacks by Dakotas—the upper Great Lakes borderland was an uneasy place defined by anxiety, irksomeness, and annoyance.

The Americans' conference with the Ojibwas did little to put Houghton at ease; rather, it reminded him of the limits of American power. The Ojibwas eagerly received the vaccine that Houghton offered, but they remained cool to Schoolcraft's diplomatic efforts. At Leech Lake, Houghton vaccinated roughly four hundred Ojibwas during a council that Schoolcraft and an army lieutenant, James Allen, held with the Ojibwa leader, Flat Mouth (Aish-ki-bugi-kozh). Schoolcraft and Allen presented Flat Mouth with cloth, knives, tobacco, and ammunition; and they implored him, according to Allen, to make peace with the Dakotas and "endeavor to procure and enjoy some of the comforts of the whites, and learn to live like them." Flat Mouth, who, according to Allen, already had adapted to many aspects of U.S. material culture—he lived not in a traditional Ojibwa lodge but in a house "built of squared timber"—accepted the gifts but refused to accede to any of Schoolcraft's requests. While Ojibwas continued to file past Houghton to receive their vaccinations, Flat Mouth harangued Schoolcraft and Allen. In an attempt to enlist the United States in the Ojibwas' war with the Dakotas,

65. Journal of Douglas Houghton, July 2, July 10, July 14, 1832, in *Schoolcraft's Expedition*, ed. Mason, 247–57.

66. Douglas Houghton to Richard Houghton, June 24, 1832, in *Schoolcraft's Expedition*, ed. Mason, 298.

Flat Mouth threw the U.S. medals that had been presented to him at Schoolcraft's feet and threatened to seek the help of the British against the Dakotas if Schoolcraft refused him. Flat Mouth's intransigence reflected how little effective power the United States wielded in the multi-lateral borderlands. As Allen wrote, the Ojibwas "feel inaccessible and secure from any power whatever, even that of the United States."[67] The most the United States could muster in the contested region in return for the gift of vaccination was the tenuous allegiance of native groups that, for the time being, remained autonomous.

The Americans' use of vaccine as a tool of diplomacy was not an unusual tactic in the nineteenth-century borderlands. The Hudson's Bay Company began offering vaccine to the natives of Canada in 1837 in response to the U.S. program.[68] The Japanese offered vaccine to the Ainu of Hokkaido as they jostled with Russia for control of the island—and for the goodwill of the island's inhabitants.[69] In frontier regions where sovereignty was contested and the allegiance of native groups undetermined, Americans, like the British traders in Canada and the Japanese in Hokkaido, claimed to be not conquerors but healers. Rather than evidence of a kind of medical imperialism, the vaccine program represented (for the Indians) a hybrid medical practice and (for the Americans) the limits of U.S. power on its borderlands.

III

Vaccination of natives was also part of a paternalistic narrative that legitimized U.S. advances into the West. Around the same time as the expeditions of Martin and Houghton, the vaccination initiative was realized in a literary sense in a frontier narrative published in 1831, *The Personal Narrative of James O. Pattie of Kentucky*. By his own account, Pattie did more to save natives from smallpox than any other single person: he claimed to have vaccinated over twenty thousand inhabitants of Mexican California. His narrative tells the story of his six-year sojourn in Mexico, from his arrival together with his father as a trader in Santa Fe, New Mexico, in 1824, until

67. Journal of Douglas Houghton, July 17, 1832; and Journal of Lieutenant James Allen, July 17, 1832, in *Schoolcraft's Expedition*, ed. Mason, 206–10, 259–60.

68. Hackett, "Averting Disaster: The Hudson's Bay Company and Smallpox in Western Canada."

69. Walker, "The Early Modern Japanese State and Ainu Vaccinations."

his return to New Orleans in 1830.[70] Pattie's editor (and perhaps, his co-author) was Timothy Flint, a Massachusetts-born, Harvard-educated clergyman-turned-journalist who would later achieve some renown for a biography of Daniel Boone.[71] Like Flint's biography of Boone, Pattie's narrative is rife with frontier exaggeration and invention. Pattie's account of having rescued the daughter of the governor of New Mexico from Indian captivity, for instance, reads like the plot of a nineteenth-century romance—indeed, the source may well have been Flint's 1826 novel *Francis Berrian*, which tells a curiously similar story of an American frontiersman rescuing the daughter of the New Mexican governor from Indian captivity.[72]

The alleged rescue of the Mexican maiden was no less dubious, however, than Pattie's account of having vaccinated thousands of California Indians against smallpox. The story of the vaccinations is perhaps more surprising, because Pattie and his father were hunters, trappers, and traders who harbored no sympathy for Indians generally. The Indians in Pattie's account are either naïvely feckless or treacherously cruel—usually the latter. In both cases, their behavior is that of truculent children: impulsive, self-centered, and untrustworthy. Pattie's narrative recounts one instance after another of his exercise of stern parental authority over the Indians. Not only does he rescue the captured daughter of the governor, but in two other episodes he reunites families, redeeming native children who had been captured or lost. The restoration of children to their parents is a key theme of Pattie's narrative; he reorders familial lines of authority in a disordered West.[73]

Pattie disparaged Mexicans more than Indians. According to Pattie, he and his fellow Americans rescued the New Mexican governor's daughter from Indians because the Mexican forces in Santa Fe lacked the courage to confront the natives. Later in the narrative, after Pattie and other Americans repulse an Indian attack during a trapping expedition, the Indians, once defeated, acknowledge that the Americans are "too brave, and too good marksmen, to be Spaniards." The Mexicans, according to Pattie, also lack

70. For Missouri's trade with New Mexico, see David J. Weber, *The Mexican Frontier, 1821–1846: The American Southwest under Mexico* (Albuquerque: University of New Mexico Press, 1982), 122–46.

71. For Flint's treatment of Boone, see Richard Slotkin, *Regeneration through Violence: The Mythology of the American Frontier, 1600–1800* (Middletown, Conn.: Wesleyan University Press, 1973), 418–27.

72. See Richard Batman, *American Ecclesiastes: The Stories of James Pattie* (New York: Harcourt Brace Jovanovich, 1984), 14.

73. *The Personal Narrative of James O. Pattie of Kentucky*, ed. Timothy Flint (Cincinnati: John H. Wood, 1831; Chicago: Lakeside, 1930), 12–33, 64, 86–87, 130–39, 146–47, 227.

industry. During a trip to Guaymas on the coast of the Gulf of California, he laments that the region "would be among the richest of the Mexican country, if it were inhabited by an enlightened, enterprising, and industrious people." The Mexicans, moreover, were according to Pattie no less cruel than the Indians. After trapping beaver along the Gila River, crossing the Mohave Desert, and eventually reaching San Diego, California, in March 1828, Pattie and his father were imprisoned by Mexican authorities as suspected spies. Within weeks, the elder Pattie died in his cell, a victim of "the cruelty of these vile people." In the narrative, the death of Pattie's father figures as the moment when Pattie realizes the West as a place where, in the absence of U.S. sovereignty, true patriarchal authority is undermined, leaving only Indian anarchy or Mexican tyranny.[74]

Nearly a year after Pattie was first imprisoned, according to his own account, he negotiated his parole. A smallpox epidemic had broken out among the mission Indians of California. Pattie claimed to have some smallpox vaccine in his possession. The governor of Alta California, José Maria Echeandia, grudgingly released Pattie on the condition that he vaccinate the Indians of California against the disease. Pattie told Flint that he began his program of vaccination in January 1829. Within a month he claimed to have vaccinated both the soldiers of the garrison of San Diego and the Indians of the nearby mission. After having somehow "procured a sufficient quantity of the vaccine matter to answer my purpose," he moved northward, vaccinating by his account thousands of Indians at the coastal missions until he reached Los Angeles, where he administered the medicine to 2,500 townspeople. He continued northward, vaccinating the Indians and soldiers of Santa Barbara and San Luis Obispo, finally reaching San Francisco in June. Altogether, he claimed to have vaccinated over 23,000 people.[75]

The eminent historical demographer Sherburne F. Cook was dismissive of what he called "the Pattie vaccination legend." Certainly the number of people Pattie claimed to have vaccinated does not hold up under scrutiny. The total population of the missions, garrisons, and towns Pattie visited in coastal California, from San Diego in the south to the Russian sea otter hunting outpost of Fort Ross in the north, was in all likelihood about

74. *Narrative of James O. Pattie*, 64–66, 98, 168, 296. Richard Batman believes that Flint inserted the section about Guaymas into Pattie's narrative. While the section has some stylistic differences, its characterization of the Mexicans is consistent with the rest of the narrative. See Batman, *American Ecclesiastes*, 13–14.

75. *Narrative of James O. Pattie*, 344–59.

16,000—far fewer people than the number Pattie claimed to have treated. Nor is it credible that anyone could have managed to vaccinate so many people in only six months, while traveling altogether several hundred miles on horseback and foot. There is thus every reason to be skeptical of Pattie's story. Yet other aspects of Pattie's tale ring true. Epidemic disease did afflict California in late 1828—although it was neither the vast nor the virulent epidemic that Pattie described. Indeed, it may not have been smallpox at all, but measles. Although is inconceivable that Pattie, after languishing in prison for nearly a year, possessed enough vaccine to treat thousands of patients, he did have another source of medicine: the Russians deposited stocks of vaccine at Monterrey and San Diego in 1829.[76]

Cook was right to cast a skeptical light on Pattie's story. Yet an important question is not simply whether Pattie's account is true but *why* Pattie would make such remarkable claims. In his account of his travels from Missouri to California, Pattie expressed little empathy for Indians; instead he depicted them as savages and reported frequent violent encounters with them. In California, however, Pattie cast himself as the Indians' savior, juxtaposing the life-saving administration of his vaccine with the cynical baptisms of the corrupt Mexican friars. The mission Indians, Pattie wrote, had been brought to the coast from the interior "by compulsion, and then baptised, which act was as little voluntary" as their capture.[77] The implication could not have been lost on Pattie's readers in the 1830s, a decade when thousands of Americans settled in Texas and U.S. traders reoriented Californian and New Mexican commerce away from Mexico and toward the United States: U.S. sovereignty in the region would, in their view, be more enlightened and benign than that of the supposedly vile and corrupt Mexicans.

In truth, Spanish colonial authorities had embarked upon smallpox prevention programs in North America long before Pattie claimed to have introduced vaccination to California. In 1797, following an outbreak of smallpox in Tehuantepec, the Viceroy of New Spain, Miguel de la Grua Talamanca Branciforte, ordered that inoculations begin in New Spain. As a result, extensive inoculation programs were conducted in Mexico City, Guanajuato, and other cities. Responding to an outbreak of smallpox in Bogotá, King Charles IV of Spain issued a proclamation on September 1,

76. Sherburne F. Cook, "Smallpox in Spanish and Mexican California," 173–83; Rosemary K. Valle, "James Ohio Pattie and the 1827–1828 Alta California Measles Epidemic," *California Historical Quarterly* 52 (Spring 1973): 28–26.

77. *Narrative of James O. Pattie*, 347–48.

1803, ordering that the smallpox vaccine be distributed throughout the Spanish American colonies. When the king's officially appointed vaccinator arrived in Puerto Rico—his first destination—he found that local physicians had already begun to vaccinate patients. Danish physicians had also acquired the vaccine and begun to vaccinate both the free and slave populations of the Danish West Indies—the islands of St. Thomas, St. John, and St. Croix. Vaccination first reached California in 1821, when a physician administered the vaccine to forty children at Monterey.[78] Whether Pattie knew of these efforts or not it would not have altered his impression of Mexicans as diffident, ignorant, and indolent. In his telling, life-saving vaccine was a U.S. import.

The question of whether or not James Pattie actually vaccinated anyone in 1829 curiously parallels the question of whether General Jeffrey Amherst actually transmitted smallpox to Indians via infected blankets in 1763. In either case, the question, as the historian Elizabeth Fenn put it in regard to Amherst—"did he or didn't he?"—can probably never be answered.[79] What is clear is that there was a significant change in the two-thirds of a century between Amherst and Pattie. In 1763, it seemed like a good idea to Amherst and many others to try to cause an epidemic of smallpox among the Indians. In 1831, when Pattie's narrative was published, it seemed a good idea to prevent such an epidemic among the Indians. By the 1830s, Americans reasoned that an outbreak of smallpox among natives was a potential threat to all Americans. Moreover, in the complicated and unpredictable competition for political dominance in the West, the diplomatic benefits of offering vaccine to autonomous native groups were paramount.

Thus only a year after the publication of Pattie's narrative, the U.S. government embarked on a vaccination program that was, unlike Pattie's story, indisputably real. Like Pattie's narrative, however, the vaccination program served for Americans as a kind of vindication and justification of their ambitions in the West. The vaccination effort was an early public health program that, however rudimentary, transcended the fate of Indians. Success in vaccinating Indians would protect frontier settlers from an outbreak of

78. José G. Rigau-Pérez, "The Introduction of Smallpox Vaccine in 1803 and the Adoption of Immunization as a Government Function in Puerto Rico," *Hispanic American Historical Review* 69 (August 1989): 393–423; Thompson, "To Save the Children," 431–55; Sherburne F. Cook, "Smallpox in Spanish and Mexican California," 29–43; Niklas Thode Jensen, "Safeguarding Slaves: Smallpox, Vaccination, and Governmental Health Policies among the Enslaved Population in the Danish West Indies, 1803–1848," *Bulletin of the History of Medicine* 83 (Spring 2009): 95–124.

79. Fenn, "Beyond Jeffrey Amherst," 1552,

smallpox that might begin among the natives. Moreover, the program was an extension of U.S. influence—in this case, the power to cure ills—into a borderland where U.S. power was limited and its sovereignty was contested by Britain and Mexico. That effort to extend U.S. influence was, in this respect, a bold attempt to assert the extent of the U.S. body politic. Yet in another sense, in its effort to accommodate to natives and win their goodwill, the U.S. foray into the West was wary, improvisational, and an acknowledgment of the limits of U.S. power. ■

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