ISSUE 4

Was the Salem Witchcraft Hysteria Caused by a Fear of Women?

YES: **Carol F. Karlsen,** from *The Devil in the Shape of a Woman: Witchcraft in Colonial New England* (W. W. Norton, 1987)

NO: **Laurie Winn Carlson,** from *A Fever in Salem* (Ivan R. Dee, 1999)

ISSUE SUMMARY

YES: Carol Karlsen contends that the belief that woman was evil existed implicitly at the core of Puritan culture and explains why alleged witches, as threats to the desired order of society, were generally seen as women.

NO: Laurie Winn Carlson believes that the witchcraft hysteria in Salem was the product of people's responses to physical and neurological behaviors resulting from an unrecognized epidemic of encephalitis.

Although an interest in the occult, including witchcraft and devil worship, exists in modern society, for most of us the images of witches are confined to our television and movie screens or perhaps to the theatrical stage where a Shakespearean tragedy is being performed. We can watch the annual presentation of *The Wizard of Oz* and reruns of *Bewitched* or hear the cries of "Bubble, bubble, toil and trouble" in a scene from *Macbeth,* with as little concern for the safety of our souls as we exhibit when black-garbed, broomstick-toting children appear on our doorsteps at Halloween. But such was not always the case.

Prehistoric paintings on the walls of caves throughout Europe, from Spain to Russia, reveal that witchcraft was of immediate and serious concern to many of our ancestors. The most intense eruptions in the long history of witchcraft, however, appeared during the sixteenth and seventeenth centuries. In the British North American colonies, there were over 100 witchcraft trials in seventeenth-century New England alone, and 40 percent of those accused were executed. For most Americans the events that began in the kitchen of the Reverend Samuel Parris in Salem, Massachusetts, in 1692 are the most notorious.

A group of young girls, with the assistance of Parris's West Indian slave, Tituba, were attempting to see into the future by "reading" messages in the white of a raw egg they had suspended in a glass. The tragic results of this seemingly innocent diversion scandalized the Salem community and reverberated all the way to Boston. One of the participants insisted she saw the specter of a coffin in the egg white, and soon after, the girls began to display the hysterical symptoms of the possessed. Following intense interrogation by adults, Tituba, Sarah Good, and Sarah Osborne were accused of practicing magic and were arrested. Subsequently, Tituba confessed her guilt and acknowledged the existence of other witches but refused to name them. Accusations spread as paranoia enveloped the community. Between May and September 1692, hundreds of people were arrested. Nineteen were convicted and hanged (not burned at the stake, as is often assumed), and another, a man who refused to admit either guilt or innocence, was pressed to death under heavy weights. Finally, Sir William Phips, the new royal governor of the colony, halted court proceedings against the accused (which included his wife), and in May 1693, he ordered the release of those who were still in jail.

Throughout history, witchcraft accusations have tended to follow certain patterns, most of which were duplicated in Salem. Usually, they occurred during periods of political turmoil, economic dislocation, or social stress. In Salem, a political impasse between English authorities and the Massachusetts Bay Colony, economic tensions between commercial and agricultural interests, and disagreements between Salem Town and Salem Village all formed the backdrop to the legal drama of 1692. In addition, the events in Salem fit the traditional pattern that those accused were almost always women. To what extent did sexism play the central role in the Salem witchcraft hysteria of 1692? Are there other equally valid explanations that place little or no weight on the gender of the accused?

In the selections that follow, Carol F. Karlsen and Mary Beth Norton offer two varying interpretations that seek to explain the events in Salem over 300 years ago. For Karlsen, gender is the key factor. Negative views of women as the embodiment of evil were deeply imbedded in the Puritan (and European) world view. But through most of the seventeenth century, according to Karlsen, New Englanders avoided explicit connections between women and witchcraft. Nevertheless, the attitudes that depicted witches as women remained self-evident truths and sprang to the surface in 1692. Laurie Winn Carlson, on the other hand, insists that previous explanations for the events in Salem fail to take into account the physical and neurological symptoms exhibited by many of the residents of the town. Those symptoms, she argues, correspond very closely to behaviors described during the pandemic of encephalitis lethargica that struck the United States in the early twentieth century, and they provide a reasonable explanation for many of the unanswered questions about the events in Salem.

Carol F. Karlsen

The Devil in the Shape of a Woman: Witchcraft in Colonial New England

Handmaidens of the Lord

There is a curious paradox that students of New England witchcraft encounter. The characteristics of the New England witch—demographic, economic, religious, and sexual—emerge from *patterns* found in accusations and in the life histories of the accused; they are not visible in the content of individual accusations or in the ministerial literature. No colonist ever explicitly said why he or she saw witches as women, or particularly as older women. No one explained why some older women were suspect while others were not, why certain sins were signs of witchcraft when committed by women but not when committed by men, or why specific behaviors associated with women aroused witchcraft fears while specific behaviors associated with men did not. Indeed, New Englanders did not openly discuss most of their widely shared assumptions about women-as-witches.

This cultural silence becomes even more puzzling when we consider that many of these assumptions had once been quite openly talked about in the European witchcraft tradition. In the late fifteenth and early sixteenth centuries especially, defenders of the Christian faith spelled out in elaborate detail why they believed women rather than men were likely to join Satan's forces. The reasons they gave are not very different from those evident in the patterns the New England sources reveal. This presses upon us a question of some consequence: Why had once-explicit beliefs about women's proclivity to witchcraft become implicit in their New England setting?

We can probe this question by following the lead of the anthropologist Mary Douglas and other scholars who have explored the social construction of knowledge. In Douglas's analysis, human societies relegate certain information to the category of self-evident truths. Ideas that are treated as self-evident, "as too true to warrant discussion," constitute a society's implicit knowledge. At one time explicit, implicit ideas have not simply been forgotten, but have been "actively thrust out of the way" because they conflict with ideas deemed more suitable to the social order. But the conflict is more apparent than real. In

the "elusive exchange" between implicit and explicit knowledge, the implicit is "obliquely affirmed" and the society is shielded from challenges to its world view. The implicit resides in a society's symbols, rituals, and myths, which simultaneously describe, reflect, and mask that world view. To understand these processes, implicit and explicit knowledge must be examined together and in the context of their social environment.

In colonial New England, the many connections between "women" and "witchcraft" were implicitly understood. In Europe, several generations before, the connections had still been explicit. Over time, these established "truths" about women's sinfulness had increasingly come into conflict with other ideas about women—ideas latent in Christian thought but brought to the fore by the Reformation and the political, economic, and social transformations that accompanied it. For the Puritans who emigrated to New England in the early seventeenth century, once-explicit assumptions about why witches were women were already self-evident.

The swiftly changing conditions of early settlement left it uncertain at first whether, or how, witchcraft would serve the goals of New England society. Though men in positions of authority believed that certain women were working against the new colonies' interests, others did not see these women as witches. By the late 1640s, however, New Englanders embraced a witchcraft belief system as integral to their social order. Over the course of the seventeenth century, Puritan rituals, symbols, and myths perpetuated the belief that women posed ever-present dangers to human society, but the newer, post-Reformation ideas about women forced colonists to shrink from explicitly justifying this belief. They therefore continued to assume the complex of ideas about women-as-witches as self-evident truths. . . .

Seventeenth-century Puritan writings on women and family life reveal that the sexual hierarchy was at stake for them also, but with this difference: knowledge that detailed, explained, and justified the denigration of women had come into conflict with newer views of women. Though still vital, the old truths had been thrust from sight by the new.

The fundamental tenet of European witchcraft—that women were innately more evil than men—did not fit with other ideas Puritans brought with them to their new world. This tenet was still as necessary to Puritans as it had been for their Catholic predecessors, but it was incompatible with the emphasis Puritanism placed on the priesthood of all believers, on the importance of marriage and family relations, and on the status of women within those relations.

Puritanism took shape in late sixteenth- and early seventeenth-century England amidst a heated controversy over the nature of women, the value of marriage, and the propriety of women's social roles. The dominant attitude toward women in the popular press and on stage did not differ very much from the views of Catholic witch-hunters except that overall it was less virulent, delivered as often in the form of mockery as invective. According to this opinion, women were evil, whorish, deceitful, extravagant, angry, vengeful, and, of course, insubordinate and proud. Women "are altogether a lumpe of pride," one author maintained in 1609—"a masse of pride, even altogether

made of pride, and nothing else but pride, pride." Considering the nature of women, marriage was at best man's folly; at worst, it was the cause of his destruction.

The problem, as some writers of this school had it, was women's increasing independence, impudence, "masculine" dress, and "masculine" ways. The presence of women in the streets and shops of the new commercial centers was merely symptomatic of their newly found "forwardness" and desire for "liberties." But more than likely it was not so much women's increasing independence in the wake of commercial development that troubled these commentators; rather it was the increasing visibility of women within their traditional but increasingly commercialized occupations. Solutions to the problem, when offered, echoed a 1547 London proclamation that enjoined husbands to "keep their wives in their houses."

Other writers argued that women were equal if not superior to men, called for recognition of the abuse women suffered under men's tyranny, and intimated that society would be better served if economic power resided in women's hands—but their voices were few and barely heard. More often, defenders of women simply took exception to the worst of the misogynists' charges and recounted the contributions women made to the welfare of their families and their society. The most serious challenge to prevailing opinion, however, came from a group of men who shared some of the concerns and goals of women's most avid detractors. Most of these men were Protestant ministers, and they entered the debate indirectly, through their sermons and publications on domestic relations. Though not primarily interested in bettering women's position in society, they found certain transformations in attitudes toward women essential to their own social vision. Among them, it was the Puritan divines—in both old and New England—who mounted the most cogent, most sustained, and most enduring attack on the contemporary wisdom concerning women's inherent evil.

From the publication of Robert Cleaver's *A Godly Form of Householde Governement* in 1598 until at least the appearance of John Cotton's *A Meet Help* in 1699, a number of Puritan ministers did battle with "Misogynists, such as cry out against all women." If they were not unanimous on every point, most of them agreed with John Cotton that women were not "a necessary Evil," but "a necessary good." For justification of this belief, they turned to the Scriptures, to the story of the Creation. God in his infinite wisdom, John Robinson contended, had created woman from man and for man, when he "could find none fit and good enough for the man . . . amongst all the good creatures which he had made." He had made woman *from* man's rib, Samuel Willard noted, "Partly that all might derive Originally from One; Partly that she might be the more Dear and Precious to him, and Beloved by him as a piece of himself." He had made her *for* "man's conveniency and comfort," Cotton said, to be a helpmeet in all his spiritual and secular endeavors and "a most sweet and intimate companion." It followed from both the means and purposes of God's Creation that women and men were "joynt Heirs of salvation," that marriage was an honorable, even ideal state, and that women who fulfilled the purposes of their creation deserved to be praised, not vilified by godly men. In 1598,

Cleaver called men foolish who detested women and marriage. For Cotton, a century later, such men were "a sort of Blasphemers."

What had happened? Why did Puritans (along with their reforming brethren) insist on a shift in attitude that would by the nineteenth century result in a full reversal of a number of sixteenth-century notions about the "innate" qualities of men and women? We can begin to answer this question by considering a few elements critical in bringing about the transformation.

The Puritan challenge to the authority of church and state covered many issues, but one point not in dispute was the necessity of authority itself. Puritans were as disturbed by the lack of order in their society as were their enemies and were as fully committed to the principle of hierarchy. Though Puritanism developed during the period of upheavel that followed the breakup of the feudal order, Puritans were nevertheless determined to smother the sources of upheaval. Like other propertied Englishmen, Puritan men worried especially about masterlessness—insubordination in women, children, servants, vagabonds, beggars, and even in themselves.

Where they differed with other men of property was in their belief that existing authority was both ineffective and misplaced. "Faced with the ineffectuality of authorities in everyday life," one historian has argued, "the Puritans dramatically and emphatically denied the chain of authority in the church and enthroned conscience in its place. . . . The radical solution to social deterioration was not the strengthening of external authority. It was, rather, the internalization of authority itself." Foremost among the lessons Puritans taught was God's insistence on complete submission to divine will as expressed in the Bible and interpreted by ministers and magistrates. Outward compliance was not enough. Individuals who were fully committed to following the laws of God were *self*-controlled, needing only the Scriptures and an educated ministry to guide them on the path of right behavior. Submission to God's will had to be not only complete but voluntary. External discipline was still necessary to control the ungodly, but even they could be taught a measure of self-discipline.

The internal commitment to God's laws was to be inculcated primarily within the family, under the guidance and watchful eye of the head of the household, who conducted family prayer and instilled moral values in his dependents. It was not easy for family heads to ensure willing submission in their dependents, Puritans readily admitted. Minister John Robinson was talking specifically about children when he said that the "stubbornness, and stoutness of mind arising from natural pride . . . must . . . be broken and beaten down, . . . [the] root of actual rebellion both against God and man . . . destroyed," but his remarks reflect the larger Puritan belief in the difficulty of curbing human willfulness. For subordinates to accept their places in the hierarchical order, they must first be disciplined to accept the *sin* in their very tendency to rebel. From there, it was possible to develop enlightened consciences.

The family was also crucial as a symbol of a hierarchical society. Functioning as both "a little Church" and "a little Commonwealth," it served as a model of relationships between God and his creatures and as a model for all social relations. As husband, father, and master to wife, children, and servants,

the head of the household stood in the same relationship to them as the minister did to his congregants and as the magistrate did to his subjects. Also, his relationship to them mirrored God's to him. Indeed, the authority of God was vested in him as household head, and his relationship to God was immediate: he served God directly. There was therefore no need for a priesthood to mediate between God and family heads. Other household members had immortal souls and could pray to God directly, but they served God indirectly by serving their superiors within the domestic frame. This model enhanced the position of all male heads of household and made any challenge to their authority a challenge to God's authority. It thereby more firmly tied other family members into positions of subordination.

The relationship of household heads to other family members fit within a larger Puritan world view. God had created the world, Puritans maintained, in the form of a great "Chain of Being" in which man was both above other creatures and subordinate to the Deity. God had ordained that human relationships were to be similarly patterned, with husbands superior to wives, parents to children, masters to servants, ministers to congregants, and magistrates to subjects. All, however, were subordinate to God. In each of these relations, inferiors served God by serving their superiors. While Puritans viewed the parent-child relation as a natural one, all other unequal relationships were described as voluntary, based on a covenant between the individuals concerned. God also required that family heads enter into another contractual relationship, called a "family covenant." Under this agreement, men promised to ensure obedience in all their dependents, in return for God's promise of prosperity.

Finally, the family also guided children in the right selection of their "particular callings." For the English divine William Perkins, particular callings were of two types. The first was God's call to individuals to enter into one or more of the several kinds of unequal social relations (husband/wife, parent/child, master/servant, and so on), relations that were "the essence and foundation of any society, without which the society cannot be." The second was God's call to specific kinds of employment by which individuals earned their livelihoods. In each case, God did the calling, but children had to endeavor to know what God had in mind for them, and parents were responsible to see that their charges made appropriate choices. Once chosen, callings were to be attended to conscientiously, not for honor or material reward but in the service of God. What Perkins did not say was that for Puritans the second sort of calling did not apply to females. Woman was called for only one employment, the work of a wife. . . .

As the old idea of woman as a necessary evil was gradually transformed into the idea of woman as a necessary good, the fear and hostility that men felt toward women remained. The old view of woman was suppressed, but it made its presence known in the many faults and tensions that riddled Puritan formulations on woman. Though largely unspoken, the old assumptions modified the seemingly more enlightened knowledge Puritans imparted. The new discourse, "first uttered out of the pulpit," was in fact dedicated to affirming the beliefs of the old, but in ways that would better serve male interests in a society that was itself being transformed.

The belief that woman was evil continued to reside in the myth at the core of Puritan culture—the biblical tale of human origins. Really two myths in one, it is the story of Creation in the Garden of Eden and the story of Adam and Eve's fall from grace. Our concern is mostly with the latter, but the two tales are nonetheless interdependent—the joys of Paradise making comprehensible the agonies of Paradise lost.

In their version of human origins, the Puritan clergy were more ambiguous than usual about when they were discussing "man, male and female," and when they were discussing men only. Despite its many contradictions, this creation myth allowed the Puritans to establish their two most cherished truths: hierarchy and order. Even before the Fall, they maintained, God had designated woman as both inferior to and destined to serve man—though her original inferiority was based "in innocency" and without "grief." Woman's initial identity was not—like man's—as a separate individual, but as a wife in relation to a husband. The very purpose of her creation allowed Puritans to extend the idea of her subordination *as wife* to her subordination *as woman*, in much the same manner as Anglican minister Matthew Griffiths did when he observed: "No sooner was she a Woman, but presently a Wife; so that Woman and Wife are of the same standing." So interchangeable were these terms in the minds of the clergy that they could barely conceive of woman's relationship to God except through a husband.

Woman's position in the Puritan version of Eden was analogous to that of the angels and the animals. Angels were formed before Creation as morally perfect spiritual beings. Though angels were clearly above man in the hierarchy of Creation, and though man was not to have dominion over them, God would require the angels to "minister for man." Animals were even closer to the position of woman since they too were created specifically to serve man.

The Puritan account of the Fall follows the standard Christian version in its general outlines. Discontented with their position in the hierarchical order, Adam and Eve succumbed to the Devil's temptation to eat the forbidden fruit, thus challenging God's supremacy over them and rebelling against the order of Creation. Guilty of pride, both were punished, but Eve doubly because she gave in to the temptation first, thereby causing man's downfall.

Puritan elaborations on this tale are revealing. According to Samuel Willard, Adam and Eve were both principal causes of man's fall, but there were also three instrumental causes: the serpent, the Devil, and the woman. Exonerating the serpent as a creature lacking the ability to reason, he went on to discuss the two "blamable Causes," the Devil and Eve. The events of the Fall originated with the Devil, he said, explaining that the word "Devil" was a collective term for a group of apostate angels. Filled with pride in their positions as the most noble of God's creations, discontented that they were assigned to serve "such a peasant as man," envious of what they saw as a "greater honour conferred upon him," and consumed with malice against God and man, the apostate angels sought revenge by plotting man's downfall. What motivated them was not their displeasure at their place in the hierarchical order, Willard claimed, for only God was above them. Rather it was their "supreme contempt for their employment." United by their evil intentions, they are called "Satan"

in the Scriptures as a sign that they had traded their natural subjection to God for a diabolical subjection to the "Prince of Evil." In the process of accomplishing their ends, they were the first to speak falsehoods in Eden, becoming in the process blasphemers against God and murderers of the bodies and souls of men. "They seduced them . . . and thus in procuring of man's fall, they compleated their own; in making of him miserable, they made themselves Devils."

Eve's story—and her motivations—were more complex. Entering the body of the serpent, the Devil addressed himself to Eve, Willard said, suggesting to her that if she ate the fruit he offered, she would become godlike. Her senses suddenly deluded, she gave in to her lusts: "the lusts of the flesh, in giving way to carnal appetite, good for food; the lust of the eye, in entertaining the desirable aspect of the forbidden fruit, pleasant to the eyes; [and] the lusts of pride, in aspiring after more wisdom than God saw meet to endow a creature withal, to make one wise." Easily seduced, she in turn seduced Adam, thereby implicating him in her guilt. She commended the fruit, "makes offers to him, insinuates herself into him, backs all that the Serpent had said, and attracts him to joint consent with her in the great Transgression." Eve was moved not only by her sensuality but, like Satan, by pride. Her action bespoke the pride of a desire for knowledge, and by extension for God's position, rather than the resentment of her obligation to serve man.

Adam and Eve were both punished for the sin of pride, for rebelling against the order of Creation, but Eve rebelled both as part of man and as man's "other." For this reason, Willard called her both a principal and an instrumental cause of man's fall. According to Willard, when God commanded man not to eat the fruit of the tree of knowledge, "though their prohibition be expresst as given to Adam in the singular [necessarily so, as Eve had yet to be created in the chapter Willard was citing]. . . yet Eve understood it as comprehending them both." Thus she shared with Adam responsibility as a principal in the matter. "Yet, looking upon her as made for the man, and by the Creators law owing a subordination to him, so she may also be looked upon as instrumental." Elaborating on this point, Willard argued that having been created as his helpmeet, she ought to have encouraged and fortified him in that obedience which God had required of them both. Instead she became a mischief, "an occasion, yea a blamable cause of his ruin." For this, the Lord placed his "special curse" upon the female sex: "Unto the woman he said, I will greatly multiply thy sorrow and thy conception: in sorrow shalt thou bring forth children: and thy desire shall be to thy husband, and he shall rule over thee."

Part of woman's sin, then, was the seduction of man; another part was her failure to serve man. Though Willard never explicitly charged woman with having the same sinister motives as Satan, he did strengthen the association between these two instruments of man's fall by defining her as the Devil's willing agent: she acted "upon deliberation," he said, "and was voluntary in what she did."

In contrast, Adam (as distinguished from "man") lacked any motive for his sin. His role in the Fall was essentially passive. When God confronted the pair about their sin Adam defended himself by pointing the accusatory finger at his mate: "the woman which thou gavest to be with me, she gave me of the

tree, and I did eat." Willard exonerated Adam by supporting his disclaimer and by describing him as an unwitting victim of his temptress wife: "Adam was not deceived, but the woman being deceived, was in the transgression." The burden of Adam's guilt was thereby lifted, and the blame placed on Eve. If "man's" sin in the Garden of Eden was pride, it was woman subsumed in man who committed it. Her male counterpart deserved a share of the punishment, but merely for allowing himself to be made "a servant of servants." Willard reinforced this point in his description of the sins that made human beings like devils. It is by now a familiar list: pride, discontent, envy, malice, lying, blasphemy, seduction, and murder. Some were explicitly Eve's, others implicitly hers; none were attributed to Adam.

Eve was the main symbol of woman-as-evil in Puritan culture. She was, in many ways, the archetypal witch. Whatever the new beliefs affirmed about women's potential goodness, the persistence of Eve as a figure in the Puritan cosmology signals the endurance of older if more covert beliefs. Women could be taught to internalize the authority of men, Puritans thought—but they knew that the sweeping denial of self they demanded of women was "too bitter a pill to be well digested," that it had to "be sweetened" before it could "be swallowed." The story of the Fall taught the lesson that female submission would not come easily—not, certainly, through a theological reformulation alone. Their continuing references to the Fall bespeak Puritan belief that the subjection of the daughters of Eve, whether religious, economic, or sexual, would have to be coerced. That was the message of Eve's punishment.

Ever fearful that women's conversion to virtuous womanhood was incomplete, ministers sometimes resorted to more vivid images of physical and psychological coercion. They warned the Puritan husband that he should not "bee satisfied that hee hath robed his wife of her virginitie, but in that hee hath possession and use of her will." Women tempted to abandon their chastity, and therefore their God, were told to resolve "that if ever these Other Lords do after this Obtain any thing from you, it shall be by the Violence of a Rape." For women who had yet to learn the necessity of subjection came the ever-present threat of additional punishment: "Christ will sorely revenge the rebellion of evill wives." Though the clergy protested again and again that the position of wives was different from that of servants, when they tried to picture what husbands' position would be like if the power relations within marriage were reversed, they envisioned men kept as vassals or enchained as slaves.

Ministers described this reversal of the sexual order as a complete perversion of the laws of God and the laws of nature. The most frequently employed symbols of female usurpers were perversions of those other beings destined to serve man: angels and animals. For woman to be "a man-kinde woman or a masterly wife" conjured up images of fallen angels, demons, and monsters, distortions of nature in every respect.

The tensions within the new ideology suggest that Puritans could no more resolve the ambivalence in their feelings than they could the contradictions

in their thought. There was a deep and fundamental split in the Puritan psyche where women were concerned: their two conflicting sets of beliefs about women coexisted, albeit precariously, one on a conscious level, the other layers beneath. If woman was good—if she was chaste, submissive, deferential—then who was this creature whose image so frequently, if so fleetingly, passed through the mind and who so regularly controlled the night? Who was this female figure who was so clearly what woman was not? The ministers were not the only ones who lived with this tension, of course. The dual view of women affected everyone, male and female alike. Still, as the primary arbiters of culture in an age when God still reigned supreme, the clergy played the crucial role not only in creating the virtuous wife but in perpetuating belief in her malevolent predecessor.

In colonial New England, the intensity of this psychic tension is best seen in the writings of Cotton Mather—perhaps simply because he wrote so much, perhaps because his own ambivalence was so extreme.

In 1692, Mather published his lengthiest treatise on womanhood, *Ornaments for the Daughters of Zion*. His purpose, as he stated in his preface, was "to advocate virtue among those who can not forget their Ornaments and to promote a fear of God in the female sex." He was concerned both with women's behavior and with their relationship to God. He devoted much of his attention to the celebration of individual women, mostly biblical figures, whose lives were distinguished by quiet piety and godly ways. He presented them as models for New England women to emulate.

That same year, Mather completed *Wonders of the Invisible World,* his major justification for the Salem witchcraft trials and executions. Mather's focus here was on the behavior of witches and their relationships with the Devil—particularly women's complicity in Satan's attempts to overthrow the churches of New England. The book featured the witchcraft testimony presented against five of the accused at Salem, four of whom were women.

The nearly simultaneous publication of these two mirror-image works was not, it would seem, merely coincidental. Though Mather's witchcraft book does not explicitly address the reason why most of his subjects are women, his witches are nonetheless embodiments of peculiarly female forms of evil. Proud, discontented, envious, and malicious, they stood in direct contrast to the embodiments of female good in *Ornaments,* all of whom fully accepted the place God had chosen for them and regarded a willing and joyous submission to his will as the ultimate expression of their faith. Unable to ignore the profound uneasiness these two diametrically opposed views generated, Mather, like other New Englanders, relegated the still-powerful belief in women's evil to witches, on whom his fear and hatred could be unleashed. He was thereby freed to lavish praise on virtuous women—women who repressed the "witch" in themselves. Though his resolution allowed him to preserve man's superior position in the universe, Mather's heavy reliance in *Ornaments* on figures of Eve reveals how very delicate the balance was.

Mather's resolution was also his culture's. In the late sixteenth and seventeenth centuries, Puritans and other like-minded Protestants were engaged in the task of transforming an ideology, formulating beliefs that would better serve them in a world in which many of the old hierarchies and truths were no longer useful or plausible. They devised a new conception of man which, though drawn from the old, increasingly conceived him as an individual in relation to his God and his neighbors. It was a formulation that better fit the new economic order. The new man required a new woman: not an individual like himself, but a being who made possible his mobility, his accumulation of property, his sense of self-importance, and his subjection to new masters. By defining women as capable and worthy of the helpmeet role, the Puritan authorities offered a powerful inducement for women to embrace it. But they also recognized that the task they had set for themselves was a difficult one. If women were to repress their own needs, their own goals, their own interests—and identify with the needs, goals, and interests of the men in their families—then the impulse to speak and act on their own behalf had to be stifled.

As the witchcraft trials and executions show, only force could ensure such a sweeping denial of self. New England witches were women who resisted the new truths, either symbolically or in fact. In doing so, they were visible—and profoundly disturbing—reminders of the potential resistance in all women.

Puritans' witchcraft beliefs are finally inseparable from their ideas about women and from their larger religious world view. The witch was both the negative model by which the virtuous woman was defined and the focus for Puritan explanations of the problem of evil. In both respects, Puritan culture resembles other cultures with witchcraft beliefs: the witch image sets off in stark relief the most cherished values of these societies. A central element in these cosmologies, witches explain the presence of not only illness, death, and personal misfortune, but of attitudes and behavior antithetical to the culture's moral universe.

For Puritans, hierarchy and order were the most cherished values. People who did not accept their place in the social order were the very embodiments of evil. Disorderly women posed a greater threat than disorderly men because the male/female relation provided the very model of and for all hierarchical relations, and because Puritans hoped that the subordination of women to men would ensure men's stake in maintaining those relations. Many years ago the anthropologist Monica Hunter Wilson said that witchcraft beliefs were "the standardized nightmare of a group, and . . . the comparative analysis of such nightmares . . . one of the keys to the understanding of society." New England's nightmare was what the historian Natalie Zemon Davis has called "women on top": women as the willing agents of the Prince of Evil in his effort to topple the whole hierarchical system.

Laurie Winn Carlson

NO

A Fever in Salem: A New Interpretation of the New England Witch Trials

During the latter part of the seventeenth century, residents of a northeastern Massachusetts colony experienced a succession of witchcraft accusations resulting in hearings, trials, imprisonments, and executions. Between 1689 and 1700 the citizens complained of symptoms that included fits (convulsions), spectral visions (hallucinations), mental "distraction" (psychosis), "pinching, pin pricking and bites" on their skin (clonus), lethargy, and even death. They "barked like dogs," were unable to walk, and had their arms and legs "nearly twisted out of joint."

In late winter and early spring of 1692, residents of Salem Village, Massachusetts, a thinly settled town of six hundred, began to suffer from a strange physical and mental malady. Fits, hallucinations, temporary paralysis, and "distracted" rampages were suddenly occurring sporadically in the community. The livestock, too, seemed to suffer from the unexplainable illness. The randomness of the victims and the unusual symptoms that were seldom exactly the same, led the residents to suspect an otherworldly menace. With the limited scientific and medical knowledge of the time, physicians who were consulted could only offer witchcraft as an explanation.

These New Englanders were Puritans, people who had come to North America to establish a utopian vision of community based upon religious ideals. But, as the historian Daniel Boorstin points out, their religious beliefs were countered by their reliance on English common law. The Puritans did not create a society out of their religious dogma but maintained the rule of law brought from their homeland. They were pragmatic, attempting to adapt practices brought from England rather than reinventing their own as it suited them. When problems arose that were within the realm of the legal system, the community acted appropriately, seeking redress for wrongs within the courts.

Thus when purported witchcraft appeared, church leaders, physicians, and a panicked citizenry turned the problem over to the civil authorities. Witchcraft was a capital crime in all the colonies, and whoever was to blame for it had to be ferreted out and made to stop. Because no one could halt the

From *A Fever in Salem: A New Interpretation of the New England Witch Trials* by Laurie Winn Carlson (Ivan R. Dee, 1999), pp. xiii–xvi, 114–125, 142–146.

outbreak of illness, for ten months the community wrestled with sickness, sin, and the criminal act of witchcraft. By September 1692, nineteen convicted witches had been hanged and more than a hundred people sat in prison awaiting sentencing when the trials at last faded. The next year all were released and the court closed. The craze ended as abruptly as it began.

Or did it? There had been similar sporadic physical complaints blamed on witchcraft going back several decades in New England, to the 1640s when the first executions for the crime of witchcraft were ordered in the colonies. Evidence indicates that people (and domestic animals) had suffered similar physical symptoms and ailments in Europe in still earlier years. After the witch trials ended in Salem, there continued to be complaints of the "Salem symptoms" in Connecticut and New Hampshire, as well as in Boston, into the early eighteenth century. But there were no more hangings. The epidemic and witchcraft had parted ways.

By examining the primary records left by those who suffered from the unexplainable and supposedly diabolical ailments in 1692, we get a clear picture of exactly what they were experiencing. *The Salem Witchcraft Papers,* a three-volume set compiled from the original documents and preserved as typescripts by the Works Progress Administration in the 1930s, has been edited for today's reader by Paul Boyer and Stephen Nissenbaum. It is invaluable for reading the complete and detailed problems people were dealing with. Like sitting in the physician's office with them, we read where the pain started, how it disappeared or progressed, how long they endured it.

A similar epidemic with nearly exact symptoms swept the world from 1916 to 1930. This world-wide pandemic, sleeping sickness, or encephalitis lethargica, eventually claimed more than five million victims. Its cause has never been fully identified. There is no cure. Victims of the twentieth-century epidemic continue under hospitalization to the present day. An excellent source for better understanding encephalitis lethargica is Oliver Sacks's book *Awakenings,* which is now in its sixth edition and has become a cult classic. A movie of the same title, based on the book, presents a very credible look at the physical behaviors patients exhibited during the epidemic. While encephalitis lethargica, in the epidemic form in which it appeared in the early twentieth century, is not active today, outbreaks of insect-borne encephalitis do appear infrequently throughout the country; recent outbreaks of mosquito-borne encephalitis have nearly brought Walt Disney World in Florida to a halt, have caused entire towns to abandon evening football games, and have made horse owners anxious throughout the San Joaquin Valley in California.

Using the legal documents from the Salem witch trials of 1692, as well as contemporary accounts of earlier incidents in the surrounding area, we can identify the "afflictions" that the colonists experienced and that led to the accusations of witchcraft. By comparing the symptoms reported by seventeenth-century colonists with those of patients affected by the encephalitis lethargica epidemic of the early twentieth century, a pattern of symptoms emerges. This pattern supports the hypothesis that the witch-hunts of New England were a response to unexplained physical and neurological behaviors resulting from an epidemic of encephalitis. This was some form of the same

encephalitis epidemic that became pandemic in the 1920s. In fact it is difficult to find anything in the record at Salem that *doesn't* support the idea that the symptoms were caused by that very disease. . . .

What Happened at Salem?

. . . Historical explanations of witchcraft dwell on what Thomas Szasz calls the "scapegoat theory of witchcraft," which explores who was accused and why in the context of larger societal issues. Inevitably they fail to examine the accusers or the "afflicted," who themselves were often tried for witchcraft.

Sociologists have pointed to community-based socioeconomic problems as the causative agent in the events at Salem. They propose that there were really two Salems: Salem Town (a prosperous sector on the well-developed east side of town) and Salem Village (a less-developed, very swampy and rocky area on the west side). Likening Salem Village to a troubled backwater, the accusations and afflictions emanated from the west side, where the residents directed their animosity toward their wealthier, more powerful eastern counterparts by accusing individuals on the east side of witchcraft. Examining the struggles, failures, broken dreams, and lost hopes of the Salem Village residents, sociologists began to view the village as "an inner city on a hill." Social conflict, in this case between prosperous merchants and struggling subsistence farmers, was examined. In the case of the Salem witch hunts, the theory may better explain who was accused and convicted of witchcraft than why individuals were afflicted. Division along class and religious lines has been well documented in determining criminal accusations.

Other investigators have blamed the situation on village factionalism, claiming that Salem Village was rife with suspicious, disgruntled, jealous settlers whose frustrations had festered for years before exploding in the court record with witchcraft accusations and trials. But that does not explain why twenty-two *other* towns in New England were eventually connected to the proceedings in some way; villagers throughout Maine, New Hampshire, Connecticut, Massachusetts, and Rhode Island were brought into the trial records. Victims, accused witches, and witnesses came from other locales as far away as the Maine frontier. Other locations, such as Connecticut, conducted witch trials that preceded or coincided with those at Salem. Choosing to view the problems as power struggles or personality differences within a small village strikes one as too parochial. Many of the possessed claimants barely knew the people they named as their tormenters, in fact several had never even met the persons they accused of fostering their problems—hardly enough tension to support the idea that the entire uproar was based on long-standing animosities. Socioeconomic divisions did engender problems in the region, and while they ultimately may be used to explain who was accused and why, they do not explain the many physical symptoms or who experienced them.

Carol Karlsen has viewed what happened at Salem in her book *The Devil in the Shape of a Woman,* which relates the events to women's oppressed status within Puritan society. She considers New Englanders' "possession" to have been a cultural performance—a ritual—performed by girls, interpreted by

ministers, and observed by an audience as a dramatic event. Karlsen claims the possessed individuals exhibited learned behavior patterns and that words and actions varied only slightly among them. The affected women experienced an inner conflict which was explained by ministers as a struggle between good and evil: God versus Satan. The outcome revolved around whether or not the young women would later lead virtuous lives or fall into sin. Karlsen suggests that a woman's possession was the result of her indecision or ambivalence about choosing the sort of woman she wanted to be. She views the possession as a "collective phenomenon" among women in Connecticut between 1662 and 1663, and in Massachusetts from 1692 to 1693. It was a "ritual expression of Puritan belief and New England's gender arrangements," and a challenge to society. It was ultimately a simple power struggle between women and their oppressors.

As to the physical symptoms: the fits, trances, and paralyzed limbs, among others, Karlsen attributes them to the afflicted girls' actual fear of witches as well as the idea that once they fell into an afflicted state they were free to express unacceptable feelings without reprisal. The swollen throats, extended tongues, and eyes frozen in peripheral stares were manifestations of the inner rage they felt toward society; they were so upset they literally *couldn't* speak. Their paralysis was based on anger over having to work; their inability to walk meant they could not perform their expected labor—in other words, a passive-aggressive response to a situation that incensed them. Karlsen views witchcraft possession in New England as a rebellion against gender and class powers: a psychopathology rooted in female anger.

Misogyny may well explain who was accused of witchcraft, but it lacks an explanation for the wide-ranging symptoms, the ages of the afflicted, and the patterns of symptoms that occurred across time and distance in seventeenth-century New England. Scholars who take this route, however, conveniently ignore the fact that men too were accused, tried, and hanged for witchcraft, both in the colonies and in Europe. In fact, Robin Briggs states that though "every serious historical account recognizes that large numbers of men were accused and executed on similar charges, this fact has never really penetrated to become part of the general knowledge on the subject." His research shows that a misogynistic view of witch-hunts lacks complete credibility.

Many researchers have proposed that mass hysteria affected the young women of Salem. The term *hysteria,* essentially a female complaint, has recently been dropped from use by the psychiatric profession in favor of "conversion symptom," which describes the manner in which neurotic patients suffer emotional stress brought on by an unconscious source. This stress or tension can undergo "conversion" and reveal itself in a variety of physical ailments. Conversion, a very pliable disorder, can be explained by almost any societal pressure in any particular culture. It is a psychological catchall for unexplained neurological or emotional problems. But its victims are always the same, according to analysts: unstable females.

Jean-Martin Charcot, a French physician, worked extensively with epileptic and hysteric female patients at the Salpêtrière Hospital in Paris between 1862 and 1870. He laid the groundwork for hysteria theory, calling it hystero-epilepsy.

He accused his patients of being deceitful, clever actresses who delighted in fooling the male physician. Charcot's medical students claimed to be able to transfer diseases from hysterics with the use of magnets, something they called the "metal cure." Eventually his professional standing as a neurologist diminished and faded, and he turned to faith healing, Sigmund Freud, one of his students, began his work under Charcot's direction.

A more modern version of the hysteria complex is called Mass Psychogenic Illness, or MPI, which is defined as the contagious spread of behavior within a group of individuals where one person serves as the catalyst or "starter" and the others imitate the behavior. Used to describe situations where mass illness breaks out in the school or workplace, it is usually connected to a toxic agent—real or imagined—in a less than satisfactory institutional or factory setting. MPI is the sufferer's response to overwhelming life and work stress. It relies on the individual's identification with the index case (the first one to get sick, in effect the "leader") and willingness to succumb to the same illness. A classical outbreak of MPI involves a group of segregated young females in a noisy, crowded, high-intensity setting. It is most common in Southeast Asian factories crowded with young female workers; adults are not usually affected. Symptoms appear, spread, and subside rapidly (usually over one day). Physical manifestations usually include fainting, malaise, convulsions with hyperventilation, and excitement. Transmission is by sight or sound brought about by a triggering factor which affects members of the group, who share some degree of unconscious fantasies. A phenomenon more related to the industrial world of the nineteenth and twentieth centuries than to pastoral village life in colonial New England, MPI does not address the question of why men and young children, who would not have identified emotionally and psychologically with a group of young girls, suffered. The New England colonists scarcely fit the pattern for this illness theory that demands large groups of people of similar age, sex, and personality assembled in one confined location.

Salem's witches cannot, of course, escape Freudian critique. Beyond the hysteria hypothesis, John Demos, in *Entertaining Satan,* looked at the evidence from the perspective of modern psychoanalysis. He pointed out that witchcraft explained and excused people's mistakes or incompetence—a failure or mistake blamed on witches allowed a cathartic cleansing of personal responsibility. Witches served a purpose; deviant people served as models to the rest of society to exemplify socially unacceptable behavior. But Demos's explanation that witch-hunts were an integral part of social experience, something that bound the community together—sort of a public works project—does not address the physical symptoms of the sufferers.

For the most part, examinations of the afflicted individuals at Salem have focused on the young women, essentially placing the blame on them instead of exploring an organic cause for their behaviors. Freudian explanations for the goings-on have attributed the activities of the possessed girls to a quest for attention. Their physical manifestations of illness have been explained as being conversion symptoms due to intrapsychic conflict. Their physical expression of psychological conflict is a compromise between unacceptable impulses and the mind's attempt to ignore them. Demos uses the example of Elizabeth

Knapp, whose fits became increasingly severe while strangers gathered to view her behavior. Instead of considering that she was beset by an uncontrollable series of convulsions which were likely worsened by the excited witnesses who refused to leave her alone, he attributes her worsening condition to her exhibitionist tendencies, motivated by strong dependency needs. Elizabeth's writhing on the floor in a fetal position is seen as an oral dependency left over from childhood, causing her regression to infancy.

But "inner conflict" simply does not explain the events at Salem. Neither does the idea that the young afflicted girls were motivated by an erotic attraction to church ministers who were called in to determine whether Satan was involved. The girls' repressed adolescent sexual wishes (one girl was only eleven years old) and their seeking a replacement for absent father figures scarcely explains the toll the disease was taking on victims of both sexes and all ages. No Freudian stone has been left unturned by scholars; even the "genetic reconstruction" of Elizabeth Knapp's past points out that her childhood was filled with unmet needs, her mother's frustration because of an inability to bear additional children, and her father's reputation as a suspected adulterer. "Narcissistic depletion," "psychological transference," "a tendency to fragment which was temporarily neutralized"—the psycho-lingo just about stumbles over itself in attempts to explain the afflicted girls at Salem. But unanswered questions remain: Why the sharp pains in extremities? The hallucinations? The hyperactivity? The periods of calm between sessions of convulsions? Why did other residents swear in court that they had seen marks appear on the arms of the afflicted?

The opinion that the victims were creating their own fits as challenges to authority and quests for fame has shaped most interpretations of what happened in 1692. But would the colonists have strived for public notice and attention? If the afflicted individuals were behaving unusually to garner public notice, why? Did women and men of that era really crave public attention, or would it have put them in awkward, critical, and socially unacceptable situations? How socially redeeming would writhing on the ground "like a hog" and emitting strange noises, "barking like a dog," or "bleating like a calf" be for a destitute young servant girl who hoped to marry above her station? It is difficult to accept that these spectacles, which horrified viewers as well as the participants themselves, were actually a positive experience for the young women. That sort of suspicious activity usually met with social stigma, shunning, or, at the least, brutal whipping from father or master.

Puberty, a time of inner turmoil, is thought to have contributed to the victims acting out through fits, convulsions, and erratic behavior. The victims' inability to eat is explained away as a disorder related to the youthful struggle for individuality: anorexia nervosa. What about the young men who reported symptoms? Freudian interpretation attributes their behavior to rebellion against controlling fathers. How have psycho-social interpretations explained the reason witch trials ended after 1692 in Salem? As communities grew into larger urban units, people no longer knew their neighbors, grudges receded in importance as a factor in social control, and witches were no longer valuable to society. John Demos observes that witchcraft never appeared in cities, and

that it lasted longest in villages far removed from urban influence. That linkage between witchcraft outbreaks and agricultural villages is important when establishing a connection with outbreaks of encephalitis lethargica, which appeared largely in small towns and rural areas in the early twentieth century. Rather than accepting the idea that witchcraft receded because it was no longer useful in a community context, one must examine why epidemics occurred in waves and how particular diseases affected isolated population groups.

The situation in seventeenth-century New England fails psycho-social explanation because too many questions remain unanswered. Not only can we not make a strong case that infantilism, sexual repression, and a struggle for individuality caused the turmoil in Salem, but a psycho-social explanation does not answer why the symptoms, which were so *obviously physical,* appeared with such force and then, in the autumn of 1692, largely disappeared from Salem.

Because the complexity of psychological and social factors connected with interpreting witchcraft is so absorbing, the existence of a physical pathology behind the events at Salem has long been overlooked. Linnda Caporeal, a graduate student in psychology, proposed that ergot, a fungus that appears on rye crops, caused the hallucinogenic poisoning in Salem. Her article appeared in 1976 in *Science* while Americans were trying to understand the LSD drug phenomenon. Hers is one of the few attempts made to link the puzzling occurrences at Salem with biological evidence.

Ergot was identified by a French scientist in 1676, in an explanation of the relation between ergotized rye and bread poisoning. It is a fungus that contains several potent pharmacologic agents, the ergot alkaloids. One of these alkaloids is lysergic acid amide, which has ten percent of the activity of LSD (lysergic acid diethylamide). This sort of substance causes convulsions or gangrenous deterioration of the extremities. Caporeal proposed that an ergot infestation in the Salem area might explain the convulsions attributed to witchcraft. If grain crops had been infected with ergot fungus during the 1692 rainy season and later stored away, the fungus might have grown in the storage area and spread to the entire crop. When it was distributed randomly among friends and villagers, they would have become affected by the poisoned grain.

Caporeal's innovative thinking was challenged by psychologists Nicholas Spanos and Jack Gottlieb, who were quick to point out that her theory did not explain why, if food poisoning were to blame, families who ate from the same source of grain were not affected. And infants were afflicted who may not have been eating bread grains. Historically, epidemics of ergotism have appeared in areas where there was a severe vitamin A deficiency in the diet. Salem residents had plenty of milk and seafood available; they certainly did not suffer from vitamin A deficiency. Ergotism also involves extensive vomiting and diarrhea, symptoms not found in the Salem cases. A hearty appetite, almost ravenous, follows ergotism; in New England the afflicted wasted away from either an inability to eat or a lack of interest in it. The sudden onset of the Salem symptoms in late winter and early spring would be hard to trace to months of eating contaminated grain. Ergot was never seriously considered as the cause of problems at Salem, even by the colonists themselves who knew what ergotism

was (it had been identified sixteen years earlier) and were trying desperately to discover the source of their problems.

An explanation that satisfies many of the unanswered questions about the events at Salem is that the symptoms reported by the afflicted New Englanders and their families in the seventeenth century were the result of an unrecognized epidemic of encephalitis. Comparisons may be made between the afflictions reported at Salem (as well as the rest of seventeenth-century New England) and the encephalitis lethargica pandemic of the early twentieth century. This partial list, created from the literature, reveals how similar the two epidemics were, in spite of the variation in medical terms of the day:

1692 SALEM	1916–1930s ENCEPHALITIS EPIDEMIC
fits	convulsions
spectral visions	hallucinations
mental "distraction"	psychoses
pinching, pricking	myoclonus of small muscle bundles on skin surface
"bites"	erythmata on skin surface, capillary hemorrhaging
eyes twisted	oculogyric crises: gaze fixed upward, downward, or to the side
inability to walk	paresis: partial paralysis
neck twisted	torticollis: spasm of neck muscles forces head to one side, spasms affect trunk and neck
repeating nonsense words	palilalia: repetition of one's own words

In both times, most of the afflicted were young women or children; the children were hit hardest, several dying in their cradles from violent fits. The afflictions appeared in late winter and early spring and receded with the heat of summer. . . . Von Economo noted that most encephalitis lethargica epidemics had historically shown the greatest number of acute cases occurring in the first quarter of the year, from midwinter to the beginning of spring. The "pricking and pinching" repeated so often in the court records at Salem can be explained by the way patients' skin surfaces exhibited twitches—quick, short, fluttering sequences of contractions of muscle bundles. Cold temperatures cause them to increase in number and spread over the body. Twitches were seldom absent in cases of hyperkinetic encephalitis lethargica during the 1920s epidemic. The skin surface also exhibited a peculiar disturbance in which red areas appeared due to dilation and congestion of the capillaries. Red marks that bleed through the skin's surface would explain the many references in court documents to suspected bites made by witches.

Examining the colonists' complaints in the trial papers uncovers many other symptom similarities: inability to walk, terrifying hallucinations, sore throat, or choking—the list goes on and on. . . .

Ultimately the witch-hunts—or at least the complaints of afflictions—ended in Salem in the autumn of 1692, and there were no more complaints the following year. An arboviral encephalitis epidemic would have receded in the fall, when the air and water grew too cold for mosquitoes' survival. By the time spring arrived, the situation had altered, and the epidemic appeared to fade. Encephalitis epidemics, like many other contagious epidemics, often recede for years—sometimes decades—between recrudescence periods. Either the agents mutate and disappear to return years later, or they run out of susceptible hosts—the only ones left are those who have an immunity to the infection.

Ticks too might have been to blame. Just as in the spread of tick-borne encephalitis throughout the northern region of Russia, ticks played a part in spreading the disease across the virgin forests of temperate North America. Peasants who worked in the forest as woodcutters were affected in Russia during the epidemic of the 1950s; in Salem, in the seventeenth century, residents also worked as woodcutters and loggers. The Putnam family, in particular, were engaged in logging and woodcutting (and in fact were involved in arguments over whether they were taking logs from property they did not own). If the Putnams brought ticks bearing disease into their homes on their bodies or clothing, other members might have been affected. Reverend Parris's household could have been infected from the large amount of firewood he negotiated to supply his family, as part of his salary. Because they were his strongest supporters, the Putnams would likely have been the ones to cut and deliver the wood to his doorstep. Firewood, in the form of large logs used in colonial fireplaces, might have harbored wood ticks that had gone into winter hibernation but came out of the bark when logs were stored beside the hearth in a warm New England house. Infestations of ticks and body lice were common in colonial homes where laundry could not be done during the winter (nowhere to dry the wet clothing) and baths were rarely taken.

Another disease that results in encephalitis is endemic to the New England area even today. Lyme disease is a contemporary problem in New England, and there is little reason to think that it would have been absent from the area in colonial times. It is an infectious disease caused by bacteria spread by deer ticks. Both people and animals can be infected with Lyme disease. It is a serious but not fatal disease today. Found throughout the United States, it is most common along the East Coast, the Great Lakes, and the Pacific Northwest. In Massachusetts, deer ticks are most often found along the coast and are common in the Connecticut River Valley. The disease most likely spreads between late May and early autumn, when ticks are active. So tiny that the larvae are no bigger than a pencil point, the ticks live for two years, during which they can infect wild and domestic animals as well as people.

Symptoms of Lyme disease include a rash where the tick was attached—which may appear anywhere between three days and a month after the innocuous bite. Some times the rash looks like a small red doughnut. Other signs

include itching, hives, swollen eyelids, and flulike symptoms such as fever, headache, stiff neck, sore muscles, fatigue, sore throat, and swollen glands. The symptoms go away after a few weeks, but without medical treatment nearly half the infected people will experience the rash again in other places on their bodies. In the later stages, three major areas—the joints, the nervous system, and the heart—may be affected even months after the tick bite. People with Lyme disease can develop late-stage symptoms even if they have never had the rash. About 10 to 20 percent of the people who do not get treatment develop nervous system problems: severe headache, stiff neck, facial paralysis, or cranial nerve palsies, and weakness and/or pain in their hands, arms, feet, or legs. Symptoms may last for weeks, often shifting from mild to severe and back again.

These symptoms are found in the present form of Lyme disease; the disease could likely have mutated over the centuries, because hallucinations and paranoia, along with lethargy, are not found in today's tick-borne version of Lyme disease. Questions and problems arise when connecting Lyme disease to the situations in 1692 or 1920, but it is another factor to consider. Could ticks have been common in Salem? The colonists did not bathe regularly, and they lived close by their domestic animals. Ticks could have wintered inside the home, carried in on firewood. They would have found ample hiding places in the seams of the heavy woolen clothing commonly worn by the colonists.

What about 1920? A common nuisance of that era was the "bedbug," chinch bug, or *Cimex lectularius*. Jar lids filled with arsenic were placed under bedsteads to keep the critters from climbing into bed and feeding on people's blood. Head lice have been common throughout the ages; today's rampant epidemics in schools are nothing to ignore, though scientists reassure us that neither bedbugs nor head lice carry any type of disease. Perhaps they did at one time. Many avenues must be explored, much research must be done. Perhaps we will never know what caused encephalitis lethargica. . . .