

Dancing plagues and mass hysteria

John Waller on how distress and pious fear have led to bizarre outbreaks across the ages

The year was 1374. In dozens of medieval towns scattered along the valley of the River Rhine hundreds of people were seized by an agonising compulsion to dance. Scarcely pausing to rest or eat, they danced for hours or even days in succession. They were victims of one of the strangest afflictions in Western history. Within weeks the mania had engulfed large areas of north-eastern France and the Netherlands, and only after several months did the epidemic subside. In the following century there were only a few isolated outbreaks of compulsive dancing. Then it reappeared, explosively, in the city of Strasbourg in 1518.

Chronicles indicate that it then consumed about 400 men, women and children, causing dozens of deaths (Waller, 2008).

Not long before the Strasbourg dancing epidemic, an equally strange compulsion had gripped a nunnery in the Spanish Netherlands. In 1491 several nuns were 'possessed' by devilish familiars which impelled them to race around like dogs, jump out of trees in imitation of birds or miaow and claw their way up tree trunks in the manner of cats. Such possession epidemics were by no

means confined to nunneries, but nuns were disproportionately affected (Newman, 1998). Over the next 200 years, in nunneries everywhere from Rome to Paris, hundreds were plunged into states of frantic delirium during which they foamed, screamed and convulsed, sexually propositioned exorcists and priests, and confessed to having carnal relations with devils or Christ.

These events may sound wildly improbable, but there is clear documentary evidence that they did in fact happen. The dancing plagues were

independently described by scores of physicians, chroniclers, monks and priests, and for the 1518 outbreak we can even read the panicky municipal orders written by the Strasbourg authorities at the time of the epidemic (Midelfort, 1999; Waller, 2008). Similarly, trial documents and the archives of the inquisition provide copious, in-depth accounts of nuns doing and saying the strangest of things (Sluhovsky, 2002).

Writers then and now have offered various interpretations of these strange and sometimes deadly crises. It has been suggested that the dancing maniacs of 1374 and 1518 were members of a heretical dancing cult. Contemporary observers, however, made clear their view that the dancing was a sickness. Nor did the Church, at a time when heresies were quickly suppressed, believe the dancers to be anything but victims of a terrible affliction, natural or divine. In recent decades a vogue for simple biological explanations has inspired the view that epidemic madneses of the past were caused by the ingestion of ergot, a mould containing psychotropic chemicals (Backman, 1952; Matossian, 1989).

But scholarship in the fields of psychology, history and anthropology provides compelling evidence that the dancing plagues and the possession epidemics of Europe's nunneries were in fact classic instances of a very different phenomenon: mass psychogenic illness.

Altered states

An important clue to the cause of these bizarre outbreaks lies in the fact that they appear to have involved dissociative trance, a condition involving (among other things) a dramatic loss of self-control. It is hard to imagine people dancing for several days, with bruised and bloodied feet, except in an altered state of consciousness. But we also have

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eyewitness evidence that they were not fully conscious. Onlookers spoke of the dancing maniacs of 1374 as wild, frenzied and seeing visions. One noted that while 'they danced their minds were no longer clear' and another spoke of how, having wearied themselves through dancing and jumping, they went 'raging like beasts over the land' (Backman, 1952). The hundreds of possessed nuns described in chronicles, legal records, theological texts or the archives of the Catholic Inquisition were equally subject to dissociative trance (Newman, 1998; Rosen, 1968). Some may have simulated the behaviour of the demoniac as a means of eliciting positive attention (Walker, 1981), but the detailed descriptions of astute and cautious inquisitors leave little doubt that most were genuinely entranced.

"during their possession attacks, dissociating nuns often behaved with alarming lewdness"

How might we explain these epidemics of dissociation? Ergot could have induced hallucinations and convulsions in nuns who ate bread made from contaminated flour, but it is highly unlikely that ergotism would cause remorseless bouts of dancing (Berger, 1931). Nor is there any evidence that what the victims of mass possession ate or drank made any difference. Rather, as explained below, there are very strong indications that fearful and depressed communities were unusually prone to epidemic possession. And given that there is a well-established link between psychological stress and dissociation, this correlation is immediately suggestive of mass psychogenic illness.

Fear and loathing

The years preceding the dancing epidemics were exceptional in their harshness. The 1374 outbreak maps on to the areas most severely affected, earlier in the same year, by one of the worst floods of the century. Chronicles tell of the

waters of the Rhine rising 34 feet, of flood waters pouring over town walls, of homes and market places submerged, and of decomposing horses bobbing along watery streets (Backman, 1952). In the decade before the dancing plague of 1518, famine, sickness and terrible cold caused widespread despair in Strasbourg and its environs (Rapp, 1974). Bread prices reached their highest levels for a generation, thousands of starving farmers and vine growers arrived at the city gates, and old killers like leprosy and the plague were joined by a terrifying new affliction named syphilis. These were intensely traumatic times.

Nuns were protected from many of the indignities of daily life, but nunneries could also become toxic psychological environments. Even in well-managed communities, some nuns were inevitably unhappy. Sisters were often consigned to lives of quiet contemplation in accordance with the wishes of their parents rather than any conspicuous piety on their own part. Once inside the cloisters it was very hard for them to get out. But those who keenly embraced the spiritual life were often the most desperate. Tormented by a feeling of falling short of the exacting standards of holiness imposed by their orders, plenty reflected with terrible fear on the fiery destiny awaiting those impure in mind or deed.

A notable example is that of Jeanne des Anges, Mother Superior of the Loudun nunnery in southern France, who became infatuated with a local priest, Father Grandier, in the year 1627. 'When I did not see him', she later confessed, 'I burned with desire for him.' In consequence, Jeanne felt overwhelming worthlessness and guilt. After weeks of painful penance and introspection, she fell into a dissociative state during which she repeatedly accused Grandier of plotting with Satan to make her lust after him. Within days, several more nuns had

followed suit, all deliriously pointing the finger at the hapless priest. After an investigation by the Inquisition, Grandier was burnt alive (de Certeau, 2000). As in the case of the Loudun nunnery, a deep, guilty longing for human intimacy could trigger collective breakdowns. This is in part why, during their possession attacks, dissociating nuns often behaved with alarming lewdness: lifting their habits, simulating copulation, and giving their demons names such as Dog's Dick, Fornication, even Ash-Coloured Pussy. Guilt and desire could drive a nun to distraction (Sluhovsky, 2002).

The fortitude of many a nun was most severely tested during the evangelical reform movement that swept their communities from the early 1400s. Striving to restore the harsh spiritual codes of earlier centuries, reformers instructed the nuns to consume only the blandest fare, to spurn all vanity, to adopt exacting regimes of abstinence and self-abasement, and to meditate routinely on the evils of Satan and the flames of Hell. Often the younger daughters of nobles or rich burghers, many nuns did not adjust well to tasteless meals, pillow-less beds and evenings bereft of music and conversation. Hence the arrival of reformist Mother Superiors precipitated a significant number of mass possessions. Take, for example, the Ursuline nuns of Auxonne in eastern France who experienced a possession crisis in 1658 after the appointment of the evangelical Barbe Buvée to their nunnery. For several years, distressed and dissociating nuns accused her of being a witch, of killing babies and of being a lesbian. Barbe Buvée was exonerated but judiciously assigned to an alternative nunnery. The possession crisis petered out (Sluhovsky, 2002).

Mass possession also affected secular communities, and here too the role of stress is abundantly clear. The girls whose 'grievous fits' and 'hideous clamors and screeching' set off the Salem witch panic in New England in 1692 were the members of a community rent by factional strife (Demos, 1983). They were

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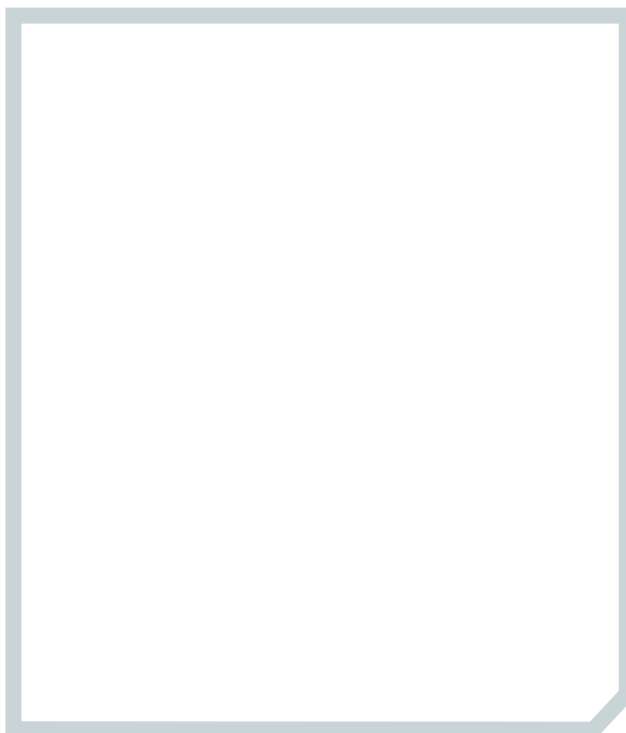
also terrified of attacks by the Native American tribes which had already slaughtered the parents and relatives of several of those at the heart of the witchcraft accusations (Norton, 2003).

Fear and anguish were the common denominators of dancing plagues and possession crises. But this is only part of the story.

Rude devils and cursing saints

Studies of possession cults in hundreds of modern cultures, from Haiti to the Arctic, reveal that people are more likely to experience dissociative trance if they already believe in the possibility of spirit possession (Rouget, 1985). Minds can be prepared, by learning or passive exposure, to shift into altered states. The anthropologist Erika Bourguignon (1991) speaks of an 'environment of belief', the set of accepted ideas about the spirit world that members of communities absorb, thus preparing them later to achieve the possession state. It is not necessary, however, to be formally trained. The dancers of 1374 and 1518 occupied an environment of belief that accepted the threat of divine curse, possession or bewitchment. They didn't intend to enter trance-like states, but their metaphysical beliefs made it possible for them to do so.

Similarly, it is only by taking cultural context seriously that we can explain the striking epidemiological facts that possession crises so often struck religious houses and that men were far less often the victims of mass diabolical possession. The daily lives of nuns were saturated in a mystical supernaturalism, their imaginations vivid with devils, demons, Satanic familiars and wrathful saints. They believed implicitly in the possibility of possession and so made themselves susceptible to it. Evangelical Mother Superiors often made them more vulnerable by encouraging trance and ecstasy; mind-altering forms of worship prepared them for later entering



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involuntary possession states. Moreover, early modern women were imbued with the idea that as the tainted heirs of Eve they were more liable to succumb to Satan, a misogynistic trope that often heightened their suggestibility.

So when one especially distressed nun began to faint, foam, convulse and speak in strange tongues, there was always a chance that the more suggestible of her sisters would begin to experience the same kind of dissociation, convinced that Satan was stalking their cloisters in search of impure souls.

Modern anthropology and psychology also reveal how beliefs and expectations can shape the individual's experience of dissociation. In societies where people are encouraged to enter trance states so as to make contact with a spirit world, they typically behave in ways prescribed by

their cultures (Katz, 1982; Sharp, 1993). We have every reason to think that the victims of dancing plagues and possession epidemics were also acting in accordance with the rich theology of their worlds.

That the dancing plagues were reliant on cultural belief-systems is apparent from the fact that they were concentrated in just those communities where we know there to have been a pre-existing belief in the possibility of dancing curses being sent down from Heaven or Hell. In 1374 the dancers believed that Satan had unleashed an irresistible dance, hence they not only danced interminably, but also begged for divine intercession, hurried to

holy sites, and submitted gladly to exorcism (Backman, 1952). The people of

Strasbourg in 1518 were convinced that a saint called Vitus had unleashed a dancing curse (Martin, 1914; Waller, 2008). And so, having entered the possession state, it seems that they acted according to the conventions of the St Vitus myth: dancing for days on end. The dance turned epidemic, as it had in 1374, because each new victim lent further credibility to the belief in supernatural agency. Indeed, the Strasbourg epidemic exemplifies the awesome power of suggestion: the city authorities ensured that the outbreak got out of control by having the dancers gathered together and left to dance in some of the most public spaces in the city (Waller, 2008).

Theological conventions also conditioned the behaviour of demoniac nuns. This is apparent from the fact that nearly all possession epidemics occurred within a single 300-year period, from

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around 1400 to the early 1700s. The reason is that only during this period did religious writers insist that such events were possible (Newman 1998).

Theologians, inquisitors and exorcists established the rules of mass demonic possession to which dissociating nuns then unconsciously conformed: writhing, foaming, convulsing, dancing, laughing, speaking in tongues and making obscene gestures and propositions. These were shocking but entirely stereotypical performances based on deep-seated beliefs about Satan's depravity drawn from religious writings and from accounts of previous possessions.

For centuries, then, distress and pious fear worked in concert to produce epidemics of dancing and possession.

Body and mind

In 1749 a German nunnery in Würzburg experienced an epidemic of screaming, squirming and trance which led to the beheading of a suspected witch. By this period, however, the dancing plagues had disappeared and possession crises were rarities. The incidence of possession declined with the rise of modern rationalism (Bartholomew, 2001). Thereafter, mass outbreaks of dissociation tended to be confined to harshly managed settings such as factories and schools, and to be triggered by groundless fears of poisoning or exposure to toxic chemicals (see box opposite). For a variety of reasons, even these outbreaks are now uncommon in the Western world.

But the dancing plagues and the experiences of demonic nuns still have something to tell us about human responses to stress. For these events place in bold relief the extraordinary power of context to shape how anguish and fear are expressed. What the historian Edward Shorter calls the 'symptom pool' for psychosomatic illness has varied significantly over time and between cultures (Shorter, 1992), and the changing incidences of conversion disorder, somatoform disorder and dissociative trance are all attributable, at least in part, to shifting norms and expectations (Nandi et al., 1992). Madneses of the past of course tell us much about the worlds that sustained them. But wild epidemics of dancing and possession can also serve as powerful reminders of the instability of many psychiatric conditions.

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Modern hysterias

Even if dancing plagues are things of the past, mass psychogenic illness (MPI) remains a part of the human condition. MPI has been defined as the 'collective occurrence of physical symptoms and related beliefs among two or more persons in the absence of an identifiable pathogen' (Colligan & Murphy, 1982). Simon Wessely (1987) has usefully separated outbreaks of MPI into two different kinds: 'mass anxiety hysteria' and 'mass motor hysteria'.

Mass anxiety hysteria usually involves the sudden expression of intense anxiety in response to a false threat. In Western settings, plausible fears of poisoning or exposure to toxic chemicals have been known to trigger classic stress-reactions such as fainting, nausea, weakness and hyperventilation. In a school in Blackburn in 1965, for instance, as many as 141 pupils were affected by psychogenic dizziness, nausea, spasms and shortness of breath after several girls had publicly fainted (Bartholomew & Wessely, 2002). Unless the initial fear is given credibility by the media or authorities, cases of mass anxiety hysteria seldom last more than a few days.

Mass motor hysteria, in contrast, typically requires a prolonged build-up of psychological tension which then manifests itself in dissociative states, conversion symptoms and other psychomotor abnormalities. These can persist for weeks or months. Such outbreaks are often shaped by the kinds of supernaturalist beliefs that were responsible for the dancing mania and the possession crises of European nunneries. In modern-day Malaysia and Singapore, for example, factory workers are often drawn from rural communities steeped in beliefs about the spirit world. Those who find it hard to adjust to the regimentation of factory life sometimes enter a dissociative state in which they behave in a manner shaped by their culture's understanding of spirit possession. MPI may arise where fellow-workers share the same beliefs and are also experiencing severe psychological strain. These outbreaks are often brought to an end with a religious ritual involving the slaughter of a goat (Phoon, 1982).

In both Western and non-Western settings, mass motor hysteria usually occurs in schools. In 1962, for example, several girls at a mission school near Lake Tanganyika developed a compulsion to laugh and cry by turns. The affliction soon spread to neighbouring populations (Rankin & Philip, 1963). Similar outbreaks of laughing have been recorded in both Zambia and Uganda. In fact, schools in central Africa are especially prone to outbreaks of mass motor hysteria. Late in 2008 several girls in a Tanzanian school responded to the pressure of taking important exams by dissociating: some fainted, while other sobbed, yelled or ran around the school.

In other cases, conversion symptoms predominate. Thus in 2006 around 600 students in an emotionally austere all-girls school in Mexico City developed paralysis and nausea lasting days or weeks. Analogous forms of MPI have been described in European and North American schools. In a school in North Carolina in 2002 a dozen pupils experienced seizures or other paroxysmal episodes over the course of four months (Roach and Langley, 2004). In many such cases, the victims receive extensive medical treatment before a failure to identify a pathogenic cause leads to a diagnosis of MPI.

More properly described as 'mass hysteria' are cases in which groups of people act upon beliefs which gain exaggerated credence in times of social and economic distress. For example, parts of south-east Asia are periodically struck by epidemics of a fear among men and women that their genitals are shrinking into their bodies. 'Koro' is fuelled by a belief in the existence of an evil spirit that causes genital retraction. Death is said to ensue once the penis, nipples or vulva have fully disappeared into the body: hence men have been known to drive pegs through their penises in the attempt to prevent complete retraction (Bartholomew, 2001). A similar phenomenon has been recorded in parts of western Africa where men claim their penises to have been shrunk or stolen through evil magic. Individuals accused of stealing or shrinking genitals are sometimes beaten to death or lynched: at least 14 suspected penis-thieves were killed in Nigeria in 2001 (Dzokoto & Adams, 2005).

Mass anxiety hysteria and mass motor hysteria can be hard to distinguish from the effects of actual exposure to environmental hazards. Experts have therefore identified several features that are indicative of a psychogenic origin for a sudden outbreak of illness symptoms in a group of people. These include the lack of a plausible organic basis, their occurrence in a relatively closed group, and the prior existence of high levels of stress. It is always necessary, however, to test fully for potential toxic or pathogenic exposures. This point is underscored by a case in 1990 when several children at a London primary school fell sick with typical symptoms of MPI: nausea, vomiting and abdominal pain and over-breathing. It looked like a classic case of hysteria. However, it turned out that they were actually suffering from poisoning from pesticides used on cucumbers (Bartholomew, 2001).