

Redefining epidemic hysteria: an example from Sweden

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François Sirois' influential paradigm for diagnosing episodes of epidemic hysteria is discussed. The part of his schema addressing the large diffuse outbreak should be eliminated as it does not possess characteristic features of mass hysteria and overlooks the potential social, cultural, political, ritualistic and institutional patterning of collective behavior. A case study involving the collective delusion of phantom rockets over Sweden during 1946 illustrates the complexities of such episodes.

Key words: epidemic hysteria; cross-cultural study; relativity

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Nearly two decades ago, François Sirois' seminal article on epidemic hysteria first appeared in this journal. It has since become the most influential, widely cited paradigm for explaining a variety of mass hysterias – from spasmodic twitching among Zambian schoolgirls (1) to community delusions of legendary creatures in the rural United States (2). Sirois (3) taxonomizes episodes into 5 broad categories, from the explosive type, typically appearing in small institutionalized social networks, to large diffuse outbreaks in which false rumors and beliefs overwhelm a community. He considers the phenomena to be a form of socially shared psychopathology, a position maintained in subsequent writings (4, 5). In reviewing the epidemic hysteria literature, he assumes that most reports describe a homogeneous phenomenon under different labels, with historical and geographic differences in the medical and cultural contexts accounting for the variance in descriptions and nomenclature (3).

Sirois' 5-part classification system is etic in nature, viewing mass hysteria as a stress-induced mental disorder masked by cultural custom. The use of this paradigm has resulted in a variety of diverse and seemingly unrelated social phenomena as fads, Nazism, cargo cults and collective flying saucer sightings being placed under a unitary diagnostic rubric, which reflects the continuing Western psychiatric commitment to a universalist disease model of mental disorder that highlights biological similarity and de-emphasizes or ignores sociocultural variation (6). As a result, many of the behaviors that are currently

described as epidemic hysteria may consist of unfamiliar conduct codes, world-views that differ substantially from those of the investigators, covert political resistance, rituals and institutionalized behaviors or culturally conditioned forms of deviant social roles. Each of these categories promote specific beliefs that can become self-fulfilling.

Without judging the applicability of Sirois' remaining taxonomic categories, the large diffuse outbreak is atypical of historical episodes of epidemic hysteria, given the conspicuous absence of female susceptibility and closed, cohesive social networks that dominate the literature. I will briefly illustrate this concern, in this case the importance of sociocultural context and the role of legitimating institutions of social control, by using an example from contemporary Scandinavian history. The ghost rocket episode of 1946 is typically considered as a case of epidemic hysteria and would be classified under the large diffuse outbreak.

Material and methods

The analysis in this study is based on a survey of Swedish historical sources and 4 northern European newspapers during the period of the episode. All accounts pertaining to the perception of mysterious aerial objects, were collected and reviewed. The newspapers surveyed include *Svenska Dagbladet* and *Morgon-Tidningen* (Sweden), *Berlingske Tidende* (Denmark) and *Morgonbladet* (Norway).

Results

Historical context

Between early May and September 30, 1946, thousands of ghost rockets or phantom missiles were reported across Scandinavia, with most emanating from Sweden, where 997 reports were officially investigated by the Swedish military defense staff (7). This fostered a widespread folk theory that remote-controlled German V-rockets confiscated by the Soviets at the close of the Second World War were being test-fired over Scandinavia. Astronomer Louis Winkler correlates the rocket sightings with geomagnetic comets. "These unique phenomena were caused by a high degree of solar activity at the time and the dispersed orbital streams" of some comets (8). This rare set of astronomical and meteorological circumstances produced spectacular formations of luminous aerial phenomena (8):

The uniqueness of the ghost rocket activity is emphasized by additional preliminary and accompanying phenomena. Scandinavian newspaper accounts of spectacular auroras occurring over Helsinki on February 26 and Stockholm on July 26. The preliminary aurora correlates well with the spray date of Encke on February 25, whereas the July 26 aurora corresponds to the onset of the main ghost rocket activity. Evidently, earth encountered a wall of solar-comet mixture in space around July 25 and 26, which simultaneously produced meteors, auroras, and UFOs.

While initial luminous aerial phenomena sightings "disturbed" residents (9), no mention is given of the possibility that any of the objects were of a hostile or foreign power origin. However, by May 24, earlier reports of a "celestial phenomenon" were interpreted as possible "experiments with secret weapons" (10). By July 10, two of Sweden's largest newspapers (*Morgon-Tidningen* and *Svenska Dagbladet*) initiated almost daily coverage of the mysterious aerial phenomena. On July 11, following hundreds of sightings the previous night, both newspapers began describing the ambiguous, almost exclusively nocturnal aerial perceptions as radio bombs. Meteors and aurora-like events reported during previous months were now being reinterpreted on a massive scale and reported in newspapers as potentially destructive products of a war that ended on May 7 of the previous year (11–21). Various foreign newspapers also published accounts during this period treating the existence of the ghost bombs as factual (22–24).

The mass observations of phantom bombs reflected a set of assumptions as to what constituted reality for the Swedish people during this particular time and place. The Soviet relationship with northern Europe is characterized by 200 years of conflict, wars and invasion anxieties. The destructive images of German V-rockets deployed near the war's end were vivid and intense in 1946, when the Soviets

were occupying Peenemunde, the former center of German rocket science. Once the populace was conditioned by the press to reinterpret the aerial events within a hostile frame of meaning, newspapers began reinforcing and reflecting this definition of the situation with such witness descriptions as "German V-1's" and "rockets". Such subjective accounts served to reinforce the conviction that luminous aerial phenomena represented V-rockets, providing publicity, legitimacy and institutionalization to the rumors and transforming them into an external fact. The Soviets occupied much of northern Europe during this period. Within this context of long-held fears of Russian invasion in Scandinavia (25, 26), the close Soviet proximity and uncertainty as to how much Scandinavian territory the Soviets would claim in the political uncertainty preceding the war (27), plausible rumors as to potentially hostile Russian intentions were already circulating. Rumors are a natural part of any social structure and are most prominent during ambiguous situations of perceived importance (28) that appear to pose a direct personal threat (29).

Institutional legitimacy

Press speculation that some sightings may represent a "radio bomb" or "rocket projectile" provided a familiar label with which to classify unfamiliar stimuli. By July 10, the defense staff officially initiated high-profile investigations of aerial bomb observations, and all citizens were urged to report sightings to their nearest military unit (30). Such active, widely publicized military involvement and subsequent highly visible inspections of numerous "crash" sites reinforced a plausible belief that the Soviets were test-firing V-rockets over Sweden. According to a declassified memorandum from the Swedish defense staff archives, military representatives conducted first-hand field investigations of at least 28 cases, while 30 "ghost bomb" fragments were obtained and examined by the military from approximately 100 purported crash sites (7). Although the existence of even a single rocket was never subsequently verified, such public investigations and press descriptions thereof served to reinforce the prevailing definition of the situation.

Numerous military authorities made statements that the sightings represented experiments from a potentially hostile enemy (31–33), generating considerable anxiety in the population. The situation was highly ambiguous relative to the rockets' origin, purpose and destructive power. When would these experiments cease? Where would they appear next? The pre-existence of rocket rumors and the presence of luminous aerial phenomena and recent war memories heightened tension and plausibility relative to

the likelihood of the existence of Soviet-fired rockets over Sweden. Nevertheless, no one could be certain if this was the case. In the wake of such uncertainties and the resultant anxiety which it generated, many Swedes attempted to resolve this ambiguous situation by scrutinizing the sky to confirm or deny the rockets' existence. It is under such circumstances that anxiety is reduced by transforming the ambiguous object of potential fear into a specific and absolute threat, making the situation more predictable (34).

Once the rockets' existence became widely accepted, various past and concurrent events and circumstances that would have ordinarily been viewed as prosaic were reinterpreted relative to this new meaning. In at least two separate instances, fires with no obvious cause were attributed to phantom rockets. The first incident occurring in the eastern coastal city of Sundsvall involving a farmstead henhouse which a housewife heard explode, then witness perish in flames. "Since a 'ghost bomb' was observed yesterday over the area, there has been no other explanation available than that one of them fell down on the building" (35). A subsequent investigation determined the cause as a blasting cap and nitrolite cartridge (36). Concurrently, a major fire in the Svartvike sulfite factory was widely attributed to a ghost bomb, despite the police finding nothing to specifically support the rocket theory (37). In Jämtland, the mysterious death of 3 cows was attributed to poisonous material carried by a rocket projectile (38). The crash of a Swedish warplane at Vaggeryd prompted intense press speculation of a space rocket collision. An inquiry commission into the incident later dismissed this theory (39).

Throughout the episode, various prosaic, ambiguous objects and markings situated in the vicinity of recent sightings became the subject of intense speculation and scrutiny relative to the assumption that rockets were traversing the Swedish skies. A "pit in the ground" in central Sweden was investigated by defense specialists on the assumption that it was a "ghost bomb mark" (40). A farmer in southern Sweden told of discovering a rocket projectile embedded 25 to 30 cm into the ground in a remote region of Blekinge on August 5. After attracting the attention of police and military officials, it was subsequently identified as a dislodged airplane antenna (41, 42). In mid-August, a strange metal object was discovered at the location where a space projectile reportedly fell. A military expert was rushed to the site, observing that "it amounted to a couple of copper objects, which partly seemed old, partly lacked marks after the fall to the ground, wherefore neither in this case is there any reason to suppose that they can be components of a space projectile" (43).

Discussion

The large diffuse outbreak category isolates behavior from its social, cultural, political and institutionalized complexity, reducing heterogeneous human potentialities into homogeneous psychological or psychiatric typifications. A preponderance of female or adolescent participants in such outbreaks and a constellation of psychogenic symptoms that typify the other categories of epidemic hysteria within Sirois' schema are conspicuously absent (44–54). The primary symptoms of each of these cases are anxiety and the physiological consequences thereof (palpitations, nervousness, sweating and fear). Even the famous case of the phantom prowler of Mattoon, Illinois (55) primarily affected women because the media initially defined them as the perceived targets (49) and involved ambiguous symptoms such as coughing, nausea and sleepiness. Sirois regards East African running manias as examples of diffuse outbreaks (56–61), yet these episodes involved large numbers of both men and women, with the predominant symptoms (disobedience to authority, running, destructiveness, violence and laughing) resulting in missionary schools being closed; this appears more closely related to political resistance than mental disorder.

The large diffuse outbreak category was primarily devised to account for the appearance of episodes of dancing mania and Tarantism in Europe during the Middle Ages, and the various subsequent witch manias. However, contrary to popular belief, women were not overly represented in Tarantism epidemics (62) which were pandemic (63) and highly ritualized (64), providing an opportunity for pagans to worship in a Christianized society with impunity (65). Further, many dancing mania participants were religious pilgrims seeking divine protection or cures (62). The preponderance of women was by no means overwhelming, the pattern of which is accountable by other factors, such as an outlet for subordinated women to participate in ordinarily proscribed behaviors. Many participated out of loneliness (65) and for sexual gratification, curiosity and physical stimulation (66). Some were threatened with violence if they did not join in (67). Many in the dance swarms were parents searching for their children (68), and others joined in for adventure and to partake in free food (62). Further, dancing mania and Tarantism symptoms (such as chest pain, shortness of breath, fainting, tremor and hallucinations) are expectable from a portion of any large population engaging in extensive periods of fasting, religious excitement and sporadic, frenzied dancing.

Large diffuse outbreaks of seemingly strange beliefs as the infamous Martian invasion panic (44), mutilation scares (45, 52), prosaic windshield pitting

(46), Virgin Mary visions (47, 48) and perceptions of mysterious aerial objects (49, 50) are often viewed as irrational. However, since rationality does not necessarily depend on objective reality but social circumstances surrounding the formation of seemingly bizarre beliefs, these large diffuse delusions are more accurately described as nonrational. In this sense, they involve plausible social realities that attain potency within a specific sociocultural setting, and are thus no more irrational than a group of children believing in Santa Claus or other widespread social realities: Islam, Christianity or astrology. They may be false, but they do not deserve to be categorized as a mental or behavioral disorder or the result of a dysfunctional proper social order anymore than emotionalism accompanying religious revivals during the past century deserved the typification within mainstream psychiatry as “religious insanity” (69).

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