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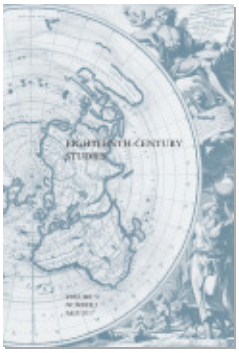

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Jean-François Lozier

As he sought to shed reciprocal light on the customs of the inhabitants of the New World and of the ancient peoples of the Old with his *Mœurs des Sauvages américains comparées aux mœurs des premiers temps* (1724), Jesuit missionary and ethnological forerunner Joseph-François Lafitau found that colors and the ways in which they were painted or tattooed onto the body offered fruitful points of comparison. Commenting on the ochres that Indigenous North Americans had used as pigment since time immemorial, he opined that they produced "a rather nice red, but that is not worth our vermilion."[1] This aesthetic impression was widely shared by his contemporaries, and for several decades already it had become the basis of a lively intercultural trade.

Chemically speaking, vermilion is mercuric sulfide (HgS), an opaque, vibrant red substance that can be produced from pulverized cinnabar, the most common ore of mercury, or otherwise created through a range of small- and large-scale synthetic processes. Leaving aside other reasons why red might be thought of as the color most characteristic of the encounter between Indigenous and European peoples in the Americas—such as it being the color of bloodshed, or the color projected onto the skin of the land's original inhabitants as new notions of race arose—this essay endeavors to flesh out a chapter in the global history of the early modern color trade by exploring vermilion's circulation in North America during the long eighteenth century.[2] In this period, ancient North American patterns of consumption and recent innovations in European methods of production allowed vermilion to grow into a staple of the transatlantic fur trade and a crucial

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diplomatic gift used by competing colonial powers to solidify commercial and military alliances with local peoples. Although imported vermilion never entirely supplanted the locally-sourced ochres, Indigenous populations became enthusiastic consumers of its unmatched red hues.

Vermilion has yet to attract the sort of focused monographic attention that scholars have lavished on other pigments such as indigo or, if we consider only the reds, cochineal, brazilwood, and madder. Nor has it elicited the sort of interest that other eighteenth-century North American trade goods such as textiles, metal implements, firearms, or beads have generated.[3] Why might this be? The explanation may have something to do with vermilion's materiality. Although it frequently enters the historian's field of vision by featuring in travel narratives and lists of trade goods, it does so in a particularly elusive way. Namely, it appears not as an object of well-defined form and volume, of the sort that can be intuitively grasped, but rather as an irregular mass—finely granular, fungible, seemingly raw, elemental, almost abstract. Like the substance itself, references to vermilion are opaque. If other trade goods conjure up images of craftsmen hammering, grinding, spinning, and weaving, this one is conspicuously divorced from the context of its production. Going even further, one might also suggest that old biases are also to blame for scholarly neglect: whereas indigo, cochineal, brazilwood, and madder are the stuff of textile production, industry, and progress, cosmetics have a long tradition of being dismissed by intellectuals as superficial, frivolous, and primitive.[4]

No less than those other pigments that have captured scholars' imaginations in recent years, however, vermilion crossed great geographical expanses and cultural boundaries. In *The Social Life of Things*, a seminal volume in the study of material culture published three decades ago, Arjun Appadurai and his collaborators demonstrated the ways in which objects could fruitfully be tracked through space, time, and culture, across wide-ranging contexts of production, circulation, and consumption, to reveal complex and changing webs of meaning and experience. Like other pigment-as-commodity studies that have preceded it, this article owes much to Appadurai's injunction to scholars to "follow the things themselves."[5] Because the particular thing that it attempts to follow crossed between European and Indigenous worlds, this study also adopts an approach that is firmly ethnohistorical, which is to say that it draws upon the materials and insights of both history and anthropology in an effort to compensate for the biases and silences of colonial observers and thus to draw nearer to the experiences of peoples who generated few written sources of their own. Eighteenth-century manuscript and printed sources are here read in tandem with works of nineteenth and twentieth-century ethnography, including oral traditions; eclectic angles of approach, ranging from toponymy to microscopy, all lend a hand in an effort to better understand vermilion's trade and use.[6]

PAINTED PEOPLES

When and how, exactly, this transatlantic trade in vermilion began is difficult to establish. Oral tradition among the French residents of Canada during the mid-eighteenth century held that vermilion had been traded since the colony's earliest days, i.e. the first decade of the seventeenth century. "Many persons have told me," reported Pehr Kalm, the Swedish naturalist who visited the St. Lawrence

valley in 1749, "that they had heard their fathers mention, that the first Frenchmen who came over here got a great heap of furs from the Indians, for three times as much cinnabar [vermilion] as would lie on the tip of a knife."[7] Yet aside from this lone suggestion that they circulated at such an early date, red pigments—labeled as vermilion, *vermillon*, or more generically as paint—seem conspicuously absent from enumerations of goods offered in the context of intercultural trade and diplomacy until the century's final decades.

In 1684 the French explorer René-Robert Cavelier de La Salle listed vermilion among the "small articles" which he was trading in the Great Lakes, and asked for fifty pounds of it to be sent from France to "drive a profitable trade." The archaeological recovery of one of his ships, *La Belle*, which sank two years later along the Texan seaboard during an ill-fated mission to find the mouth of the Mississippi River, revealed that its cargo contained some of it.[8] By the turn of the century, the French chronicler Bacqueville de La Potherie could state that a "great commerce" in vermilion was conducted in Canada.[9] The pigment appears in the English colonies at about the same time. In February 1687, Governor Thomas Dongan of New York mentioned it in a list of "Merchandize commonly called Indian Goods." In November 1694, "6 pound[s] vermilion" is listed among the goods that were to be presented to representatives of the Iroquois Confederacy at Albany.[10] Through the eighteenth century, vermilion was abundantly traded and offered as a diplomatic present in every North American frontier zone.[11]

Vermilion's value was rooted in the universal appeal of the color red, long discerned by anthropologists. Observing that all languages contain terms for black and white (or "light" and "dark"), and that if a language distinguishes a third color it is almost always red, Brent Berlin and Paul Kay proposed four decades ago a model according to which the terms to describe these colors were the first to emerge in human languages across the globe. As Victor Turner and others have argued, the primacy of black, white, and red as basic colors follows from their cognitive relationship with bodily emissions—semen, milk, water, feces, blood—and with the associated physical experiences and heightened emotional states.[12] Linguistic evidence leaves no doubt as to the connection between blood and the color red among the Indigenous peoples encountered by the French and English: in Algonquin, for example, *miskwi* means blood and *misko* means red; in Mohawk, *onekwensa* means blood and *onekwentara* means red.[13] Through its relationship with blood, the color red is linked to physical and physiological excitement. It was closely connected with the rituals and symbols of life and death, of reproduction and violence, and of festivities and joy.[14]

The red pigments that dominated the Indigenous palette at the time of contact with Europeans could be obtained from a number of vegetal and mineral sources. A few exceptional geological deposits granted access to vermilion itself—mercuric sulfide—well before contact. Native Californians, including the Ohlone and Yokuts, mined and processed cinnabar at a place they called Pooyi, named Nuevo Almaden or New Almaden by Mexican and American settlers in the nineteenth century. Like other ceremonial goods such as abalone and olivella shell, vermilion was traded within the area of present-day California, Washington, Oregon, and Nevada. Cinnabar deposits in Texas may also have been exploited in this way.[15]

Beyond California and the Southwest, native peoples of North America drew their reds from other sources. Plant saps, such as that of bloodroot (*Sanguinaria canadensis*, also known as bloodwort or puccoon root), found widespread use.[16] Most significant, however, was ochre, a term that refers to the red or reddish pigments derived from iron-bearing ores, particularly hematite (Fe_2O_3). Far more abundantly distributed than cinnabar, and far brighter and more colorfast than vegetal concoctions, ochre has been associated with human activity in the archaeological record across the globe as early as the time of *Homo erectus*, approximately 300,000 B.C.E. The persistence of practices and regularity in its patterns of use in prehistoric and contemporary traditional societies are such that one anthropologist has described ochre as "like a red thread" woven through human history.[17]

In North America, sites of ochre extraction were sometimes advertised widely. Bodies of water whose banks were known to be rich in it were often named accordingly: in the Algonquian-speaking Northeast, for instance, names such as Aramoni, Olamon, Onaman, Oulaman, and Osanaman dotted the landscape. European explorers and settlers would later translate many of these names into "Red" or "Paint" River, Creek, or Lake. As the vermilion trade took off in the eighteenth century, however, the French took to favoring "Vermillon" as a generic translation of these diverse Indigenous toponyms during their exploration of the continent. This tendency explains the existence of hundreds of features of that name, in many cases Anglicized as "Vermilion," that persist in Canada and the United States today.[18]

Sites of ochre extraction might alternatively be kept secret from outsiders or only prudently shared with them, depending on specific circumstances and cultural contexts. Here as elsewhere, drawing upon twentieth-century anthropological fieldwork allows us to gesture toward customs that earlier writers had not recorded. Naskapi tradition, for example, held that all comers could take as much ochre as they needed for their personal use from the deposits near Lake Chibougamau, Quebec, without needing to ask permission from the local band or provide payment, on the sole condition that it was not to be sold. Among the Yuma of California, on the other hand, it was reported that "no one divulges their source for red ochre."[19] Restrictions on the sale of ochre or the divulgation of its source point to the highly sacred nature of the pigment, which like most natural resources was understood to be controlled by supernatural beings. Its extraction was generally accompanied by rituals and offerings aimed at honoring and propitiating these spirits.[20]

Vermilion from across the Atlantic was widely adopted to serve the same purposes as ground ochre, the imported pigment's brilliant hues far surpassing the duller earth tones of its locally-sourced counterpart. Vermilion could be applied in exactly the same way to a surface, either dry or mixed with grease, water, sap, or saliva as a binding agent. It was used to decorate a variety of objects of wood, bark, leather, shell, metal, and stone. On a larger scale, vermilion was used to draw upon architectural structures and mark features of the landscape such as rock faces or trees. Unquestionably, though, it was the ways in which vermilion and other red pigments were rubbed onto human bodies that struck the minds of Europeans. Indigenous peoples used them extensively as a cosmetic, mixed with animal fat to paint their faces and bodies, or applied in powdered form to hair; they also used them as bases of tattoo ink. These uses extended to the afterlife, with ochre and later vermilion being commonly used to adorn the dead and as a grave offering.[21]

The practices and meanings associated with face and body painting varied from one group to another. Among those populations who usually went about naked or nearly so, full-body painting had the practical advantages of keeping away mosquitoes and gnats, and in colder climates of serving "in winter as a mask against the cold and the ice."[22] There were usually additional layers of meaning, however, related to concerns with beauty, spirituality, and collective and individual identity. While in some cultures it was common for both women and men to paint themselves, European newcomers discovered with some amusement that among many peoples—notably those of the Eastern Woodlands—it was to the men that body paint tended to afford the greatest opportunities for self-expression. It was, in particular, an essential accessory of war, as exemplified by the common notion of "war paint."[23]

To European eyes, the designs adopted during celebrations, councils, and on the war path seemed to follow personal fancy. When questioned about the meaning of such designs, some warriors admitted to inquisitive foreigners that "not being master of their nature, their enemies could perceive on their face some air of pallor and of fear." Paint concealed signs of weakness, and, conversely, warriors found that it "adds to their Courage and strikes a terror in their Enemies." It was also used to display personal emblems. As one Jesuit missionary noted, each warrior had "in this matter his own style of livery, so to speak, which he retains through life."[24] Ethnographic information collected in the Plains and Southwest in the early twentieth century hints at the range of spiritual meanings that went unnoticed or uncommented upon by European observers in the Eastern Woodlands in previous centuries. Color and design preferences were frequently inspired by visions and dreams in which supernatural entities imparted powers and abilities. Paint was often meant to protect its wearer from harm.[25]

THE RISE OF THE VERMILION TRADE

The North American vermilion trade, while built on ochre's widespread local antecedence, was certainly influenced by patterns of profitable exchange in other parts of the world. Natural vermilion, arrived at by grinding cinnabar from the same mines that produced quicksilver, mercury's pure form, had been produced in Spain from antiquity through to the early modern period, and distributed from there to other points in Europe. French merchants were among those who had a hand in exporting vermilion to other points in the Mediterranean: Italy, the Levant, and North Africa, including Egypt.[26] Europeans also discovered a steady market for both vermilion and quicksilver in Asia. Cinnabar had been produced in abundance in China since prehistoric times, particularly in Kweichow and Hunan provinces, as well as in Japan. The mercury that was derived from it was used to process gold, while the vermilion was used as a pigment, notably for paint and lacquerware. The intra-Asian trade in vermilion was already well established before the arrival of Europeans, with the temples of India being major customers of what is called *sindoor* in Hindi. Portuguese, Dutch, English, and French merchants all sought to capitalize on this. At first, they shipped quicksilver and vermilion from Europe. Before long, however, they took to obtaining these commodities in China, via the port of Canton, for redistribution throughout their South and Southeast Asian outposts.[27]

Until the latter half of the eighteenth century, the Asian vermilion trade appears to have been largely self-contained. The vermilion that the French and English exported to their North American colonies until that point came not from the mines of Spain or Asia, but from Dutch manufactures. A process for synthesizing vermilion on a small scale by combining mercury and sulfur was recorded in Europe as early as the eighth century, plausibly after having been transmitted from China via Arabia. From the twelfth century onward, synthetic vermilion was used throughout Europe as an artist's pigment. The cost of its manufacture prohibited its widespread use at first, except in illuminated manuscripts, but it became more common by the end of the Middle Ages. With the European cosmetic revival of the fifteenth century, vermilion began to be used to redden cheeks and lips. By the eighteenth century, it was used to give a bright red hue to a great range of things, from sealing wax to carriages.[28]

The rise of the transatlantic vermilion trade coincided with technological advances. In the seventeenth century, Amsterdam emerged as the center of production of vermilion on a large scale using what is called the "dry" process, which involved combining mercury with molten sulfur and heating it to the point of sublimation.[29] In 1687 a German named Gottfried Schultz invented a new "wet" process that entailed heating a mixture of mercury and sulfur in a warm, caustic solution of ammonium or potassium sulfide. This more efficient and cheaper process was adopted in Amsterdam, which would retain its dominance as a center of vermilion production until the early nineteenth century. The production process of high-quality artificial vermilion on a large scale was widely deemed to be a Dutch secret, and both the French and British were great importers of the product.[30]

Vermilion's transatlantic rise was accompanied by that of another pigment: red lead or lead tetroxide (Pb_3O_4), also known as minium. Less vibrant than vermilion, red lead could be produced more readily and cheaply than vermilion by the calcination of white lead—basic lead carbonate ($2PbCO_3{\cdot}Pb[OH]_2$). The Dutch dominated its production too, though Britain also produced some of its own. As early as 1622, a merchant named Christopher Eland received a patent granting a monopoly on the traffic of "redd leade" in the country. In the 1670s, red lead mills were active at the lead mines in Cardiganshire, and four decades later others are mentioned in Glamorganshire.[31] France does not seem to have produced much, to the extent that the *Encyclopédie d'Yverdon* (1776) observed that true vermilion "is not to be confused with *vermillon d'Angleterre* [English vermilion]." The latter was "less pretty, a shade paler," and believed to be "nothing other than a mix of minium and cinnabar well pulverized together."[32]

Given the lower cost of production of red lead compared to that of vermilion, it is no surprise that it found its way into the hands of Britain's allies and trading partners in North America. Governor Thomas Dongan's 1684 enumeration of "Indian Goods" included reference not only to vermilion, but also to red lead. In 1716 a factor at Savano Town in South Carolina requested that his superiors allow him to use red lead to extend his supply of the more expensive vermilion. He was advised in response that "We do likewise consent that you mix the Vermilion and red Lead equally, as you sell the same."[33] Though lists of trading goods sometimes allude to both vermilion and red lead, and though they occasionally allude to "vermilion mixed" or simply "paint," there is good reason to believe

that the pigments described simply as "vermilion" in the records were not always pure mercuric sulfide. In at least one instance, an employee of the Hudson's Bay Company used the terms "English vermilion" and "French vermilion" to make a distinction in his account books.[34]

Analyses conducted on ethnographic and archaeological material with electron microscopes equipped with X-ray energy spectrometers that can identify chemicals present in paints concur with such observations. An analysis of five painted eighteenth-century Naskapi hide artifacts reveals that in four of five cases wet-process vermilion was used, as opposed to dry-process vermilion or powdered mineral cinnabar. In one of the five samples, the vermilion was mixed with a small amount of red lead.[35] Vermilion could also be adulterated with other low-quality substances, such as crushed brick or ochre, as it frequently was on the European market. Unscrupulous North American traders also short weighed it.[36]

There were good profit margins to be made in vermilion, pure or not. Though it represented only a fraction of the total inventories of the North American fur trade—the great bulk of which consisted of textiles and metal implements—this pigment was by volume and weight one of the trade's most expensive commodities. The nineteenth-century Canadian historian François-Xavier Garneau's exclamation that "as much as 800 francs have been obtained for a pound of vermilion!" was certainly an exaggeration, along the lines of Pehr Kalm's earlier claim that "a great heap of furs" could be had for "three times as much cinnabar as would lie on the tip of a knife." Henry Rowe Schoolcraft, in the early nineteenth century, offered a more conservative echo of these claims when he wrote that "tradition states" that in the Western Great Lakes a prime beaver skin "was given for as much vermilion as would cover the point of a case knife."[37] More safely we can point to the fact that the Hudson's Bay Company's standard of trade through most of the eighteenth century hovered around 1 to 1.5 ounces of vermilion per beaver skin. To put this in perspective, a list of the value of various goods traded by the HBC in 1749 indicates that a beaver skin could buy a full pound of beads, gunpowder, shot, or thread.[38]

CONTROVERSIES AND COMPROMISES

Even as merchants made a great profit from the trade in vermilion and red lead, their end use as face and body paint rested on a contradiction. The European Renaissance had been, among other things, a time of cosmetic revival. Among other substances, white lead found favor as a foundation for the face, and vermilion as rouge to highlight cheeks and lips. But this increasingly widespread use of face paint among women and even men was met with a revival of patristic arguments according to which cosmetics deformed God's work and turned the mind away from the soul toward the body. Giving free rein to their misogyny, late medieval and early modern authors seized on these old critiques and fused them with new humanistic concerns about the relationship between nature, truth, artifice, and falsehood.[39]

The misogynistic undercurrent of the controversy over cosmetics carried over into colonial writings, insofar as Indigenous men were sometimes disparaged precisely for sharing with European women an inordinate preoccupation with their appearance. The distant past also offered opportunities for parallels, as observers familiar with the classical authors noted similarities between the meanings and

practices of cosmetics on both sides of the Atlantic. On the subject of peoples who reddened their entire bodies, Lafitau was the most expansive. "As a rule," he wrote, "the ancient writers tell us this about the [East] Indians, the Africans, the Picts, the Geloni, the Agathyrses and a number of other peoples," including the Ethiopians, about whom Pliny "assures us that they coloured themselves with vermilion from head to foot." Even those eminently respectable Romans, he noted, had painted the statues of their gods red. Comparisons such as these were often grounded in a sympathetic humanistic curiosity, but their ultimate effect was to reinforce the idea that Indigenous peoples were primitives. Painted bodies were understood to be an expression of a collective moral deficiency.[40]

It is no surprise, then, that early missionaries attempted to deter native peoples from face and body painting. Roger Williams, the Protestant theologian and founder of the colony of Rhode Island, did his best to dissuade the Narragansetts from the "foolish Custome" of painting themselves. Jesuit missionaries operating in the St. Lawrence valley during the same period similarly rebuked the Montagnais, Algonquins, and Hurons for the "mischievous custom" of face and body painting.[41] At the mission-village of Lorette, near Quebec City, the Jesuits were careful to have their statue of the Virgin Mary painted in Caucasian flesh tones rather than in the darker shades of the original statue in Loreto, Italy. "We did this for fear lest, if we exposed for the veneration of our Savages an image entirely black," explained Father Pierre-Joseph-Marie Chaumonot, "we might cause them to resume the custom which we have made them abandon, of blackening and staining their faces."[42]

Moravians working among the Delaware beginning in the mid-eighteenth century similarly prohibited face painting and other customs that contributed to an aggressive countenance. When a chief asked, with pride, how the missionary John Heckewelder liked his painted face, the latter answered "that if he had done the work on a piece of board, bark, or anything else, I should like it very well, and should often look at it, but that I would rather see his natural face than so disguised that I hardly knew him." The man walked away, in Heckewelder's phrasing, "a little huffed."[43] Others pushed back. Pueblo peoples, when challenged by Franciscans about the body painting and plumes that they wore, responded by arguing that "among the Spanish it is not a bad thing to put on the hats, feathers and ribbons" and that they themselves did not "use these things for bad things either." Convinced by this line of reasoning, Fray Antonio Miranda went on to defend these cosmetic practices when in 1714 New Mexico's governor Juan Ignacio Flores Mogollón conducted an investigation into whether or not the Pueblos should be allowed to continue to paint themselves in a traditional manner. The governor was persuaded and decided not to pursue the matter.[44]

Other missionaries came to believe that these cosmetic customs, like other forms of adornment and dress, language, and music, were innocuous and compatible with the fundamentals of the Christian faith. In 1704 the French Jesuits working in Illinois Country were themselves requesting vermilion, among other goods intended for trade and diplomatic presents, from their procurator in Paris.[45] A German officer who visited the chapel at Lorette around the time of the American Revolution allows us to see that there too the Jesuits had made their peace. He was astonished to find therein carved figures who "appear as savages in savage costume." He does not mention the statue of the Virgin Mary specifically, but he

exclaimed to his correspondent, "I shall not readily forget good St. Peter with his keys and his painted face."[46]

Anxieties about painted neighbors were aesthetic, moral, and theological. Often they were also rooted in the fear of being unable to distinguish friends and foes. Governor Flores's investigation of 1714 was prompted by the concern that Spaniards could not tell the friendly Pueblos apart from the other, "heathen" and hostile, inhabitants of the region such as the Apaches. It was feared that the Pueblos, painted and dressed so as to be indistinguishable from the enemy, were free to mischievously steal livestock and murder settlers.[47] Similar misgivings were common along the Anglo-American frontier. John Brickell, a naturalist and physician who spent the late 1720s in North Carolina, complained that in times of war "these Savages always appear'd in these disguises, whereby they might never after be discovered or known by the Christians that should happen to see them after they had made their escape; for it is impossible ever to know an Indian under these Colours, although he had been ever so often at your House, and you were most intimately acquainted with him before he put on this disguise."[48]

Despite their discomfort with face and body painting among native peoples, colonists were only too happy to put on such disguises themselves when it suited their purpose. French and British officials and military men cultivated habits of self-presentation that allowed them to interact fruitfully with their Indigenous interlocutors. A willingness to display a face painted according to local conventions, much like a familiarity with local languages, was a means of demonstrating solidarity, a prerequisite performance necessary to acquire and maintain influence. It was "dressed and painted after the manner of an Indian War Captain," for example, that the trader and diplomat Sir William Johnson entered the city gates of Albany in August of 1746, at the head of a Mohawk delegation.[49]

By extension, the painted Indian famously became a convenient guise for American Patriots. "I immediately dressed myself in the costume of an Indian," recalled George Hewes of his involvement in the Boston Tea Party of 1773, explaining that he had blackened his face with coal dust from a blacksmith's shop. Whether this choice of black over red was a mere matter of convenience, or whether it was a purposeful choice influenced by colonials' association of rouge with women and effete aristocrats, it is impossible to say. Hewes and his fellow Tea Partiers' thinly veiled impersonation of "Indians" (Mohawks to be precise) fooled no one, but then again, these men were less concerned with passing themselves off as other people than with hiding their individual identities and registering their protest in flamboyant and symbolic style.[50]

Conversely, Indigenous individuals were increasingly developing an awareness that Europeans expected them to perform a certain identity, and were encountering new contexts in which to cultivate old habits of self-presentation. Joseph Brant, the Mohawk chief and diplomat, thus attended a masquerade in London wearing "war paint." On another occasion he is said to have borrowed women's rouge to daub his cheek while posing for the painter Ezra Ames, having brought no vermilion of his own to the sitting.[51] The Indian personified America, and the painted face epitomized the Indian.

SHIFTING POLITICS, AESTHETICS, AND SOURCES

The second half of the eighteenth century was a time of upheaval in the transatlantic vermilion trade, however. The British conquest of Canada in 1760, and the subsequent cession of New France to Great Britain and Spain, entailed a reconfiguration of the networks by which the pigment reached Indigenous consumers. France, after having lavished vermilion and an array of goods on its allies to encourage their martial ardor, was suddenly eliminated from the scene. Having won the imperial contest for the continent, Britain retrenched its own gift-giving policy. British customs records show that vermilion importation from the Netherlands reached its peak of just under 32,000 pounds per annum in 1760.[52]

The American War of Independence and the War of 1812 revived these diplomatic protocols to a certain extent, and the distribution of presents of arms, ammunition, and vermilion resumed. In the years that followed, however, the strategic importance of Indigenous military allies waned more decisively. This is not to say that the diplomatic distribution of vermilion disappeared altogether. In the mid-nineteenth century still, vermilion was featured on some of the annuity lists distributed to Indigenous peoples in the Plains. For example, in 1858 the Piegan (460 lodges) received 201 pounds of it from the American government for face painting.[53] Still, warrior culture, for which imperial powers had found uses in the eighteenth century, was henceforth seen as a threat to the stability and progress of the American and British (eventually Canadian) nations in their parallel westward expansion across the continent. Encouraging Indigenous militarism no longer served national or imperial interests.

A second important late eighteenth-century shift, the Western turn toward a more naturalistic cosmetic aesthetic and the sharp decline in the popularity of face paint, also had an impact on the vermilion trade. Critics had long pointed to the paradoxes of these substances that, though meant to enhance beauty, in fact damaged it. The corrosive effects of many ingredients used in face paint, including white lead and vermilion, were already known in the fourteenth and fifteenth centuries. In the second half of the eighteenth century, medical professionals increasingly intervened in the debate; by the 1770s, the deleterious effects of cosmetics were universally recognized even in France, that bastion of face painting. Moreover, whitening faces and reddening lips also came by the end of the eighteenth century to be associated with actresses and prostitutes.[54]

Indigenous communities closest to Euro-American settlements and most assimilated to Euro-American ways conformed to this cosmetic shift by largely abandoning former face and body painting practices. During the second half of the nineteenth century, the institution of reservations and increasingly rigid civilizing policies of the state would allow missionaries and government officials to oppose these customs with renewed vigor and unprecedented repressive power. Cleanliness was next to godliness, and face painting was among the pernicious practices to be discouraged. Traders operating on many reservations were instructed that, as one official phrased it, "No red paint or other articles of heathenism were to be offered for sale."[55] At the same time, paradoxically, the rise of the Wild West shows and of the Cowboy and Indian literary and cinematic genre ensured that face painting remained a hallmark of indigeneity.

Interestingly, the public health argument that had featured so prominently in late eighteenth-century European discourse on cosmetics does not appear to have been invoked with comparable vigor in relation to Indigenous peoples. Only at the turn of the twentieth century do we find a commissioner of Indian Affairs, William A. Jones, making claims that face painting was responsible for "the majority of the cases of blindness among the Indians of the United States."[56] Exactly how much validity there was in this assertion, which seems to muddle an element of truth with colonialist hyperbole, is difficult to ascertain. While we can speculate about the impact of vermilion use among Indigenous peoples from the seventeenth to the early twentieth century, evidence of mercury intoxication consistent with effects recognized today is not readily apparent in the historical record. Future analyses of human remains may provide clearer indications. For now, let us only point to the work of scientists who have provocatively hypothesized that the high mercury content in the soil and streams near Grand Portage, Minnesota, may be the product of the high level of vermilion trade there. An inventory from the local trading post, dating to 1797, signals the presence of more than 100 pounds of the pigment.[57]

A third important shift away from the patterns established in the final decades of the seventeenth century was the emergence, beginning in the late eighteenth century, of Chinese vermilion in the North American market. It arrived first via Great Britain, but eventually was carried directly across the Pacific aboard American and British ships. The decrease in British imports of vermilion from the Netherlands after 1760 corresponded to an increase in imports from China and Germany.[58] A new form of packaging was introduced, small folded paper packets, often stamped with the producer's name in Chinese characters. By 1812, if not earlier, the United States' Office of Indian Trade was purchasing such "China vermilion in small papers" for distribution.[59]

As chemists in France and England struggled to crack the Dutch secret for the mass production of synthetic vermilion, American chemical manufacturers proposed substitutes for the now popular "China red." They struggled, however, to achieve its brilliant hues. In 1817 the United States' Superintendent of Indian Trade wrote to a supplier in New York that the sample he had sent "appears to me to be equal to the English. But our Indians having very keen perceptions in the article of vermilion, and having been accustomed to use the Chinese, I do not know how this grade would take. . . . The time will come when you will have arrived at similar perfection with these ancient people [the Chinese]."[60]

Vermilion remained a favorite through the nineteenth century, even as a wide variety of new pigments were introduced to the inventories of traders: Prussian blue, yellow lead chromate, green chromium oxide, ivory black or bone char, and zinc oxide or Chinese white. Technical advances in the European and American manufacturing process and expanded trade relations with China made vermilion more affordable than ever. By the mid-nineteenth century, a pound could be had for four beaver skins, compared to sixteen pelts for a pound a century earlier.[61] Though its use on the body was discouraged, vermilion continued to be traded well into the twentieth century to serve in various art and craft work.[62]

It is nevertheless clear from the ethnological record that the imported pigment never entirely supplanted locally sourced ones in the way that metal

implements quickly replaced stone tools or firearms replaced bows. The study of vermilion thus challenges what has been described as the "standard view" of modern technologies in traditional societies, which posits that upon contact Indigenous peoples recognized the superiority of European goods and swiftly grew dependent on them, abandoning traditional technologies and the skills associated with them.[63] One explanation is economic. Schoolcraft remarked that although vermilion was, by the mid-nineteenth century, cheaper than ever, it remained "generally too costly for habitual use."[64] The fact that some groups lived at a great distance from trading posts and maintained relatively little contact with outside traders until the early twentieth century may also explain why ochre continued to be used for a variety of ceremonial purposes, including face and body painting.

Another possible explanation hinges on relationships. Notwithstanding the oft-stated Indigenous preference for the vibrant hues of vermilion, it is tempting to think that some individuals and communities continued to prefer duller ochre not merely because it was cheaper, but because they could control the ritual dimensions of its extraction and maintain a relationship with the supernatural forces that inhabited the landscape around them. Imported vermilion or red lead, because they were decontextualized from this local environment, may to some people and in some ritual circumstances have seemed rather poor ersatzes. The value vermilion derived in its eighteenth-century heyday from the fact that it embodied a different set of reciprocal relationships—with colonial traders and officials—proved fleeting. As Indigenous peoples were faced with increasingly repressive and assimilationist states, vermilion lost much of that former appeal. It remained a nicer red, perhaps, but in some profound ways a less meaningful one.

NOTES

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11. References to gifts and exchanges of vermilion are too numerous to enumerate here. See for example *NYCD*, 6:387, 721; 7:281, 657, 787; 8:718, 720; 9:220, 707; 10:558, 929; and "List of Merchandise Granted by Governor John Reynolds' Order to William Little from December 16, 1755 to February 15, 1757," The National Archives (TNA), London, Public Records Office, CO 5/646, ff. 7l–72; John Brickell, *The Natural History of North Carolina* (Dublin: James Carson, 1737), 316; Antoine-Simon Le Page du Pratz, *Histoire de la Louisiane* (Paris: De Bure l'Aîné, Veuve Delaguette, Lambert, 1758), 2:184, 197; 3:166, 180, 193.

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