

'Mystery Illness' in Western New York

Is Social Networking Spreading Mass Hysteria?

The recent outbreak of twitching, facial tics, and garbled speech—symptoms of a form of conversion disorder—at a school in Western New York may signal a growing trend in the United States.

During the twentieth century similar outbreaks were recorded in only four schools, yet in the past decade alone this form of psychogenic illness has already appeared in three U.S. schools. We may be witnessing a milestone in the history of psychogenic illness, where the new vectors are the Internet and social media.

ROBERT E. BARTHOLOMEW

Of all our passions, fear weakens judgment most. —Bertrand Russell

A thirteen-year-old schoolgirl exhibits facial tics, trembling, twitching, and difficulty communicating. Classmates soon develop similar symptoms. This outbreak, reported in Basel, Switzerland, in 1904, parallels the one that students at Le Roy Central School in Western New York experienced in 2011–2012. In all, twenty-seven students were affected in the Swiss episode (Zollinger 1906); twelve years earlier in 1892, similar symptoms swept through the same school, affecting twenty pupils. Often the twitching would subside at home only to flare up upon a student's return to the school grounds (Aemmer 1893). In a similar vein, Dave Watson, a parent of one of the affected Le Roy students, observes: "How can you send your child to school perfectly normal and a couple of hours later you're picking her up in this condition?" (Nelson 2012).

The symptoms exhibited by the students in Le Roy and Basel are nothing new; in fact, they recall a similar rash of symptoms that affected a group of girls in 1692 in Salem, Massachusetts Bay Colony. It is the same disorder in a different cultural guise. What is new is the way these outbreaks appear to be spreading. Traditionally, they have affected close-knit students in the same classes or classroom, but in the three recent outbreaks in the United States, the pattern of spread was more dispersed throughout the school. This new trend conspicuously coincides with the rise of the Internet and social networking sites as such Facebook, YouTube, and Twitter.

Historical Perspective

When individuals or groups of people come under significant stress for long periods of time, they may develop strange behaviors and symptoms as a result of the stress. After eliminating organic and environmental causes of the behaviors, scientists and health professionals focus on the social pattern-

ing of these episodes and the role that pent-up stress can play in their development; such stress-induced episodes are diagnosed as conversion disorder. In cases where multiple individuals are affected, the diagnosis may be mass psychogenic illness. Stress disrupts the nerves and neurons that send messages to the muscles and brain. As a result, the body of a stressed individual may undergo temporary bouts of twitching, spasms, and shaking. Sometimes affected individuals exhibit trance-like states and amnesia.

While the onset of symptoms may be gradual, it usually takes weeks or months for the anxiety to subside, the nerves to settle down and function normally again, and the symptoms to disappear (Bartholomew and Wessely 2002). In some individual cases of conversion disorder, the patient disputes the diagnosis; in the case of a student, for example, where neither parents nor the public will accept a psychological cause for the symptoms, the symptoms can spread to other students and endure for years. One outbreak affecting thirty-six students at an Islamic school in Alor Star, Malaysia, during the mid-1980s endured five years in a waxing, waning fashion. The episode, which included twitching, shaking, and "spirit possession," only subsided permanently after the former prime minister intervened and had the affected girls transferred to a more liberal school (Bartholomew 2000).

Such outbreaks most commonly occur in schools and factories where close-knit groups exist in restricted, stressful environments that are not easy to escape. Though factory workers can quit their jobs and students can walk out of school, doing so comes at a high price. Between the nineteenth and early twentieth centuries, outbreaks of twitching, shaking, convulsions, fainting spells, and trance states were common in European schools, especially in France, Germany, Switzerland, and Austria. At Gross-tinz, Germany, between June and October 1892, hand tremors, trance states, and amnesia struck twenty

students (Hirt 1893), while arm and hand tremors forced a school in Chemnitz, Germany, to cancel its writing classes in 1906 (Schoedel 1906). The schools involved were always those with high performance standards that placed significant amounts of pressure on the affected students over an extended period of time. The German cases seem to have been triggered by the implementation of tedious, monotonous writing classes.

Two Types of Conversion Disorder

British psychiatrist Simon Wessely (1987) has identified two main types of collective conversion disorder, or mass psychogenic illness. The most prevalent type in Western countries is triggered by the sudden exposure to a stressful agent, most often a foul odor that is believed to be toxic. Symptoms typically include fainting, dizziness, headaches, and hyperventilation, with most episodes lasting less than twenty-four hours and victims recovering rapidly with encouragement and support. In cases where a harmful agent is believed to remain on the school grounds, relapses may occur. Outbreaks of this type became common beginning in the mid-twentieth century, coinciding with the rise of the environmental movement and concern over the contamination of food, air, and water.

A second rarer form of conversion disorder is triggered by long-term stress that disrupts the nerves and neurons that send messages to the muscles and brain. Sometimes referred to as motor hysteria, this second type of conversion disorder features outbreaks of twitching, shaking, difficulty in walking and speaking, seizures, and trance states, all of which appear slowly over a period of weeks or months. Many cases take weeks or months to subside, too—and only after the stress has been reduced or eliminated.

Outbreaks of mass psychogenic illness affecting motor function are common, and dozens of cases are reported each year. Most of these cases are confined to Africa and Asia, where symptoms often involve collective spirit possession triggered by a belief in witches, demons, and ghosts; twitching and the blurt-ing out of unintelligible words or phrases are also common (Bartholomew and Sirois 1996). These cases are rare events in Western countries, yet many of the few recent cases evidence anxiety generated by interpersonal conflict.

In 1939, a twitching epidemic broke out among a group of girls at a high school in Bellevue, Louisiana. The first girl, a poor dancer who feared her boyfriend would leave her, began to twitch and was recused from dance classes. Investigators theorized that the symptoms spread to six other girls over the next several weeks because of the attention that was given to the first victim, including increased affection from her boyfriend (Schuler and Parenton 1943).

In 1962, a series of blackout spells affected an African American school in Louisiana where a sig-

nificant number of students were sexually active. The symptoms started after rumors that authorities were going to administer pregnancy tests, with offenders to be transferred to reform school, began to circulate among the students (Knight et al. 1965). The rumors were unfounded, but in cases of mass psychogenic illness perception is everything.

When several girls in Mount Pleasant, Mississippi, began to act strangely in April 1976, school officials suspected drug use, and narcotics agents swarmed the building after fifteen students fell to the ground “writhing and kicking before passing out” (“Fainting Spells” 1976). Police found the girls were drug-free and concluded that hysteria was the culprit. Many students and parents blamed voodoo. The girls would suddenly fall to the floor, kicking and screaming, “Don’t let it get me!” or “Get it off!” before passing out. Attacks lasted up to fifteen minutes. The trigger was identified as a schoolgirl rivalry over the affections of a boy. One group of girls said that a jealous classmate had put a voodoo hex on them. The fear of magic spells spread quickly through the group after the first few girls suffered fits, which only confirmed their classmates’ suspicions of sorcery and fueled their own fears that they would be next.



Le Roy Junior/Senior High School senior Thera Sanchez speaks on the *Today* show in New York. Sanchez said she was fine until she woke up one day and began stuttering. She said symptoms worsened to the point she couldn’t even attend class. She said she’s had some psychological counseling, which she says increased her stress but has not resolved whatever is causing her condition. “I want an answer. A straight answer,” she said on the show. (AP Photo/NBC News/TODAY)

Twenty-First Century Outbreaks—a New Trend

In 2002, a mysterious malady swept through a high school in rural North Carolina. Ten girls developed seizures at the start of the new school year along with fainting, headaches, lightheadedness, muscle twitching and jerking, tingling, and numbness. The school nurse noted that the fits were unlike any epileptic seizures that she had ever seen. When she placed smelling salts near the noses of a couple of the girls, they cringed, while the mothers of two girls said that when their daughters began to have fits they “could ‘talk her out of it’ as the episode started to develop” (Roach and Langley 2004, 1270). There was another oddity: the malady rarely occurred in class but struck students in the hallway between classes, in the cafeteria, or in the schoolyard during recess.

The first stricken was a cheerleader, and the fear of “catching” her seizure may have made her fellow cheerleaders and other classmates nervous, triggering their blackout spells. It may have also been some kind of identification with a school role model, as four others who were affected were either cheerleaders or former cheerleaders. This case is unusual in the scientific literature, for three of the students were

eleventh-graders, three were tenth-graders, and four were in the ninth grade. Historically, outbreaks of psychogenic illness in schools occur among students who share classrooms, but in this case just two were in the same class. It took four months for the symptoms to subside. Neurological exams confirmed that the seizures were psychogenic.

In 2007, an epidemic of twitching limbs, headaches, and dizziness were reported at William Byrd High School in Virginia (Harrison 2007). At least nine girls and one female teacher were affected. Media reports indicate that the students did not all share a common denominator, such as being from the same classroom. The outbreak occurred amid a spate of public health concerns for the Roanoke County Public Schools, including an asbestos scare, warnings about a drug-resistant *Staphylococcus* (Golden Staph) infection that was blamed for the death of an area resident, and concern over the recent mass shooting at Virginia Tech. After conducting a battery of tests, the Virginia State Health Department officially listed the cause as psychogenic.

Fear 101—the Le Roy Affair

In 2012, another outbreak of motor conversion disorder was reported among students at Le Roy Central School in Western New York. By early February the total number of affected students had reached fifteen, including one boy. What makes the case unusual is that based on media reports, the symptoms were not confined to one class or group but were scattered throughout the school. The media first brought attention to the “mystery illness” in 2011. Naturally parents and community members were concerned because the symptoms were dramatic: facial tics, twitching muscles, and unintelligible verbal outbursts that resembled Tourette syndrome. Some of the girls could not complete a single sentence without severely garbling her words.

Given that Le Roy was the site of a chemical spill resulting from a train derailment in 1970, exposure to toxins became an immediate theory behind the cause of the outbreak. Fox News medical consultant Marc Siegel, MD, said he was almost certain the symptoms were the result of PANDAS, an illness caused by strep infections (see www.youtube.com/watch?v=eOSJs3aOT1E&feature=related). Other causes were posited: Lyme disease, pesticides, electromagnetic fields, government experiments, and magnesium deficiency. There seemed no end to the list of possible causes.

The New York State Health Department tried to allay the public’s fears by announcing in early January 2012 that they had eliminated environmental and organic causes. They even claimed to have identified the cause of the outbreak but said



Le Roy Junior/Senior High School, the location of the recent outbreak of mass psychogenic illness.

they could not disclose it publicly due to medical privacy laws. Their cryptic announcement only served to generate further anxiety among the public.

In early January 2012, a Buffalo-area neurologist, Laszlo Mechtler, MD, who was treating many of the girls, revealed the Health Department's diagnosis: conversion disorder, formerly termed "mass hysteria." An outcry arose among the girls' parents who did not want to accept a psychological cause behind the girls' physical symptoms. Presumably, their parents' outcry created more stress for the affected students.

The New York State Health Department contributed to the fear surrounding the illness by withholding the diagnosis, generating undue alarm and public suspicion. The Department's position that privacy issues prevented their release of the diagnosis generated so much public anxiety that it transformed the case into a public health issue in which the rights of the public to know outweighed the privacy rights of a small group of individuals. But it is clear that the Health Department was correct in its diagnosis: not many diseases or toxic agents almost exclusively affect young girls. If exposure to toxins in the area near the school caused the symptoms, as many locals and other professionals suggested, why were teachers and maintenance staff who had been present at the school for decades or parents not affected? The way in which the cases spread from one student to another, combined with the elimination of environmental and organic causes, points to conversion disorder as the logical diagnosis.

Mass Hysteria and the Social Network

The Le Roy case is significant in that it is the first vigorously disputed case of conversion disorder to occur in the United States during this social networking era. People can view the girls on YouTube, follow the latest events on Twitter, and exchange Facebook links related to the case. The case is likely to endure, not just because of the toxic dumpsites located in Western New York but also because the involvement of high-profile people like Erin Brockovich has brought even more media attention to the situation. There's another reason behind the persistence of this case: we may be witnessing a shift in the history of psychogenic illness in which the primary agents of spread are the Internet, media, and social networking sites.

Australian expert on conversion disorder Paul Cropper believes that mass psychogenic illness can act as a force for instant social networking. He observes that the Le Roy girls may not have known each other well, but they "may have unknowingly shared the fact that they felt 'invisible,' excluded, neglected (if only in a minor way), stressed, etc., but once Case 1 arrives it becomes a public invitation for all the others to join this exclusive club or protest—the tic sufferers." Cropper believes that the attention the case has drawn

to the girls subconsciously underscores their status as special, different, and suddenly "visible" (Cropper 2012).

Clearly the Health Department's failure to render its diagnosis public has eroded its credibility and fuelled the public's suspicion, ensuring that this issue will continue to consume public and private resources and generate needless anxiety. With disgruntled parents contacting the likes of Erin Brockovich, who is now searching toxic dump sites for the "real" cause behind the outbreak, this episode will haunt the New York State Health Department for years to come. Scientists will publish journal articles about it. Residents will write books on it. Allow me to suggest a title: *The "Mystery Illness" in Western New York: How Not to Handle a Case of Mass Psychogenic Illness.* ■

References

- Aemmer, Fritz. 1893. *Eine Schulepidemie von Tremor Hystericus* [A school epidemic of hysterical tremor]. Inaugural dissertation, Basel.
- Bartholomew, Robert E. 2000. *Exotic Deviance*. Boulder, Colorado: University of Colorado Press.
- Bartholomew, Robert E., and Francois Sirois. 1996. Epidemic hysteria in schools: An international and historical overview. *Educational Studies* 22(3): 285–311.
- Bartholomew, Robert E., and Simon Wessely. 2002. Protean nature of mass sociogenic illness: From possessed nuns to chemical and biological terrorism fears. *The British Journal of Psychiatry* 180: 300–306.
- Cropper, Paul. 2012. Personal communication, January 24.
- Fainting spells making school nervous. 1976. *Associated Press* (April 10).
- Harrison, David. 2007. Expert: Mystery illness is stress. *The Roanoke Times* (November 18).
- Hirt, L. 1893. Eine Epidemie von Hysterischen Krampfen in einer Schleisichen Dorfschule [An epidemic of hysterical cramp in a village school in Schleisichen]. *Zeitschrift für Schulgesundheitspflege* 6: 225–29. (Summary of an article by L. Hirt in the *Berliner Klinische Wochenschrift*).
- Knight, J.A., T.I. Friedman, and J. Sulianti. 1965. Epidemic hysteria: A field study. *American Journal of Public Health* 55: 858–65.
- Nelson, Sara C. 2012. Erin Brockovich investigates mystery Tourette's illness at Le Roy High School in New York. *Huffington Post UK* (February 3).
- Roach, E. Steven, and Ricky L. Langley. 2004. Episodic neurological dysfunction due to mass hysteria. *Archives of Neurology* 61(8) (August): 1269–72.
- Schoedel, Johannes. 1906. Über Induzierte Krankheiten [On induced illness]. *Jahrbuch für Kinderheilkunde* 14: 521–28.
- Schuler, E.A., and V.J. Parenton. 1943. A recent epidemic of hysteria in a Louisiana high school. *Journal of Social Psychology* 17: 221–35.
- Wessely, Simon. 1987. Mass hysteria: Two syndromes? *Psychological Medicine* 17: 109–20.
- Zollinger, E. 1906. Über die Padagogische Behandlung des Nervösen Zitterns der Schulkinder [On the educational treatment of nervous trembling in school children]. *Jahrbuch der Schweiz Gesellschaft für Schulgesundheitspflege* 7: 20–47.



Robert Bartholomew teaches in the Department of History at Botany College in Auckland, New Zealand. He is the author of *The Martians Have Landed! A History of Media-Driven Panics and Hoaxes* (with Benjamin Radford) and *Outbreak! The Encyclopedia of Extraordinary Social Behavior* (with Hilary Evans). He can be reached at rebartholomew@yahoo.com.