American Indians and European Diseases

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In "The Clash of Cultures," William Cronon and Richard White explained why European diseases had such devastating effects on American Indians. In this essay, Professor Alfred W. Crosby of the University of Texas shows how European diseases affected the Indians of New England both physically and psychologically. That the Europeans were as ignorant of what was actually happening as the "primitive" native inhabitants and, indeed, that they attributed the Indians' diseases to the same supernatural cause that the Indians did is an added illustration of how environment and culture interact.

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In December of 1620, a group of English dissenters who "knew they were pilgrimes," in the words of William Bradford, stepped ashore on the southern coast of Massachusetts at the site of the Wampanoag Indian village of Pawtuxet. The village was empty, abandoned long enough for the grasses and weeds to have taken over the cornfields, but not long enough for the trees to have returned. The Pilgrims occupied the lonely place and called it Plymouth.

It was pestilence that had cleared the way for this tiny foothold in New England, and the shadow of death would be a major factor in giving the settlement form and substance in the months ahead.

New England Indians and European fishermen and traders had been in intermittent contact for a century, and it was inevitable that more than otter skins, beaver pelts, knives, and kettles would be exchanged. Disease was among the commodities, and in this trade the Indians would come off second best. Europe, with ancient contact by land and new ones by sea with the chief disease communities of the world, and with her relatively dense populations of often hungry and always filthy people, had all the advantages of her disadvantages: an arsenal of diseases.

Europe was in the midst of a golden age for infectious disease organisms, an era ushered in by the Black Death in the fourteenth century. To such old regulars as smallpox and consumption were added such new, or newly recognized, diseases as plague, typhus, and syphilis. Bubonic plague, the greatest killer of them all, smoldered continually and broke out periodically in consuming epidemics. Early in 1617 southeast gales drove whales ashore in the Netherlands. The fearful thought them a portent of plague, and sure enough, by August the plague was general throughout the land. London had full-scale epidemics of that killer in 1603 and again in 1625, and the plague—or something very like it—soon made its presence felt among the Indians of the Northeast coast of America. Innocent of immunity or experience, the Indians were helpless. . . .

When did this pestilence first appear in New England? Probably no earlier than 1616 and no later than 1617, and it lasted until at least 1619. What vessel brought it? It is improbable that we will ever know. What was the disease? Another difficult question. We know it lasted through winters, which suggests that it wasn't a mosquito-borne disease, like yellow fever. We know that the few Europeans who actually saw its victims did not identify it as smallpox, measles, mumps, chicken pox, or any of Europe's common diseases, which they certainly would have recognized. We know it spread along the coast no farther southwest than Narragansett Bay, nor farther northeast than the Kennebec River or possibly Penobscot Bay, nor did it penetrate inland more than twenty or thirty miles. The narrow geographical limitations of the epidemic suggest that the disease was not one of the breath-borne maladies, like smallpox or measles, which normally surge across vast areas. A flea- or louse-borne disease like typhus or plague seems more likely.

We know that the disease produced spots on its victims' skins; and we know by hearsay that some Englishmen in New England at the peak of the epidemic slept in huts with dead and dying Indians, but that not one of these whites fell ill or even so much as "felt their heads to ache while they stayed there." Spots certainly suggest typhus. The Europeans' freedom from infection suggests some disease so common in Europe that they all had acquired immunity to it at home, or that they didn't stay around long enough to get a proper dose of the disease—or that the account is in part or whole false.

Most of the seventeenth-century chroniclers called the disease the plague. "Plague" was and is a word often used to mean any pestilence, but these chroniclers often called it "*the* plague." Captain Thomas Dermer, one of the few Europeans actually to see Indians who were freshly recovering from the experience, called their infection in 1619 "the Plague, for wee might perceive the sores of some that had escaped, who described the spots of such as usually died."

Plague is certainly capable of doing what this pestilence did, and Europeans certainly knew it well enough to recognize it by sight or description. And it is true that plague was well established in Western Europe in the early years of the seventeenth century. Like some kinds of typhus, it is a disease carried by rats and their attendant vermin, rats which swarmed in the holds of the sailing vessels of that era. The disease travels readily by ship, as the European colonists in America knew. Many Britons fell ill and died on the vessels of the Third Supply sailing to Virginia in 1609, and the rumor was that one of the vessels had plague on board. In the 1660's, during London's last great siege of plague, Virginians fled from their ports for fear of the disease coming across on the ships from England.

Fear was justified because ship rats were coming across and establishing beachheads in America. Captain John Smith tells us that they already numbered in the thousands in Jamestown in 1609, when the rats almost starved out the colony by eating its stores of food. They were present and prospering in New England by at least the 1660's, and probably a great deal earlier. It is likely that they found living in the layered bark walls of the Indian wigwams warm and comfortable, and the Indian food-storage practices and eating habits conducive to good diet. Once the rats were established, the transfer of their plague-ridden fleas to the Indians would have been almost automatic and perhaps not even noticed by the new hosts. Body lice were even more common among New England Indians than among white settlers, and the natives commonly passed the time by picking lice and killing them between their teeth.

It is disturbing, though, to those who diagnose the pestilence as plague, that Dermer described its chief signs as sores and spots, rather than the terrible buboes or boils of the groin and armpits that are impossible to overlook in typical victims of the plague. And it is even more odd that the plague-infected fleas did not establish themselves and their bacilli permanently among the wild rodents of New England, as they did in those of the western United States at the end of the nineteenth century. A diagnosis of typhus is tempting, but the historian is reluctant to contradict firsthand witnesses.

Whether plague or typhus, the disease went through the Indians like fire. Almost all the seventeenth-century writers say it killed nine of ten and even nineteen of twenty of the Indians it touched—an incredible mortality rate. But if it was, indeed, plague, it could well have killed that proportion. In the fourteenth century, plague killed one-third of all the people in Europe and a much higher percentage than that in many towns and districts. Further, the Indians knew nothing of the principle of contagion and had an ancient custom of visiting the sick, jamming into extremely hot little huts with them, assuring maximum dispersal of the illness. Their methods of treating illness, which usually featured a stay in a sweatbox, followed by immersion in the nearest cold pond or river, would have been a dreadful trauma for a person with a high fever, and a fine way to encourage pneumonic complications. Consider, too, that the epidemic could not have failed to disrupt food-procurement patterns, as women lay too ill to tend the corn and the men too weak to hunt. Starvation often gleans what epidemic disease has missed. Consider, finally, that after the Indians realized the full extent of the disease, some of them, at least, ran away and left the sick and convalescent to die of neglect. In short, one does not necessarily have to accept a 90 per cent death rate for a given village or area in order to accept a 90 per cent depopulation rate.

It is undeniable that the pestilence largely emptied the Indian villages of coastal New England by 1619. That year, Thomas Dermer found "ancient plantations, not long since populous, now utterly void; in other places a remnant remains, but not free of sickness."

In 1621 a party of Pilgrims went to visit Massasoit, the most powerful Wampanoag sachem, at his summer quarters on a river about fifteen miles from Plymouth. They saw the remnants of many villages and former Indian cornfields along both sides of the river grown up in weeds higher than a man's head: "Thousands of men have lived there, which died in a great plague not long since:

and pity it was and is to see so many goodly fields, and so well seated, without men to dress and manure the same."

Near Boston Bay, Thomas Morton saw even more vivid indications of the plague: "For in a place where many inhabited, there hath been but one left alive, to tell what became of the rest, the livinge being (as it seemed) not able to bury the dead, they were left for Crowes, kites and vermin to prey upon. And the bones and skulls upon the severall places of their habitations, made such a spectacle after my coming into those partes, that as I travailed in that Forrest, nere the Massachusets, it seemed to mee a new found Golgotha."

What destroyed Indian bodies also undermined Indian religion—the Indian's entire view of the universe and of himself. Disease was always considered a manifestation of spiritual influences, and the power of the powwows (medicine men) to direct and cure disease was central to the Indian religion. Later in the century we hear of powwows being hounded, punished, and even killed for failing to produce promised cures. What was the impact when hundreds, even thousands, died under the hands of leaders whose chief distinction was their ability to cure? Many of the powwows themselves, in constant contact with the sick they sought to cure, must have died. What was the impact of this final and irrevocable defeat of these priestly physicians?

What seemed cosmically appalling to the Indians was interpreted as clear proof of God's love by the Pilgrims—a divine intercession that revealed itself from the beginning. They had planned to settle in the Hudson River area or thereabouts, but the master of the *Mayflower* deposited them on the coast of New England. His inability or refusal to take them where they wanted to go proved a bit of luck—"God outshoots Satan oftentimes in his own bow"—for the lands about the Hudson's mouth, though more attractive because more fertile than Plymouth's, were "then abounding with a multitude of pernicious savages. . . ." God had directed the Pilgrims to a coast His plague had cleared of such savages: "whereby he made way for the carrying of his good purpose in promulgating his gospel. . . ." There were no Indians at Plymouth and none for eight or ten miles, and yet it had recently been a village of Wampanoags who had, over the years, cut away the tough climax growth of forest to plant corn. When the weak and hungry Colonists went out to plant in the following spring, all they had to do was to clear out the weeds. Death, it seemed obvious, was God's handyman and the Pilgrim's friend.

The wind of pestilence did more than merely clear a safe place for the Pilgrim to settle; in the long run, it enabled that settlement not only to survive, but to take root and, in the end, to prosper with a minimum of native resistance. The natives of coastal Massachusetts were fewer in number than in a very long time, possibly than in several thousand years, but there were still quite enough of them to wipe out the few Europeans from the *Mayflower*, and they had reason to hate whites. In addition to kidnapings, Europeans—English, the Indians told Dermer—recently had lured a number of Wampanoags on board their ship and had then "made great slaughter of them with their murderers [small ship's cannon]. . . ." When a party of Pilgrims visited the next tribe to the south, the Nausets, in 1621, they met an old woman who broke "forth into great passion, weeping and crying excessively." She had lost three of her sons to kidnapers, and now was without comfort in her old age. A Wampanoag said that the Nausets had killed three English interlopers in the summer of 1620.

Half the English at Plymouth died of malnutrition, exhaustion, and exposure that first winter. Indian anger and Indian power could have made Plymouth one of the lost colonies, like the one Columbus left behind on La Española in 1493 or Sir Walter Raleigh's Roanoke colony of the 1580's.

At some time during this low ebb of Pilgrim history the powwows gathered in the fastnesses of a swamp, where, for three days, they "did curse and execrate" the newcomers to destroy them or drive them away. It almost worked: at times the number of English healthy enough to offer any real help to the sick and, if necessary, any real resistance to attackers was as low as six or seven. But in the end the Indian's gods failed, and the English survived, "having borne this affliction with much patience, being upheld by the Lord."

What held the Indians back from physical attack? They had the strength and motive, and bloody precedent had been set by both whites and Indians. The answer must be fear. The coastal Indians may have been second only to the Pilgrims in New England as believers in the power of the white man's god. A visitor to Plymouth in 1621 wrote that the plague had sapped Wampanoag courage, as well as the tribe's numbers: "their countenance is dejected, and they seem as a people affrighted." They were coming to the English settlement in great numbers every day, "and might in one hour have made a dispatch of us, yet such a fear was upon them, as that they never offered us the least injury in word or deed."

Direct relations between the Wampanoags and the Pilgrims began in March of 1621, approximately three months after the English arrival. An Indian walked out of the woods and through the fields and into Plymouth. He was Samoset, who spoke some English, having learned it from English fishermen on the coast of Maine. He asked for beer, and received "strong water," biscuit, butter, cheese, pudding, and a piece of duck. It was he who told the Pilgrims the old Indian name for their village and explained what had happened to its original inhabitants. A few days later he returned with the individual whom the Pilgrims would soon rank as "a special instrument sent of God for their good beyond their expectation." The man was Squanto, a Pawtuxet who had been kidnaped, had escaped in Spain, and had lived in Cornhill, London, before making his way back to America.

An hour later the sachem, Massasoit, walked in with a train of sixty men. If he had come to fight, he could have swept Plymouth out of existence, but he came in peace, and what amounts to a nonaggression and mutual defense pact was soon agreed upon—the Treaty of Plymouth. Massasoit, wrote Edward Winslow in his first-person account of that day in March, "hath a potent adversary, the Narrohigansets [Narragansets], that are at war with him, against whom he thinks we may be some strength to him, for our peeces are terrible unto them."

In the eyes of the native people of New England, the whites possessed a greater potency, a greater mana, than any Indian people. Nothing could be more immediately impressive than firearms, which made clouds of smoke and a sound like the nearest of thunderclaps and killed at a distance of many paces. And what could seem more logical but to see a similarity between the muskets and cannon, which reached out invisibly and tore bodies, and the plague, which reached out invisibly and corrupted bodies? In the 1580's, Indians in the vicinity of Roanoke had blamed the epidemic then raging on "invisible bullets" that the whites could shoot any distance desired; and it is quite like that Massasoit and his followers had a similar interpretation of their experience with epidemic disease. No wonder the mighty sachem literally trembled as he sat beside the governor of Plymouth that day in March of 1621.

The following year, the Pilgrims learned that Squanto, taking advantage of his position as go-between for the Indians and English, had been telling the former that he had such control over the latter that he could persuade them to unleash the plague again, if he wished. He tried to use this claim of immense power to persuade the Wampanoags to shift their allegiance from Massasoit to himself. It was a game which nearly cost the schemer his life, and he had to spend the rest of his days living with the Pilgrims.

He told the Indians that the plague was buried under the storehouse in Plymouth, where, interestingly enough, the Pilgrims did have something buried: their reserve kegs of gunpowder. He told the Wampanoags that the English could send the plague forth to destroy whomever they wished, while not stirring a foot from home. When, in May of 1622, the Pilgrims dug up some of the gunpowder kegs, another Wampanoag, understandably disturbed, asked the English if they did, indeed, have the plague at their beck and call. The answer he got was as honest a one as could be expected from a seventeenth-century Christian: "No; but the God of the English has it in store, and could send it at his pleasure, to the destruction of his or our enemies." Not long after, Massasoit asked Governor William Bradford if "he would let out the plague to destroy the Sachem, and his men, who were his enemies, promising that he himself, and all his posterity, would be their everlasting friends, so great an opinion he had of the English."

Those enemies were the Narragansets, whose presence was the greatest immediate threat to Plymouth, and whose fear of the Englishmen's power was Plymouth's (and the Wampanoags') best shield. In the late fall of 1621 Canonicus, the Narragansets' greatest sachem, sent a bundle of arrows wrapped in a snakeskin to Squanto at Plymouth. Squanto was not present when they arrived, for which the messenger who brought the bundle was visibly thankful, and he departed "with all expedition." When Squanto returned and examined Canonicus' package, he explained that it signified a threat and a challenge to the new colony. The governor, who as a European of the Reformation era knew as much of threat and challenge as any Indian, stuffed the skin with gunpowder and shot, and sent it back to Canonicus. The great and terrible sachem refused to accept it, would not touch the powder and shot, nor suffer the bundle to remain in Narraganset country. The sinister package, "having been posted from place to place a long time, at length came whole back again." The plague perhaps had taught the Indian the principle of contagion.

Disease, real and imagined, remained a crucial element in English-Indian relations for at least the next two years, and seemingly always to the advantage of the English. In 1622 and 1623 the Pilgrims were still so incompetent at living in America that only the abundance of shellfish and corn obtained from the

Indians kept them from starvation: a dangerous situation, because by then the Indians' fear of and respect for the whites were declining. As one Pilgrim chronicler put it, the Indians "began again to cast forth many insulting speeches, glorying in our weakness, and giving out how easy it would be ere long to cut us off. Now also Massassowat [Massasoit] seemed to frown on us, and neither came or sent to us as formerly." A letter arrived from Jamestown far to the south in Virginia telling of how the Indians had risen there, killing hundreds of the colonists. In the summer of 1622 a band of ne'er-do-well English settled at Wessagusset (Weymouth), not far from Plymouth, and after begging food from the impoverished Pilgrims, set about stealing it from the Indians. That fall Squanto, the almost indispensable man in the Pilgrims' dealings with the Indians, fell ill on a trip to collect corn from the natives. After fever and nosebleeds he died, asking the governor to pray for him "that he might go to the Englishman's God in heaven. . . ."

The Indians, apparently with the Massachusets tribe in the lead, began to plot to exterminate the Wessagusset settlement. They were less intolerant of the Plymouth than the Wessagusset people, but their plan was to destroy the Pilgrims, as well, for fear that the latter would take revenge for the murder of any English. The scheme never got beyond the talking stage. Why weren't the Indians able to organize themselves and take the action they planned? Pilgrims collecting corn from the Massachusets in the latter part of 1622 learned of a "great sickness" among them "not unlike the plague, if not the same." Soon after, Wampanoag women bringing corn to Plymouth were struck with a "great sickness," and the English were obliged to carry much of the corn home on their own backs.

Disease or, at least, bodily malfunction most dramatically affected New England history in 1623 when Massasoit developed a massive case of constipation. In March the news arrived in Plymouth that Massasoit was close to death and that a Dutch vessel had grounded on the sands right in front of his current home. The English knew of the Indian custom that any and all friends must visit the ill, especially the very ill, and they also wanted to meet with the stranded Dutch; so a small party set out from Plymouth for the sachem's sickbed. The Pilgrims found the Dutch afloat and gone, and Massasoit's dwelling jammed to bursting with well-wishers and powwows "making such a hellish noise, as it distempered us that were well, and therefore unlike to ease him that was sick."

Edward Winslow undertook the sachem's case and managed to get between his teeth "a confection of many comfortable conserves, on the point of my knife. . . ." He then washed out his patient's mouth, put him on a light diet, and soon his bowels were functioning again. The Englishman had, with the simplest of Hippocratic remedies, apparently saved the life of the most powerful man in the immediate environs of Plymouth. For the next day or so Winslow was kept busy going from one to another of the sachem's sick or allegedly sick followers, doling out smidgens of his confection and receiving "many joyful thanks." In an era which was, for the Indians, one of almost incomprehensible mortality, Winslow had succeeded where all the powwows had failed in thwarting the influences drawing Massasoit toward death. The English could not only persuade a profoundly malevolent god to kill, but also *not* to kill.

The most important immediate product of Massasoit's recovery was his gratitude. He revealed the details of the Indian plot against Wessagusset and Plymouth, a plot involving most of the larger tribes within two or three days travel of Plymouth, and even the Indians of Capawack (Martha's Vineyard). He said he had been asked to join when he was sick, but had refused for himself and his people. The Pilgrims probably had already heard rumors of the plot, and the sachem's story was confirmed by Phineas Pratt, one of the ne'er-do-wells from Wessagusset, who made his way by fleetness of foot and luck through hostile Indians to Plymouth.

Captain Miles Standish sailed to Boston Bay with a small group of armed men, tiny in number but gigantic in the power the Indians thought they possessed. They killed five or so of the alleged leaders of the plot and returned home with the head of one of them. The remnants of the Wessagusset colony were swept together and brought to Plymouth, where in time most of them made the decision to go back to Europe as hands on the vessels fishing along the Maine coast. The Indian head was set up at Plymouth fort as a visual aid to Indian education.

The Indian plan to wipe out the white colonies fell to pieces. Members of the several tribes within striking distance of Plymouth "forsook their houses, running to and fro like men distracted, living in swamps and other desert places, and so brought manifold diseases amongst themselves, whereof very many are dead. . . ." Ianough, sachem of the Massachusetts, said "the God of the English was offended with them, and would destroy them in his anger. . . ." The Pilgrims noted smugly that the mortality rate among their opponents was, indeed, high, and "neither is there any likelihood it will easily cease; because through fear they set little or no corn, which is the staff of life, and without which they cannot long preserve health and strength."

By 1622 or so the very last cases of the plague had occurred in New England—if indeed these were examples of plague and not of misdiagnosis—and the only remains of the great pestilence were disarticulating bones lost in fallen walls of rotting bark that had once been homes. But it had done its work. In 1625 the Pilgrims, for the first time, raised enough corn to fill their own stomachs *and* trade with the Indians. The Pilgrims had survived and were getting stronger, thanks more to biology than religion, despite Pilgrim preconceptions, but Thomas Morton nevertheless was reminded of a line from Exodus: "By little and little (saith God of old to his people) will I drive them out from before thee; till thou be increased, and inherit the land."