

Marching bands and mass hysteria

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A psychological look at the 'Mansfield Sunday' syndrome.

On Sunday 13 July, 280 children at a jazz band contest held near Mansfield collapsed in rapid succession and were taken to hospital. Most of them recovered rapidly, though seven were kept in hospital overnight. The hospital described the symptoms as being consistent with reactions to fumes, and subsequently many other explanations were proposed. These ranged from high frequency radio waves to mass hysteria.

A striking feature was the speed with which everything happened. An eye-witness said that she "had never seen anything like it—some of the kids were catching their friends as they fell, and then they were falling themselves. No one could understand what was happening. It looked just like a battlefield with bodies everywhere." Other symptoms that appeared were: shaking, nausea, vomiting, running eyes, sore throats, and a metallic taste in the mouth.

Extra nurses and off-duty policemen were brought in, and investigations were begun by environmental health officers, an agricultural inspector and an official from the Forestry Commission. Food poisoning was initially incriminated, and an ice-cream salesman was mobbed by angry parents. The epidemic attracted prominent coverage on television, became front-page news, and prompted the writing of this article.

The cause of the outbreak is not certain. But from descriptions of similar occurrences in the past, it is unlikely that a physical cause will be found. It will probably come to be seen as yet another manifestation of mass hysteria.

Epidemics of psychic reactions have been recorded since biblical times in a wide variety of cultures, and they have taken many forms. The most celebrated were those described by J. F. C. Hecker in his book, *Epidemics of the Middle Ages*. This contains fascinating accounts of the dancing manias that swept through Europe after the Black Death, when people danced, screamed, foamed at the mouth and leapt into the air doing the dance of St Vitus. During this period also, there was the Flagellant movement, in which people publicly scourged themselves in European cities.

In the 18th century an epidemic in which nuns mewed in unity for several hours at a time, occurred in a French convent. This ended only when they were threatened with being whipped. There was also a biting mania on the continent at around this time, while an epidemic of hysterical behaviour occurred in a Lancashire cotton mill in Hodden Bridge. Mill girls were in convulsions for hours on end, and had to be prevented from tearing their hair and hitting

their heads on the walls and floor. The outbreak began after a mouse had been put in the bosom of one of the girls.

In more recent years, many reports of epidemics of hysterical reactions have appeared in the medical literature. They have come from the United Kingdom, the United States, and from places as far afield as Japan, Singapore, Malaysia, Ghana, Uganda and Tanzania.

A wide range of symptoms have been recorded in these epidemics. They include weakness, sweating, trembling, crying, itching, headaches, sore throat or eyes, nausea, pain in the abdomen or limbs, over-breathing leading to muscle spasms, trance-like states, fainting and collapsing. In some cultures screaming and laughing have been reported. And from the Far East epidemics of the culture-bound syndrome, *koro*, have been reported. In this, the subject believes that his penis will disappear into his abdomen, with a fatal outcome.

In 1945, the mid-western American community of Mattoon was seized by the belief that a phantom anaesthetist was prowling their town and raping their women. Vigilante patrols were set up, until it became apparent that the town had been infected by a rumour. In 1954, over a three-day

period, the police in Seattle received reports of 3,000 occurrences of car windscreen pitting. This was attributed to meteoric dust, sandfly eggs and radioactive fall-out. It was eventually recognised that the pitting was no more than normal windscreen damage; but this had been perceived, in a pre-determined way, as abnormal.

Previous episodes of mass hysteria in marching bands have also been reported, both in the United Kingdom and in the United States. In one account, eight girls felt unwell, with numbness of the hands and abdominal pain, while they were performing at a basketball match. It was an extremely hot day; and they had travelled some distance by bus, wearing heavy woollen uniforms. During the journey one girl had been retching and one had fainted. At first, the epidemic was thought to be due to food poisoning, but mass hysteria was later accepted as the explanation. In 1973, in Alabama, 57 members of a high school band were affected by dizziness, weakness, headache and nausea at a football game. Heat, travel and excessive clothing again seemed to be important factors.

During the same years in England, a major epidemic was reported by H. C. T. Smith and E. J. Eastham in the *Lancet*. This outbreak occurred among players at a juvenile jazz band competition in Northumberland. It was similar to the one in Mansfield: 130 victims, mostly girls, had nausea, abdominal pain, headaches and dizziness. It was notable that no local children or adults were affected, and medical and environmental investigations were negative.

The more recently published descriptions of epidemics have shown that most victims have been adolescent or pre-adolescent girls. The epidemics are usually explosive at the



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onset, but last for only a few days.

The beliefs and reactions of the principal participants in an outbreak are important in understanding its nature. You need to take account of the victims, the observers and the mass media. The development of illness among the initial "index" cases, under conditions of stress in a pre-disposed population, leads to the rapid development of rumour, and the expectation that something is going to happen. The ensuing anxiety can give rise to vague symptoms. The perception and labelling of symptoms may be influenced by the prevailing mood. They can easily be seen as manifestations of illness.

Sometimes, in fact, epidemics of hysteria follow outbreaks of serious physical illness. In 1965 in Blackburn, for example, an epidemic of over-breathing, leading to pins-and-needles and muscle spasms, took place soon after an outbreak of polio in the town.

In any large group of people, some will have hidden medical illnesses. Once investigations are carried out, these may be uncovered. (Blood was found in the urine of some of the children in the Mansfield epidemic, and illnesses were discovered in two babies.) But it is wrong to see these as the cause of the outbreaks.

Once an epidemic starts, much anxiety is generated. When the cause is unknown, people resort to primitive explanations, or claim that the outbreak is due to a mysterious illness which baffles medical science. The arrival of ambulancemen, policemen, firemen, and TV and newspaper reporters, confirms the view that the incident is serious.

Explanations depend very much on the level of sophistication and knowledge of the observer, as well as on any commitment to a particular concept of illness. Among the general public in the west, infections,

allergies, insect bites, weedkillers, gas, radio waves and radiation have all been incriminated at some time in the past. Water supplies, heating and ventilation systems have been seen as the means of transmission. Among less sophisticated peoples, possession by evil spirits is not uncommonly blamed. Medical investigators tend to approach epidemics with the expectation of finding an infectious cause.

In the Mansfield outbreak, food poisoning was suspected; but it was pointed out that many of the people had brought their own food, and that food poisoning could not have occurred so rapidly. The possibility of infection in the water supply was investigated—but again with negative results. High-frequency radio waves, infections, and the exertion of playing jazz, were all considered, but not finally favoured. The suggestion that crop spraying was to blame was discarded when it was noted that the area had not been sprayed for 20 years. The fire service rejected the idea that fumes from an industrial fire were responsible—the wind was blowing the opposite way.

As the picture became clearer, the head of the Public Health Laboratory in Nottingham stated that, in his view, "a number of children in uniform, on a warm day, were standing to attention under conditions of excitement in bland competition. Not surprisingly, a number of them were overcome by the occasion and the temperature. As a result, there was a domino effect." But according to a Weather Centre, six miles away, the temperature on the afternoon of 13 July was 62 degrees Fahrenheit—which

The Flagellants (left) show an exaggerated form of the type of hysteria which can affect girls' marching bands.

The one below is from Wales.

would not really seem to be especially hot.

The most controversial outbreak of this kind was undoubtedly that which occurred among nurses at the Royal Free Hospital in London in 1955, and led to the hospital being temporarily closed. At the time it was attributed to an unknown infectious disease. But subsequently C. P. McEvedy and A. W. Beard re-examined the data, in an article in the *British Medical Journal* in 1970. They concluded that epidemic hysteria was a much more likely explanation. Their view was very unpopular among medical and nursing commentators. A special meeting was held at the Royal Society of Medicine in 1978 (with an audience which seems to have been lacking in psychiatrists). Those attending actually held a vote on the cause of the Royal Free epidemic, and concluded that there was insufficient evidence to support the psychological view.

Not only "in the mind"

One of the difficulties people find about accepting a psychological explanation for these phenomenon is that definite criteria may be difficult to obtain. Diagnosis tends to be by inference and exclusion. There is no entirely satisfactory definition of hysteria. For the purpose of this article, we have used it loosely to refer to a range of reactions. In no way should the term be seen as having a derogatory connotation. Given the right circumstances, we are all capable of one or other type of psychic reaction.

Neither should such reactions be seen as being entirely "in the mind." Without that complex bio-chemical and electro-physiological structure that we call a brain, there can be no function, and therefore no functional disturbance. The reactions are "psychogenic": in other words, stress is of major importance in a process that has both psychic and somatic components.

Rational management of outbreaks would demand a clear understanding of the processes at work. Uncertainty about what is happening, and over-dramatisation by the media, may lead to prolongation of the epidemic.

But, on the other hand, a cavalier approach, which regards the symptoms as being all in the mind, may run the danger of overlooking genuine illness. In these cases, full assessment of all the relevant facts needs to be made without delay, so that the necessary reassurance can be given. Where appropriate, prompt segregation of the victims can be carried out.

From the point of view of prevention, knowledge of the circumstances under which epidemics may occur can enable the right actions to be taken. Marching bands seem increasingly popular, especially on working class housing estates. The musical input may vary: but there is nearly always heavy emphasis on smartness of uniforms and precision of drill. The moral pressure on the children to perform well, is very strong. If they knew the psychological background, those who organise marching band competitions might be able to prevent isolated emotional reactions from "infecting" others. And there might be no epidemic.



David Hurry/John Hilleston Agency