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INVENTING EDWARD JENNER
Historicizing anti-vaccination

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Introduction
Mary Wortley Montagu’s importation of Turkish variolation in 1818 marked one of the earliest attempts in English culture to prevent smallpox epidemics, which continued to claim upwards of 400,000 lives each year in the eighteenth century. Medical professionals believed that variolation—the process of deliberately infecting an individual with smallpox material taken from an infected or recently variolated person to produce a mild case—protected the inoculated for life after inducing a mild case of smallpox and, as a kind of “natural infection,” would less likely be fatal. Yet frequently cases of variolation became full-blown outbreaks of smallpox, which scarred or even killed those who consented to the lancet. In many cases, the inoculated still contracted bouts of smallpox. By the 1760s medical men like John Fewster, Benjamin Jesty, and Peter Plett were considering the use of cowpox as a smallpox substitute in inoculation procedures. Edward Jenner’s experiments in 1796 were meant to intervene in this culture of inoculation inconsistently and dangerously performed. Yet, ultimately, Jenner’s sights were on something grander: the elimination of smallpox entirely. His efforts would popularize a practice that would lead to over 100,000 vaccinations by the turn of the century and, ultimately, the first and only instance of an epidemic disease being eradicated on a global scale.

Yet vaccination’s success story has obscured the history of the late eighteenth-century culture wars that led to the very invention of “the Jennerian technique” as a nationalized medical procedure. It would also be these culture wars waged between Jenner and his detractors that would transform his public image from country doctor to medical hero. Edward Jenner was not the first person to discover vaccination, but he was the first to recognize its potential to galvanize an English public that could rally behind the practice’s symbolic and biological value. His strategic collaborations with men of letters, physicians, and politicians helped to consolidate a narrative of salvific vaccination that claimed to preserve the English national body from the dangers of revolutionary fervor and fevers coming from France and the colonies: the immunizing of individual citizen’s bodies contributed to the collective protection of the body politic and the affirmation of a healthy national body. How did Jenner dispel insecurities about vaccination’s dangers while simultaneously selling...
its novelty and supposedly inherent Englishness? This chapter examines the understudied archive of propaganda from this pamphlet war to trace how insecurities about vaccination were imagined by figures on both sides of the debate. I argue that the rhetoric from these documents still underpins contemporary anti-vaccination movements resistant to scientific and political claims of vaccination’s undeniable necessity. The politicization of preventative medicine through the circulation and reproduction of Jennerian—as well as anti-Jennerian—propaganda reveals the vast extent to which vaccination became a battleground over what constituted personal, public, and political security.

Jenner’s (re)invention

Before Edward Jenner embarked on his public campaigns for vaccination, he began as an apprentice to both an apothecary and a surgeon. While this garnered Jenner practical experience that may have set him apart from other physicians, such hands-on training was still understood to be a “long way from being abstract and bookish; it emphasizes practice, not medical theory” (Jordanova, 2000: 87). Surgeons and apothecaries, seen as a rank below their more learned counterparts, steadily aimed to reform their image as lesser medical men. Jenner was deeply aware of these stereotypes surrounding the “lower” orders of eighteenth-century medicine and sought to revise them in his vaccination campaigns by intentionally blurring the already shifting professional boundaries of medicine. The ideal vaccinator, Jenner imagined, would be a triple threat: (1) he conducted himself as a learned physician with practical knowledge of the body; (2) he knew, through repeated experiment and refinement, the technical details of his own procedure, from managing calfymph to preparing the vaccine doses; and (3) he skilfully wielded the vaccination lancet.

Although Jenner would ultimately be known for his vaccination practices, it was his passion for natural history that first garnered him acclaim in scientific circles. In 1788 Jenner published a paper on the behavior of fledgling cuckoos, which put him in good favor with members of the Royal Society. His election as a Fellow in 1789 gave him enough standing to obtain a medical degree from St. Andrew’s University in Scotland by 1792. His professionalization, however unconventional, allowed Jenner to credibly establish a general practice in his home town of Berkeley, in Gloucestershire, and later to act as a consultant for wealthy patients at Cheltenham spa. Jenner’s enmeshment in spa culture, which involved patrons visiting health resorts like Bath to drink and bathe in waters, also enabled him to advertise vaccination as a form of practical preventative therapy in a market primarily dominated by physicians offering advice for daily living. The turning point for Jenner’s acceptance into higher society, particularly among more professional medical circles, was his tutelage for two years under Scottish surgeon John Hunter at St. George’s Hospital in London. Through John Hunter, he met the other esteemed Hunter brother, William, and connected with other metropolitan men of science like Joseph Banks, who would become a crucial patron of his vaccination agenda. Attention to Jenner’s biography presents an entirely different narrative of vaccine’s triumph than one of individualistic heroism. Jenner’s early career depended heavily on these networks for legitimacy and patronage in the form of Parliamentary grants for the foundation of the Royal Jennerian Society, whose sole purpose was spreading the gospel of vaccination nationwide. Part of Jenner’s success involved convincing the English elite to invest prominently into public health, thereby cultivating an interdependence between science and society at large. Vaccination catalyzed a paradigm shift in the way governments viewed their populaces: as a national body composed of individual citizen’s bodies in need of immune protection.
Prior to Jenner’s turn to cowpox, Mary Wortley Montagu had followed her husband to Constantinople upon his appointment as Ambassador to the Ottoman Empire in 1716. There, she witnessed smallpox variolation in which live smallpox fluid was taken from a blister and introduced by scratching into the skin of an uninfected person—what she would term “engraftment” in her famous letter to Sarah Chiswell in 1717. The use of fluid from smallpox pustules as a prophylactic had been well recorded in accounts by travelers in the East, but Montagu’s public inoculation of her children and the 1721 Royal Experiment ensured its continued circulation (and debate) within English high society. While variolation struggled to gain traction, Scottish and Welsh folk practices of “buying the pox,” which involved purchasing an encounter between an infected child and a healthy child or purchasing smallpox matter taken from the infected child to be “ingrafted” onto the healthy child, flourished. Early inoculation culture inaugurated a fluid economy of smallpox lymph that could be bought, sold, and trafficked from one locale and body to the next. Some parents, having heard rumors of failed procedures or severe side effects, expressed deep apprehension about exposing their children to potential harm even though it was supposedly for their own good, especially because so many children were left “pock-fretted” or “pock-holed” by the encounter. In many cases, the inoculated developed more aggressive cases of smallpox that proved fatal or were easily communicated to others if quarantine procedures were not in place. Similarly, the violence of scratching the skin and inserting infectious matter from smallpox pustules into the body of the person being inoculated also seemed to some, particularly the religious, a violation of bodily sanctity. Despite private decisions to inoculate individuals, variolation “involved either bringing the disease into the community pre-emptively or exposing the community by remaining susceptible” (Bennett, 2008: 502).

In Daniel Defoe’s Journal of the Plague Year (1721), citizens who deliberately expose themselves to the plague are portrayed as fanatical and crazed; by the middle of the century, however, early inoculators rationalized variolation as a benevolent preventative measure, changing public perception of what it meant to choose exposure to an infectious disease. The early history of vaccination involved persistent attempts on behalf of inoculators and local governments to manage health insecurity by destigmatizing the practice of inoculation. The persistent dangers of arm-to-arm procedures and technical inconsistencies prompted physicians like Robert Sutton to consider new inoculation regimens (pre- and post-procedure) that would increase safety and success. Sutton began experimenting with variolation in 1757 after a botched attempt at inoculating his own son. By 1762 he had developed and marketed a secret “new method of inoculating for small-pox,” which was so successful that it developed into an entire industry of variolation clinics and convalescence houses with over 300,000 people in just over a decade. It took until 1796 for Sutton’s eldest son, Daniel, to reveal in their publication, The Inoculator, that the famous Suttonian method consisted of shallow scratching, using the matter from only those with mild cases of smallpox, and a regimen of bloodletting and sequestering. Montagu and Sutton contributed to the developing technologies and the market for inoculation in the period, but more importantly, they helped to universalize the idea of smallpox as an affliction that could affect all English people but not necessarily kill them. The inoculated often bore small pock marks from their cases of smallpox and scars at their inoculation sites, but both physical indications of encounter with the disease were being slowly rewritten as symbols of a commitment to bodily well-being, community health, and heroic survival. Inoculation’s increasing popularity “actualized a new visual ambience” in that more living people were seen with evidence of the pox; inoculators in local communities “moderated the visceral fear of the disease and help to initiate a specific practice of bodily exhibitionism” (Kerr, 2013: 132–33). Instead of
a death sentence, safely contracting the pox through proper inoculation (and the accompanying scar) became a badge of honor that indicated one’s commitment to their health and that of the community.

In the summer of 1798 Jenner articulated in writing what he had long observed of milkmaids and their ruddy complexions: their vocational exposure to cowpox altered their constitutions, rendering them immune to smallpox. By the time Jenner published his pamphlet, *An Inquiry into the Causes and Effects of the Variolae Vaccinae*, Montagu’s variolation procedure was well-known to the English public, but Jenner’s procedure drew support for its accessibility and increased safety in comparison to variolation. Jenner’s key claim, that cowpox (*vaccinia*) could be a viable, convenient substitute for live smallpox in inoculation procedures, allowed him to conclude that “the person who has been thus affected is for ever after secure from the infection of the Small Pox” (Jenner, 1978, orig. 1798; my emphasis). Jenner’s interest in natural history helped him theorize that a disease in horses known as “the Grease” was frequently communicated to cows via farmers who handled both. Milkmaids milking the cows would touch the nipples and udders, where the pox tended to manifest, and would contract painful bouts of cowpox that would render them immune to future smallpox infection. Jenner documented this phenomenon in his collection of case histories that proved the efficacy of his “Jennerian technique.”

In Case XVI, Jenner describes milkmaid Sarah Nelmes’s poxed hand and arm:

Sarah Nelmes, a dairymaid at a Farmer’s near this place, was infected with the Cow Pox from her master’s cows in May, 1796. She received the infection on a part of the hand which had been previously in a slight degree injured from a scratch from a thorn. A large pustulous sore and the usual symptoms accompanying the disease were produced in consequence. The pustule was so expressive of the true character of the Cow Pox, as it commonly appears upon the hand, that I have given a representation of it in the annexed plate.”

(Jenner, 1978, orig. 1798: 31)

Depending on how useful a case was for the explication of his technique, Jenner would include visual illustrations of both naturally occurring smallpox cases, which were useful for harvesting viable vaccination material, and the results of his procedure. These images typically depict a close-up rendering of the subject’s wrist, arm, or hand with smallpox pustules or scars. Reinforcing the shift in the visual understanding of smallpox brought on by earlier inoculators, Jenner’s images, which seem detached from any specific, identifiable body, emphasize the recognizable nature of ideal cowpox cases for the purposes of vaccination. Nelmes’s symptoms speak for themselves and for his method, for the pustules on her hand and wrist are “expressive of the true character of the Cow Pox.” Jenner’s deliberate inclusion of the accompanying plates models what viable cowpox looked like and gave an empirical basis to what some dismissed as mere folk tales. In addition, these images provided examples for other practitioners to replicate and circulate.

Furthermore, the treatise represents cowpox as a desirable, even useful blemish on the human form. For Jenner, Nelmes’s case is both ordinary and exemplary: the case history is full of cases similar to Nelmes’s, but her idealized bodily manifestation of cowpox, primed for use in vaccination, speaks the truth of *vaccinia’s* efficacy as that which can be repurposed from nature for human defense. This promise is then verified by the subsequent Case XVII, featuring James Phipps, whom Jenner inoculated with the lymph from Nelmes:
The more accurately to observe the progress of the infection, I selected a healthy boy, about eight years old, for the purpose of inoculation for the Cow Pox. The matter was taken from a sore on the hand of a dairymaid, who was infected by her master’s cows, and it was inserted, on the 14th of May, 1796, into the arm of the boy by means of two superficial incisions, barely penetrating the cutis, each about half an inch long.

In order to ascertain whether the boy, after feeling so slight an affection of the system from the Cow-pox virus, was secure from the contagion of the Small-pox, he was inoculated the 1st of July following with variolous matter, immediately taken from a pustule. Several slight punctures and incisions were made on both his arms, and the matter was carefully inserted, but no disease followed. The same appearances were observable on the arms as we commonly see when a patient has had variolous matter applied, after having either the Cow-pox or the Small-pox. Several months afterwards, he was again inoculated with variolous matter, but no sensible effect was produced in the constitution.

(Jenner, 1978, orig. 1798: 32–34)

Phipps’s youth, Jenner implies, leads to a successful procedure with extremely limited side effects and “security from the contagion of” not only cowpox, but also smallpox. Over the course of the volume follows a narrative pattern of lymph being harvested for the vaccination of another. This circulating lymph produces a fluid link among the vaccinated bodies included in the Inquiry and creates a community of those treated by Jenner. Vaccination (and, ultimately, herd immunity) is thus fundamentally a practice of interdependence against contagion: an individual’s infection benefits another, and the collective benefits from the acts of individuals.

Jenner puts vaccination in terms of English identity and citizenship: in this practice, English bodies preserve each other. Variola’s origins still remain in debate; Jenner, however, entitles the pamphlet with a regional descriptor: he explicitly indicates that variolae vaccinae is a “disease discovered in some of the western counties of England, particularly Gloucestershire.” To identify cowpox as an endemic disease allows Jenner to argue further for its viability as a replacement for smallpox vaccinations precisely because it is locally sourced and does not need to be imported from abroad. In fact, he makes the case that England now has a highly valuable medical export that can then be used for the good of the empire. What could, then, be read as repetitive medical reportage—case after case of vaccination success—is actually less an “inquiry” than a refrain: the cowpoxed body of the English country laborer, whose “constitution [is] in a state of perfect security from the infection of the Small-pox,” (Jenner, 1978, orig. 1798: 67) is a source of protection from epidemic disease. It is this utopic promise of “perfect security” and how that security might be achieved and ensured that ultimately became the center of the vaccination propaganda wars.

While Jenner proffered “perfect security” with his “Jennerian technique,” his detractors in turn highlighted its many failures to secure anything at all: could the future of England be in the literally poxed hands of a milkmaid, and should such rural bodies, so often in proximity to animal bodies, be used for the preservation of national health? The strategic repackaging of Jenner’s technique as a nationalistic innovation and the virulent backlash it inspired reveal the stakes of what health security should constitute for citizens, as well as to what extent the state could achieve and justify that security during the increasingly insecure late eighteenth-century revolutionary period.
Jenner’s pastoral security

Tim Fulford and Debbie Lee have characterized the Jennerian propaganda campaign as one “designed to convince the socially powerful that Britain would benefit from the healing power of nature . . . and make his pastoral medicine seem socially and politically conservative as they sought public approval in a Britain dominated by war with revolutionary France” (Fulford and Lee, 2004: 202). I contend that this refashioning of pastoral medicine within conservative terms was linked to a much broader reconceptualization and politicizing of preventative medicine. Part of the challenge of publicizing and universalizing vaccination was to ensure that it was of benefit to citizens on every rung of the social ladder. Jenner’s calls for vaccination departed from the methods of physicians who tended to profit from treatment and cure rather than from preventative practice. Since George Cheyne’s *The English Malady* and William Buchan’s *Domestic Medicine*, prevention had been a concern of English physicians, but one still primarily addressed in terms of lifestyle management, particularly regarding excessive aristocratic consumption of food and drink. While the consistent moderation of intake was understood as an active means of preserving health, vaccination took this theory one step further: resistance to or security from contagious disease could be intentionally “ingrafted” into the body by the lancet.

In 1803, Jenner wrote to T. Cobb, one of his London-based patients whom he had likely met at Cheltenham, proclaiming,

my opinion is, that the Metropolis is the very Focus of Infection, and that destroying the Disease here will be essential in lessening its calamities in the Country. We hope soon to see Societies form’d throughout the Empire for the Extermination of the Smallpox.

*(Jenner, 1983; orig. 1803: 20)*

As he suggests throughout his correspondence from the 1780s through to the beginning of the nineteenth century, Jenner’s intent was never to confine vaccination to the countryside, but to directly target the metropolitan epicenters of the disease by normalizing vaccination as common practice and by establishing proxy societies that could spread vaccination throughout the British empire. This benevolent rather than profiteering agenda enhanced Jenner’s professional image against accusations of quackery. Jenner spoke of vaccination as communal effort, encouraged reproduction of his methods, assisted in the procurement of lymph for other practitioners, and frequently responded to feedback on his procedure from colleagues in the metropole and beyond. As opposed to developing an entire inoculation industry out of a secretive regimen, as the Suttonian method had done, Jenner imagined a nationwide public health network of vaccination societies that could bank and disseminate cowpox lymph for vaccination, educate, and provide vaccine services. Jenner’s model of preventative medicine was unique both temporally and spatially: (1) to be “perfectly secure” from smallpox demanded prevention well in advance of infection rather than treatment or cure after the fact, and (2) this security would need to be taken up on local and national levels as a concern of the entire English population.

Jenner’s most influential supporters were those most eager to frame vaccination “as a benign symbol of the natural powers of healing” emerging from England’s countryside (Shuttleton, 2007: 187). One of the most prominent of Jenner’s supporters was Robert Bloomfield, a London shoemaker and farmer whose autobiographical poem “The Farmer’s Boy” (1800) and collection *Rural Tales, Ballads and Songs* (1802) launched him into the
public scene as a rural poet intimately acquainted with and outspoken about the experience of England’s laboring classes. Bloomfield himself had lost family to smallpox and felt a personal investment in furthering the vaccination cause in his family’s name and for his children’s future: “I have, in my own, insured the lives of four children by Vaccine Inoculation, who, I trust, are destined to look back upon the Small-pox as the scourge of days gone by” (Bloomfield, 1804). Bloomfield evidently shared Jenner’s belief in an English future without what Jenner called “the speckled monster” throughout his campaigns.

Bloomfield’s pro-vaccination poem, “Good Tidings; or News from the Farm” (1804), begins with a dedication to Jenner and the members of the Royal Jennerian Society and a brief “Advertisement”:

I have employed my thoughts on the importance of Dr. JENNER’s discovery, and the downfall of the Small-pox, it has generally and almost unexceptionably appeared a subject of little promise; peculiarly unfit indeed for poetry. My method of treating it has endeared it to myself, for it indulges in domestic anecdote.

(Bloomfield, 1804)

Since “The Farmer’s Boy,” Bloomfield had employed “domestic anecdote” as a form that conveyed pastoral experience otherwise unavailable to metropolitan readers. In this poem, vaccination becomes a topic worthy of being cast within the rustic, autobiographical style for which Bloomfield became known. “Good Tidings” opens with the archetypal figure of the farm boy, a symbol of rural innocence, but

where the reader of a pastoral poem expects to be presented with a rural idyll, Bloomfield confronts them with this emblematic tale of the misery caused by a contagion which pointedly emanates from the towns and destroys any hopes of domestic rural happiness.

(Shuttleton, 2007: 196)

The poem’s opening gambit refuses what pastoral poetry so often aestheticizes: the simplicity and peace of rustic life. Instead, the consequence of leaving contagion unchecked moving from town to town can only be disaster and disability.

Drawing from his own experience witnessing smallpox epidemics ravaging the English countryside, Bloomfield represents the young boy’s social isolation and misery as a result of his illness, and his mother’s guilt at being unable to nurse him back to full health:

My boy was healthy, and my rest was sound
When last year’s corn was green upon the ground:
From yonder town infection found its way;
Around me putrid dead and dying lay,
I trembled for his fate: but all my care
avail’d not, for he breath’d the tainted air;
Sickness ensu’d—in terror and dismay
I nurs’d him in my arms both night and day,
When his soft skin from head to foot became
One swelling purple sore, unfit to name:
Hour after hour, when all was still beside,
When the pale night-light in its socket died,
Alone I sat; the thought still sooths my heart,
That surely I perform’d a mother’s part,
Watching with such anxiety and pain
Till he might smile and look on me again;
But that was not to be—ask no more:
Go keep small-pox and blindness from your door!
(Bloomfield, 1804: 14–15)

Bloomfield dramatizes the pathos of health insecurity: in the span of under five lines, the boy moves from “healthy” to “sickness.” The mobile “infection” from “yonder town” entirely undermines the “mother’s part,” however diligently “perform’d.” To recall Jenner’s “security” (from the Latin secundus, meaning to be free from cares), Bloomfield suggests that despite the mother’s “care,” “anxiety and pain,” she can do nothing to stop the marring of her child’s eyes and his disfigurement: he becomes almost an unrecognizable “swelling purple sore, unfit to name.” The child, as a symbol of English futurity, is reduced entirely to one abject smallpox pustule, not even dignified with a name. The speaker’s injunction to “go keep small-pox and blindness from your door” echoes the call for nationwide preventative medicine from township to city. The speaker supports by name Jenner and his allies who aim “to spread a saving conquest round the earth, /till ev’ry land shall bow the grateful knee” (Bloomfield, 1804: 15). The panacea from the countryside becomes the key to the “saving conquest” of an entire world affected by smallpox.

Bloomfield’s mythologizing of Jenner translates the revolutionary nature of Jenner’s technique into accessible terms:

Dear must that moment be when first the mind,
Ranging the paths of science unconfin’d,
Strikes a new light; when, obvious to the sense,
Springs the fresh spark of brilliant intelligence.
So felt the towering soul of Montagu,
Her sex’s glory, and her country’s too;
Who gave the spotted plague one deadly blow,
and bade its mitigated poison flow
With half its terrors; yet, with loathing still,
We hous’d a visitant with pow’r to kill.
Then when the healthful blood, though often tried,
Foil’d the keen lancet by the Severn side,
Resisting, uncontaminated still,
The purple pest and unremitting skill;
When the plain truth tradition seem’d to know,
And simply pointed to the harmless Cow,
Doubt and distrust to reason might appeal
But when hope triumph’d, what did Jenner feel!
(Bloomfield, 1804: 18)

Bloomfield links Jenner to the longer history of inoculation exemplified by Montagu (also represented as a hero), “who gave the spotted plague one deadly blow.” Fulford and Lee, as well as Michael Bennett, have noted the prevalence of military metaphors in pro-vaccination discourse, arguing that “portraying vaccination as a holy war ensured that Jenner’s medicine
appeared to the public as a cause for national pride” against foreign (read: French) contagions (Bennett, 2008: 502; Fulford and Lee, 2004: 218). Bloomfield recasts vaccination as a humanitarian enterprise:

Where even hope itself could scarcely rise
To scan the vast, inestimable prize?
Perhaps supreme, alone, triumphant stood
The great, the conscious power of doing good,
The power to will, and wishes to embrace
Th’emancipation of the human race;
A joy that must all mortal praise outlive,
A wealth that grateful nations cannot give.
(Bloomfield, 1804: 17–18)

Bloomfield frames this war against “the purple pest” as one of Enlightenment rationality (“strikes a new light,” “springs the fresh spark of intelligence”) and one of benevolence and humanitarian generosity (“The great, conscious power of doing good,” “th’emancipation of the human race”). Refuting anti-vaccination arguments that suggested vaccination was tantamount to irrational self-harm or even suicide, Bloomfield insists that it is “ranging the paths of science unconfin’d”—that is, vaccination is not merely folk medicine but scientifically sound medical practice, one that has made sense of what “plain truth tradition seem’d to know” by “simply point[ing] to the harmless Cow.” Rural figures like the blind boy and the “harmless cow,” already heroized and made mascots for the pro-vaccination cause by Jenner’s associate, the Quaker physician John Coakley Lettsom, in his Observations on the Cow-Pock (1801), find themselves in the heroic company of Jenner and Montagu. Bound together within the poem’s heroic couplets, their “glory” becomes “the country’s too” as their labor benefits their communities and the British nation.

For most of the poem, Bloomfield devotes his verses to lionizing Jenner as an English medical hero in the battle against epidemic disease. But the practice of vaccination itself begs poetic transformation: the speaker enacts the poem’s own vaccination procedure by converting what was earlier an “infection” into floriability:

Forth sped the truth immediate from his hand,
and confirmations sprung in ev’ry land;
In ev’ry land, on beauty’s lily arm,
On infant softness, like magic charm,
Appear’d the gift that conquers as it goes;
The dairy’s boast, the simple, saving Rose!
(Bloomfield, 1804: 19)

Originally titled “The Vaccine Rose,” “Good Tidings” alludes to the botanical origins of inoculation as a grafting of a bud or scion into a tree to preserve it from illness. Fulford and Lee read this as Bloomfield’s transformation of “the blister raised in the vaccinated arm into a symbol of natural beauty and fertility” (Fulford and Lee, 2004: 215). As Jenner did in his Inquiry, Bloomfield aestheticizes the sites of cowpox eruption on English arms. In contrast to the hideous purple smallpox pustule that engulfs the entire being of the blind boy, the pustule at the vaccination site blossoms as a “simple, saving Rose.” Bloomfield stages Jenner’s appropriation of one of nature’s “simple gifts” for the purpose of enabling healthy
English bodies to flower. Bloomfield’s pro-vaccination poem welcomes and models intercorporeal mixture (of rural and urban, of animal and human, of young and old) as part of the process of attaining a blissful security characterized by the “good tidings” of pastoral beauty and industrious good health. Yet this magical thinking would be precisely the target of ire and mockery by Jenner’s critics.

**Revealing Jenner’s insecurity**

Confident as Jenner was in his *Inquiry*, his letters to fellow medical men suggest constant concerns about the proper execution of vaccination and the management of lymph. In a 1798 letter to Edward Bevan, a surgeon at Stoke upon Trent, Jenner insists caution be used “in the selection of your matter—Much confusion may arise from its being used when partially decomposed by putrefaction, as in that case a disease would arise which would not give security from the contagion of smallpox” (Jenner, 1983; orig. 1803: 9). Brief notes like this abound in Jenner’s correspondence and underscore that the judicious selection of matter and its proper transportation and preparation proved to be far more difficult than Jenner suggests. Like variolation before it, vaccination too risked being improperly performed, possibly to fatal consequences for the vaccinated. In the *Inquiry*, Jenner overstates the frequency of cowpox cases in Gloucestershire. Cowpox was endemically rare and required vaccinators to arrange for safe transport of cowpox lymph from distant locations. These constraints required the development of a vaccination infrastructure more elaborate than Jenner himself imagined.

As Andrea Rusnock outlines in her study of the material history of vaccination, cowpox lymph was transported in three different ways: “in a dried state, in a fluid state, and by vaccinated individuals” (Rusnock, 2009: 24). The dry threads were convenient for mailing by post but had a high rate of failure due to damage or loss in transit, which then prompted attempts to preserve the lymph in a liquid form on the lancet itself. This aqueous solution, sometimes incorrectly prepared, rusted the lancet and ruined the solution or required extremely expensive lancets of superior metals hardly accessible to middle- and working-class patients. Heat and other environmental factors also made cowpox lymph exceedingly difficult to transport over great distances or to more remote locations in the colonies. Lymph samples were sometimes faked and led to vaccine injuries and even death. Until techniques were developed in the mid-nineteenth century for harvesting lymph from cows directly, arm-to-arm transfer was still the primary means of maintaining a steady supply of lymph. For vaccinators, this arm-to-arm method ensured a chain of infection for the vaccination of larger populations. Yet cowpox was fragile and often died out in the process, severing this vital chain. Despite Jenner’s intent to eliminate the problems brought on by variolation, the continued reliance on arm-to-arm transfer and unstable technologies meant that vaccination remained precarious. Without clear guidelines for determining and insuring vaccine contents, vaccinators and their patients would often have had to trust the lymph suppliers. Many physicians remained unsure if their sources harvested lymph from the right cases of cowpox or if the lymph was indeed lymph at all. Insecurities about vaccination materials attached easily to ongoing anxieties about the appropriateness and efficacy of injecting animal fluids into human bodies.

James Gillray’s 1802 “The Cow-Pock or the wonderful Effects of the New Inoculations!” famously caricatured the vaccination clinic by depicting it as a sensationalized theater of inappropriate social and bodily mixture, where Jenner’s “patients” quite literally turn into cows after being vaccinated. At the center of this orgy of bodies sprouting hooves and horns.

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is Jenner, depicted as the stereotype of the quack physician (skinny, sinister, and unsympathetic), as he punctures a female laborer with an exaggeratedly large, dagger-like lancet. Directly targeting Jenner’s credibility as a gentleman-doctor, the satirical print dramatizes the violence of the vaccination procedure as one that involves intentional trauma to the body. This scene’s tension is also deeply gendered: the act of vaccination is represented as a disturbing encounter between male physician and vulnerable female patient whose fear is written upon her face—a face which, we are to infer, will soon to be transformed into a bovine likeness, like those of the other bodies around her. As a political cartoon, Gillray’s print also plays upon post-revolutionary anxieties about working-class laborers as themselves beastly bearers of contagion and social discord. Gillray directly counters pro-vaccination claims for the value of the Jennerian technique: its novelty, its safety, and its benefit to collective health. Rather than ushering in the new, vaccination only seems to bring out these laborers’ inherent bestiality or hasten their inevitable transformation into mindless, unsophisticated animals from which they were little different to begin with. Most powerfully, the image gothicizes the fluid connection established among the vaccinated: the bodies crammed densely into the frame are connected by their chain of infection from a procedure meant to offer them and Britain protection. The Jennerian network, meant to spread the gospel and the security of vaccination, seems here to proliferate physical and ideological corruption instead.

This fear that bovine vaccine serum would cause “Cow-Mania” had already been suggested by Jenner’s outspoken opponent, Dr. Benjamin Moseley, who claimed that “in the year 1798 the Cow Pox Inoculation Mania seized the people of England en masse” (Moseley, 1800: 183). Moseley’s rhetoric built upon this language of “seizure” and “mania” to represent vaccination as Jenner’s quackery infecting English minds with its false promises and bad science. His mudslinging took the form of alarmist reports that vaccinated patients were developing a scrofulous bestial disease that compelled women, like Pasiphaë from classical mythology, to copulate with bulls and ultimately give birth to minotaurs. The transference of what Moseley mockingly termed a “quadrupedan sympathy” that would result in the unwholesome production of a race of cow–human hybrids was not the only consequence of injecting human bodies with the essence of cows (Moseley, 1800: 183; original emphasis). Moseley’s moralistic strategy also relied on connecting ‘Cow-Mania’ with syphilis as a disease of sin, excess, and deviant sexuality. David Shuttleton notes how Moseley’s neologism for cowpox lymph, the “Lues Bovilla, a bestial humour,” “is an etymological adaptation of Lues Venerea (i.e., syphilis) deliberately designed to counter Jenner’s term Variolae Vaccinae and foster the implication that cow-pox implants a bestial form of syphilis” (Shuttleton, 2007: 184). Moseley’s inflammatory rhetoric drew skeptical resistance to the security Bloomfield argued that Jennerian vaccination would bring to the English public: “What misery may be brought on a family after many years of imaginary security!” (Moseley, 1800: 184).

Moseley partnered with William Rowley to give a number of public lectures on the injustices and pseudoscience underlying vaccination. Resident physician to the Marylebone Infirmary and member of the Royal College of Physicians, Rowley became widely known after publishing his polemic Cow-Pox Inoculation No Security Against Small-Pox Infection (1805). Rowley describes his treatise as a necessary corrective to “many medical errors,” and as needed “to establish demonstrative truths in the theory and practice of the art” through a collection of 504 documented cases of vaccination injury, seventy-five of which led to death (Rowley, 1805: vi). These injuries primarily take the form of what Rowley variously calls “cow-pox mange, evil, blotches, ulcers, and mortification” and “filthy beastly disease,” which he claims will dissuade any rational person from supporting “universal vaccination” (Rowley, 1805: viii; original emphasis). The deception of vaccination, then, is in its false
promise of full “security” from smallpox that ultimately proves to be but “temporary security” and one “not definable” (Rowley, 1805: xi).

While Bloomfield worked to connect Jenner to his variolating predecessors in his poetic account of vaccination, Rowley deliberately denies Jenner’s connection to the “Suttons, Dimsdales, Jones, Dr. Archer and many others,” whom he holds in high esteem for practicing legitimate medicine. Rowley’s model of immunity excludes the possibility of interspecies immunity based on Levitician injunctions against human–beast contact:

The Small Pox is a visitation from God, and originates in man; but the Cow Pox is produced by presumptuous, impious man: the former heaven ordained; the latter is, perhaps a daring and profane violation of our holy religion.

(Rowley, 1805: 8)

Smallpox variolation, he declares, is safer by virtue of the fact that smallpox happens naturally in humans and the smallpox lymph used to produce an immune response is extracted from humans. Vaccination, on the other hand, is a contrived solution made out of the constitutions of beasts, which are not compatible with human ones. If vaccination’s effectiveness against smallpox is only tested during cases of exposure, Rowley believes, many supposed success cases are in fact failures waiting to reveal themselves in time, often when it is too late to intervene. “Why leave a certainty for an uncertainty?,” Rowley asks his readers (Rowley, 1805: 4). Pro-vaccination advocates, consumed by “visionary conceits, irrational projects, and obstinate perseverance in error, united to uncontrolled arrogance,” have produced more insecurity, rather than the security they promised (Rowley, 1805: 1).

In contrast to Bloomfield’s idealized blind boy, Rowley invokes the pathetic figure of the “innocent infant” forcibly vaccinated against her will or without her knowledge:

Parents, affectionate, unsuspicous parents, from the plausible pretensions and indefatigable activity, rash over-heated boastings, and extravagant promises of the vaccinators, were induced credulously to sacrifice their innocent infants to this new shrine, this new altar of probability.—They left a reality for an experiment, a known good for a probable evil.

(Rowley, 1805: 5–6; original emphasis)

In place of rationality and sound judgment, “pretension” and “rash over-heated boastings” fool parents into “sacrificing” their infants to vaccination likened to a cult. Rowley cleverly recasts the language of mathematics and science (“probability,” “experiment”) as part of the duplicitous project of the vaccination cause. Here, variolation’s certain protection far outweighs the experimental evils of vaccination. In Rowley’s judgment, the hubris of Jenner and his co-conspirators has led to a nationwide mania, producing deluded vaccine supporters and a silent epidemic of vaccine-injured children suppressed by vaccinators wanting to protect their cause.

Drawing upon the same lurid visual vocabulary seen in Gillray’s print, Rowley’s pamphlet included two hand-colored engraved plates of “The Cowpoxed Ox-Faced Boy” and the “Cowpoxed Mangey Girl.” Featuring a close-up of the boy’s face and an exposed female body, these plates were frequently used for their shock factor at Rowley’s public lectures. By drawing attention to the boy’s swollen face and the girl’s body covered in bloody abscesses, Rowley decried vaccination’s transgression of religious taboos and claimed that transgression led to the children’s physical marring. Rowley’s logic echoes medieval and

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early modern reproductive theories of maternal imprinting in which illicit behavior or external stimuli could affect the physical form of even an unborn child. The misguided parents, cajoled into allowing bestiality in the form of medicine, were being punished through their children’s deformities. Rowley devotes the concluding section of his treatise to the spectacular public exhibition of these two vaccine-injured children:

The scene was truly affecting and distressing to humanity. The first case brought into the lecture-room, was case 26, Joules, the cow-poxed, ox-faced boy, who likewise, has a terribly diseased elbow-joint. Marianne Lewis, case 88, was the second who was covered with Cow-Pox blotches, like a leopard. The indentations were shewn in these two cases, and they were compared and viewed by all the gentlemen present, with the print so well and faithfully executed by the ingenious Mr. Pugh and Mr. Anniss. The exactitude of the drawings were acknowledged by all.

After these, a load of children, brought in a cart from Sleaford-street, Battersea-fields, &c. appeared; amongst whom were the six surviving children of eight, two having died of Small Pox after vaccination. The indentations in the arms were all seen and acknowledged, and they all now have the Cow-Pox mange. Cases 50 to 57.

When these had been viewed, a very great number of other cases followed, all mentioned in the book, where Small Pox had happened after vaccination. The indentations or scars in their arms were examined and proved by all present, nearly 100 auditors, to be incontrovertible facts.

(Rowley, 1806: 126–27; original emphasis)

In his recreation of this “scene truly affecting and distressing to humanity,” Rowley details what reads like a freak show, a form of entertainment involving the exhibition of extraordinary bodies that would become increasingly popular throughout the nineteenth century. Like Jenner’s strategy of repetition in his case histories, Rowley uses a sentimental narrative of child disfigurement to enhance what has been primarily a book of tables documenting vaccine injury. While the quantity of cases he has collected into a single volume serves to prove Rowley’s point, these concluding paragraphs of narrative description put faces to those cases.

Conclusion

With the rise of teaching hospitals over the course of the eighteenth and nineteenth centuries (as Michel Foucault has described), the medical theater was often an exclusive space where medical knowledge was shared among a professional community of male physicians. As readers, we are given access to this space and can virtually witness this public reading of the children’s bodies as “incontrovertible facts” of vaccine danger. The children, reduced to their case numbers and held up as exemplary manifestations of vaccination injury, are displayed to the audience of gentlemen and are reproduced in drawings, which reappear in Rowley’s publication among others. Aside from their names and symptoms, we are given no other information about the children. The children are not quoted or given any opportunity to voice their subjective experience of vaccine injury. Alongside the cartloads of unnamed children bearing all degrees of cowpox “evils,” they become sentimental proof of the severity of vaccination injury. Unsurprisingly, the child would become the most frequently invoked figure in nineteenth-century anti-vaccination movements.

The vaccination culture wars reveal how both pro- and anti-vaccinators envisioned an English population whose health could be threatened and also managed by state
interventions. Anti-vaccinators refused the wishful thinking of Jenner’s vaccination agenda, which they saw as a futile endeavor to preserve health that only led to further corruption of English health and to the undermining of social and religious hierarchies. Yet both sides deployed vivid, if contrasting, imaginaries of health insecurity, Moseley and Rowley’s nightmarish vision of “Cow Mania” spreading unchecked against Jenner and Bloomfield’s fantasy of idyllic bliss. Attention to the transits between medicine and literature during the eighteenth and nineteenth centuries reveals that vaccination’s preventative function has never been purely a biological issue. Resurgences in practices like “chicken pox parties” or deliberate refusals of childhood vaccine schedules by concerned parents are hardly new; rather, they redploy centuries-old arguments and metaphors against what anti-vaccinators believed was the overreach and violence of medicine increasingly aligned with state power. Movements against vaccination draw on long-standing anxieties about bodily permeability and autonomy now exaggerated in a post-9/11 world of proliferating risks. These same risks underpin pro-vaccination strategies to insist upon the absolute necessity of vaccination as a public health practice aimed at protecting some of the most vulnerable members of the population. This historical tension between how pro- and anti-vaccinators imagined health insecurity and its management continues to animate current debates over vaccination, which cannot be reducible to purely its science.

References