Historical Vignette

Possessed by Rhythm: The Mystery of the Medieval Dancing Plagues

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doi: 10.5281/zenodo.17108015.

Introduction

Dancing Plague, choreomania, dancing mania, St. Vitus' dance, and tarantism are some of the many names used to describe the sudden outbreaks of dancing sprees reported in the Middle Ages. Between the 11th and the 16th century, several instances of Dancing Plagues were recorded in Central Europe, especially in areas along the Rhine and Moselle Rivers. The earliest recorded report involves 18 people who spiraled into a dancing mania on Christmas Eve of 1028 outside a church in the German city of Kölbigk. Other later instances include 1247 Erfurt, Germany, and 1278 Utrecht, when the dancing mania of 200 people led to the collapse of a bridge and their eventual death in the waters of the Moselle River. The most well-reported and certain cases of Dancing Plagues happened in western Europe of 1374, and in the city of Strasbourg in 1518 (1, 2).

St. John's dance, 1374. In 1374, during the celebrations of St. John's festival in Aachen, several people formed circles and began dancing uncontrollably for hours until collapsing from exhaustion. The dancing spree gradually spread to neighboring cities of Liege, Maastricht, Ghent, Utrecht, Metz, Trier, and Strasbourg, affecting all people regardless of age and sex. During their dancing mania, people were said to have lost control of their senses, being unaware of their surroundings and haunted by visions and strange emotional states. After collapsing, people complained of pressure and pain, symptoms that were relieved by tightly wrapping them with cloths. Seizures, dyspnea, and depression often preceded the dancing mania. Beak-like shaped masks and red-colored clothes sometimes seemed to trigger or provoke the dancers, even leading to their prohibition in Liege. It took 4 years for the dancing epidemic to finally cease (1, 2, 3, 4).

The Dancing Plague of 1518. The dancing epidemic that hit Strassburg in July of 1518 is very well detailed. It all started with a woman who fell into a dancing mania lasting 4 to 6 days continuously. Within a week, the victims of the dancing spree were 35, a number that surged to over 400 by late August. The symptoms were similar to those found in earlier occasions of dancing mania – involuntary, uncontrollable dancing, accompanied by pain and begging for mercy, that eventually led to exhaustion and sometimes, in people prone to strokes or heart disease, death. Physical contact wasn't necessary for the disease to spread, as just the vision or the sound of the frenzy could inspire more people to follow.

In an attempt to confine the Dancing Plague, authorities constructed a wooden stage and emptied two guildhalls and the outdoor grain market. They thought more dancing was enough to deal with the dancing mania. To this point, they even hired musicians and professional dancers to enhance their dance and keep the affected in a constant day and night movement until their minds and blood were finally free. However, when the first deaths made their appearance among the dancers, the authorities were forced to change strategy. Now, the plague was considered a curse from St. Vitus. Gambling, prostitution, and gaming were banned in order to please the Saint. Furthermore, the dancers were transferred to a church in the Vosges Mountains, where they were given red shoes and guided to a ritual dance around a wooden

carving depicting St. Vitus, Virgin Mary, and Pope Marcellus, as an act of repentance and prayer for divine help. As the chroniclers notice, most dancers stopped dancing and regained control of their bodies (3 , 4, 5).

Imanenjana, Madagascar. In February of 1863, a strange dancing plague broke out in the southwest part of Madagascar. Until March, it had reached the capital and the surrounding areas, affecting hundreds of people. Locals called the disease Imanenjana and the dancers Ramanenjana. Just like the previously described choreomania epidemics, victims were subjected to involuntary dancing movements that lasted for hours until exhaustion or even death from heart failure. During the episode, the dancer appeared to be in an euphoric state of mind, having no control over their senses. Other symptoms included pain, convulsions and seizure-like episodes. As reported by many Western observers, the disease seemed to be highly contagious. In particular, just the sight of a dancer was enough for the people around them to enter the dancing frenzy, often in a way resembling some religious or ritualistic act. The disease seemed to affect mainly people of the lower socioeconomic classes of native Madagascarians. At the time, King Radama II came into power, permitting religious freedom and reopening Madagascar to European influence, in contrast to the strict independence policy of his predecessor. As a result, locals were in a general distress and dissatisfaction, feeling and being threatened by the arbitrariness of the Europeans. Interestingly, no Christians were affected by choreomania, perhaps since the changes were in favor of them or because of their general belief that the dancing mania was a result of demonic possession of the pagan locals. Many of the victims describe a hatred against swine, hats, and black colored clothing, spiking their rage during those episodes. This may reflect symbolic associations. Hats and black clothing possibly representing European authority, while swine were traditionally viewed as unclean in local beliefs, thus triggering that rage (1)

Etiology. Demonic possession_ The earliest guesses regarding the etiology of Dancing Plagues involved demonic possession. In a time marked by profound religious devotion and limited medical knowledge, any strange incident was attributed to the Devil and his demons. Therefore, the spontaneous dancing sprees affecting the population couldn't be an exception. In particular, those possessions were considered a result of invalid baptisms performed by a corrupt clergy. Baptism itself was even regarded as a way of prevention (5).

Tarantism_ Spider bites were considered the etiology in the cases of choreomania occurring in the southern Italian region of Apulia. In the 15th to 17th centuries, several cases of tarantism – the name used in Apulia for choreomania – occurred. At the time, a spike in the number of large spiders was reported because of deforestation and a dry climate. In many cases, a spider bite preceding the dancing mania was reported by the victims. It is possible that spider venom or an unknown pathogen carried by spiders could have induced the disease. However, a spider bite could not be found in the history of all tarantism victims, and no experiment trying to reproduce the spider bite's results bore fruit. It seems more possible that spider bites worked as a trigger of a violent disorder leading to choreomania – a result of the fear and certainty of citizens that, after getting bitten, they will suffer from tarantism. Besides, spider bites were never associated with a Dancing Plague in any of the other cases of Dancing Plague occurring in Central Europe (5, 6, 7, 8).

Ergot poisoning_ Another theory proposed about the etiology of the Dancing Plague was ergot poisoning. Ergot poisoning occurs when rye contaminated with the fungus Claviceps purpura is consumed. Rye was a widespread cultivated crop, very important for the diet of poor citizens in the Middle Ages – the ones mainly affected by the Dancing Plagues. There have been several ergot-induced epidemics throughout history, leading to hallucinations, convulsions, nausea, and itching, often followed by epileptic seizures. Those symptoms seem to fit well with the ones experienced by the Dancing Plague victims. However, gangrene of the limbs, one of the main characteristics of ergotism, was absent in all cases of choreomania. Therefore, dancing

epidemics can't be safely attributed to ergotism epidemics. Furthermore, despite rye being one of the main ingredients in the diet of Central Europeans, it was never really cultivated by Italian farmers to any great extent. As a result, ergot couldn't be the reason behind tarantism (5, 6).

Year	Location	Approx. Number Affected	Key Symptoms	Proposed Etiologies
1028	Kölbigk, Germany	18	Involuntary dancing near a church	Demonic possession, religious beliefs
1247	Erfurt, Germany	Unknown	Uncontrolled dancing, exhaustion	Social stress, mass hysteria
1278	Utrecht, Netherlands	200	Dancing leading to bridge collapse and deaths	Mass psychogenic disorder, stress
1374	Aachen, Germany & neighboring cities	Hundreds	Uncontrollable dancing, loss of senses, pain, dyspnea, depression	Religious festival context (St. John's Day), mass hysteria, social hardship
1518	Strasbourg, France	35 → >400	Continuous dancing for days, exhaustion, sometimes death; begging for mercy	Psychological distress, St. Vitus curse, mass hysteria
15th–17th c.	Apulia, Italy (Tarantism)	Unknown	Involuntary dancing after spider bite, convulsions	Tarantism (spider bite), social belief, psychogenic factors
1863	Imanenjana, Madagascar	Hundreds	Euphoric trance-like dancing, exhaustion, convulsions, rage against certain symbols	Social upheaval, colonial pressures, psychogenic contagion

Table 1: Comparison of proposed etiologies and symptoms for each major outbreak

Curses of Saints_ In the profound religious times of the Middle Ages, plagues were often associated with the wrath of Saints. Saint Vitus, the protector of epileptic patients, was considered responsible for the sporadic outbreaks of choreomania, also called ''St Vitus ' Dance''. This belief arose from the outbreak of two such small epidemics during the celebrations of St. Vitus Day in the 15th century. Some commonly used curses of the time include 'God give you St. Vitus' and 'May St. Vitus come to you', which were believed to condemn the cursed person into a dancing mania. The victims of the 1518 choreomania were eventually brought to a chapel and danced around a painting of St. Vitus as the final treatment option. The Dancing Plague of 1374 also broke out during St. John's Day festivities, attributing the dancing sprees to St. John or the Devil himself. It is likely, that the blind faith and the collective fear of devine wrath among the uneducated, religious population led

to St. Vitus dance outbreaks - triggered by some psychologically fragile individuals, persuaded they

were suffering from a malediction, spiraling into dancing sprees, and gradually dragging a large part of society into their hysteria (5, 6, 9).

Hard times_ Without doubt, the Middle Ages were times of great social adversity. Hunger, deadly plagues, violent crimes, poverty, segregation, unsanitary conditions, and hardship were everyday life problems for the poor citizens of Central Europe. Some years before the 1374 dance epidemic, the Black Death, one of the

most fatal pandemics of human history, tormented Europe, decimating the European population by a quarter. Between the late 15th and early 16th century, Strasbourg was afflicted by successive famines, extreme weather, and economic hardship. Destruction of crops by natural causes was followed by rising taxation and the removal of traditional peasant rights, further pauperizing the poor. By 1516–1517, there was famine, starvation, and mass mortality caused by food shortages and harsh winters, while social tension, failed rebellions, and widespread resentment against the Church and ruling elites plagued the population. Syphilis, smallpox, and bubonic plague epidemics terrorized the citizens. All the above were seen by many as manifestations of divine vengeance. Amid this climate of suffering, fear, and disillusionment, psychological distress deepened, creating fertile ground for mass hysteria and trance-like states, such as the dancing mania of 1518 (6, 9).

Treatment. As Dancing Plagues kept appearing in Medieval Europe, authorities were in a constant search for treatment options. During the 14th and 15th centuries, physicians were not involved with the cure of dancing manias. Priests and magistrates were responsible for dealing with the dancing epidemics, often engaging in exorcisms and other mystical actions. In the 16th century, Paracelsus acknowledged the psychiatric factor behind choreomania, and proposed different therapies depending on the origin of each outbreak. Outbreaks resulting from 'careless spirits and impaired willpower' were treated with rest and isolation, whereas outbreaks originating from natural disorders were treated with pharmacological treatments with agents such as opium, drinkable gold, and ethanol. On the other hand, witchcraft was used for cases when St. Vitus Dance was a result of the dancers' imagination. In particular, wax effigies of the afflicted were crafted, into which, through intense concentration, the patients transferred their thoughts and passions, before casting them into the fire as an act of self-purification. Music, more dancing, and other rituals were also proposed as treatment options during those ages of despair. Music was considered the sole cure for the outbreak of tarantism that occurred in southern Italy in the 17th century (5, 9, 10, 11).

Conclusion

The power of the human brain is magnificent. The psychosomatic symptoms caused by a distressed mental state are common among 21st-century humans. Mental health experts have become very popular in treating headaches, fatigue, dizziness, diarrhea, and other physical issues associated with the stressful everyday routine. It is to be expected that, in the Middle Ages, a time when uncertainty and insecurity were much greater than the ones people experience today, the psychosomatic symptoms experienced by citizens would be much more intense. The Dancing Plagues are considered to be an early example of mass psychogenic illness, a phenomenon where psychological distress manifests as physical symptoms among groups, often fueled by shared anxieties, cultural context, and a lack of alternative explanations. Furthermore, mirror neurons may also play an important role. These specialized brain cells are believed to facilitate imitation and empathy, possibly explaining how the sight of a dancer could subconsciously trigger similar movements in observers, propagating the mania.

Therefore, choreomania as a result of extreme insecurity, fear, and mass hysteria is possibly the best explanation behind the Dancing Manias that plagued Medieval Europe. The human brain, a so powerful organ that it can trick itself into feeling sick and even unstoppably dancing to death, has a lot of well-kept secrets yet to be discovered. However, caution must be exercised as assigning psychiatric labels to historical events involves the risk of retrospective diagnosis, which may impose modern clinical interpretations onto culturally and contextually distinct phenomena.

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