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Sunday, August 14, 2016

(Plenary)

9:45 - 10:10 Social Contagion

CME Conference
Christchurch Aug 2016

Social contagion

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THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

**MEDICAL AND
HEALTH SCIENCES**

Social contagion - definition

Mass sociogenic illness

Condition that spreads within social group, but does not seem to have common organic cause

Difficult to diagnose

May be diagnosis of exclusion, once physical causes ruled out

Alternative names

Psychogenic disorders, mass hysteria (may be considered pejorative)

Features

Constellation of physical symptoms in group of people suggesting organic illness but resulting from psychological cause, each member of group experiencing one or more symptoms

Characteristics

- Absence of physical findings
- Negative laboratory tests
- Presence of hyperventilating or fainting
- Preponderance of girls or women
- Preponderance of adolescents / preadolescents
- Benign morbidity
- Rapid spread & rapid remission of symptoms
- Relapses in setting of original outbreak

Factors contributing to sociogenic illness

- Gathering of people under stress
- Common belief in physical cause or contaminant
- People seeing, hearing or hearing about other affected individuals
- Compensation issues

Mass motor hysteria

- Usually lasts for weeks or months
- Results from slowly accumulating stress to intolerable situation
- May be characterised by change in psychomotor activity eg twitching, shaking, paralysis, bizarre behaviour

Middle Ages

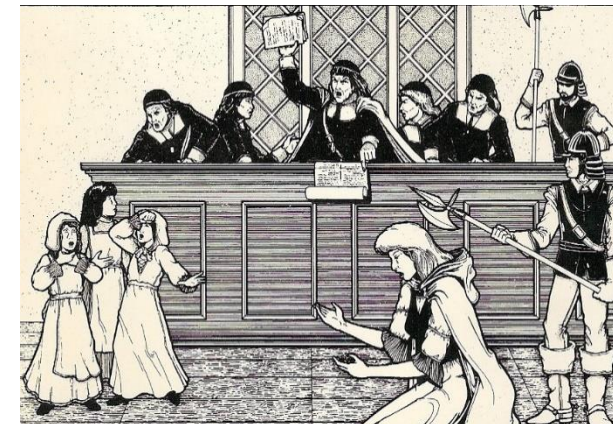
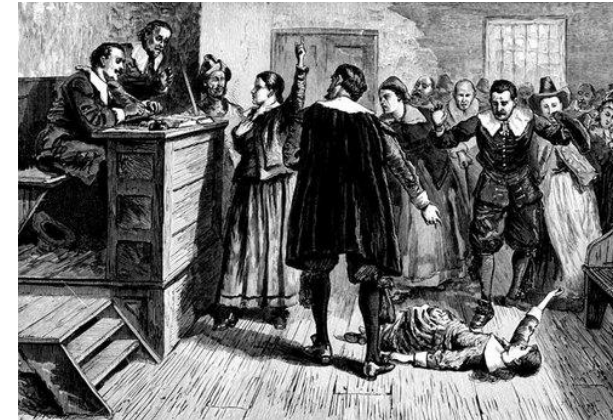
- 15th – 19th centuries
- Many outbreaks in nuns in convents, lasting months
- Foul language, blasphemy, lewd acts, acted like animals
- Included nun-biting
- Priests exorcised demons



Young girls forced into orders: lengthy fasting, cloistered, confined living quarters, punitive, floggings

Salem, Massachusetts, 1691-1693

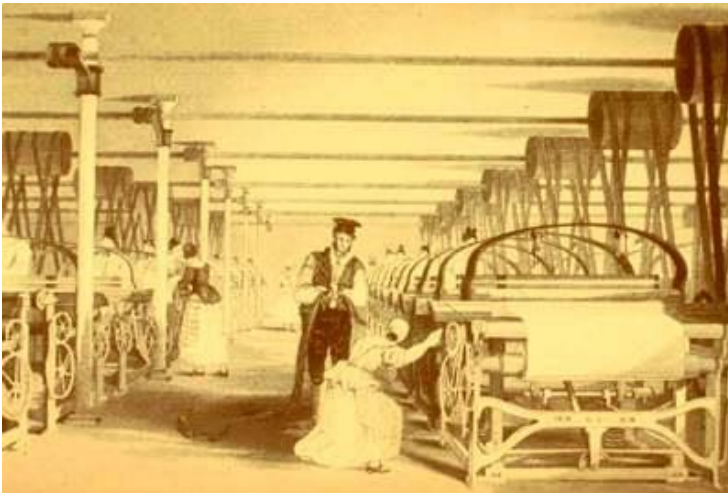
- **1691** 8 girls - disordered speech, convulsive movements, bizarre conduct
- **Feb 1692** Girls accused 2 elderly women & servant from Barbados (Tibula) of being witches
- 100s residents accused of witchcraft
- Trials, torture, imprisonment, & executions
- **May 1693** Episode ended - Governor Phips ordered all suspects be released



1880s to 1920s

Industrial settings & boarding schools

- Outbreaks eg cotton mills, Swiss, German & French private schools
- Convulsions, abnormal movements, paralysis, neurological complaints, laughing fits



1980s

All-female Muslim boarding school Malaysia

- Lasted 5 years
- Crying fits, abnormal movements, fits
- Local healers summoned to exorcise demons
- 1987 ended when girls took hostage at knife-point
- Ex-PM intervened, transfer to liberal school



Mass anxiety hysteria

- Usually short duration (eg 1 day)
- In response to fear of false threat
- May be symptoms of nausea, fainting, difficulty breathing

Dominated by environmental concerns

Fears about

Food



Water quality



Air

- Mysterious odours
- Toxic fumes
- Radiation



Vaccinations



Frequently occurs in schools

Early Sorrow 1979 And Mass Hysteria

On May 21, 1979, a wave of illness swept through 224 primary-school children as-



1983

OUTBREAK OF ILLNESS IN A SCHOOL CHORUS

Toxic Poisoning or Mass Hysteria?

Brit. J. Psychiat. (1983), 142, 85-88

1983

Epidemic Hysteria in a Zambian School:
“The Mysterious Madness of Mwinilunga”

MANOHAR DHADPHALE and S. P. SHAIKH

The New England Journal of Medicine

Special Article

1998

MASS PSYCHOGENIC ILLNESS ATTRIBUTED TO TOXIC EXPOSURE AT A HIGH SCHOOL

TIMOTHY F. JONES, M.D., ALLEN S. CRAIG, M.D., DEBBIE HOY, R.N., ELAINE W. GUNTER, M.T., DAVID L. ASHLEY, PH.D.,
DANA B. BARR, PH.D., JOHN W. BROCK, PH.D., AND WILLIAM SCHAFFNER, M.D.

ABSTRACT



EPIDEMIC hysteria, also referred to as mass

Koro epidemics

- 'Genital retraction syndrome' or 'shrinking penis'
- China, Singapore, Indonesia, Malaysia, Nigeria, Europe
- Mostly single adolescent males
- Belief or delusion that penis has retracted into abdomen despite lack of visible objective changes
- Widespread fear that genitalia will vanish





Melbourne Airport 2005

Executive Summary

1. On 21 February 2005, State and Commonwealth emergency services were involved in a multi agency response to an incident at Melbourne Airport resulting in the evacuation and closure of the southern terminal housing Virgin Blue Airlines. The incident began at around 7.10am as a medical response to a collapsed female by the Aviation Rescue and Fire Fighting (ARFF) service and concluded shortly after 6.00 pm with the reopening of the southern terminal.
2. By the end of the day 57 people had been seen by ambulance officers, 47 of whom were transported to hospital. All, but one person with an underlying medical condition were released the same day. It has been reported that

No identification of air, water or food borne transmission
or biological agent

Reaction to vaccine fear

2007

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Parents urged not to panic over Gardasil

May 22, 2007 - 2:24PM

Federal Health Minister Tony Abbott has urged parents to continue vaccinating their children against cervical cancer, despite five schoolgirls being taken to hospital after being immunised.

The five students from Melbourne's Sacred Heart Girls' College were among more than 20 who reported to the school's sick bay on May 7 after being injected with Gardasil.

"A number of students were transported to Monash Medical Centre and two were kept overnight for observation and discharged the next day," a spokesman for the Victorian Department of Human Services (DHS) said.

Student Natasha D'Souza said she collapsed and was left paralysed for six hours after being injected.

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Dominion Post 2014

...as a base for Stalin's
...NKVD from 1939-56,
...ists say the victims were
...ed between 1940 and 1941.

COLOMBIA

Sick mystery

A mystery illness has overwhelmed a small town in northern Colombia as scores of teenage girls have been hospitalised with symptoms that parents fear could be an adverse reaction to a popular vaccine against cervical cancer. Authorities say they still don't know what caused more than 200 girls in El Carmen de Bolivar to come down with symptoms ranging from fainting to numbness in the hands and headaches. Parents are on edge however because all the girls, ranging in ages from 9 to 16, were injected in recent months with the vaccine Gardasil. Yesterday, residents marched peacefully to demand a thorough investigation.

AUSTRALIA/THAILAND

Boxes crucial

Malaysia's transport m
an investigation
aysian air
he Inc

Death triggers mass illness

Last month the Pacific Steel factory in South Auckland and a suburb were closed but the reason for everyone feeling sick remains a mystery. SHARON COURSE reports.

MASS hysteria could be behind a mysterious illness which swept a steel plant and closed a south Auckland suburb.

Investigations into the events at Pacific Steel in Otahuhu three weeks ago have drawn a blank.

Now a chain reaction involving employees, paramedics, a police officer and a security guard – triggered by the death of a steel worker – is being considered as a cause.

Rhys Jones, general manager of parent company Fletcher Challenge Steel and Wire, described the event as like a science fiction film.

During the night shift, a steel worker in the mill felt sick and took a break.

Another worker, Murray Colthorpe (40) complained of nausea, also took a break, returned but felt worse, Jones said.

ed funny. We don't even use chemicals in the mill. We have done everything we can to find out if there's a physical cause but have found nothing."

Those evacuated returned three hours later.

Tests for chemicals, poisons, carbon monoxide and water contamination have all come up clear.

Leaks from nearby factories was also ruled out.

An autopsy on Colthorpe revealed he died of a stroke. Tissue and blood samples have been sent to Australia for analysis. A result is expected this week.

Blood tests of people working in the mill that night have also revealed nothing. OSH ordered more tests last week.

"I think the most likely scenario is there was possibly a strong psychological reaction to the unexpected death of Murray Colthorpe," Jones



Parnell fume incident 1973

- **26 Jan** 50 drums merphos (organic pesticide) loaded on "Good Navigator" in Mexico bound for Sydney
- **10 Feb** Storm at sea, drums damaged & leaking (Captain knew from smell)
- **26 Feb** Ship diverted to Auckland, several drums unloaded. Wharf foreman noted sweet sickly smell, saw "merphos". Drums in hot sun. Phone calls to Department of Health

Confused communication between scientists & emergency services

- **Merphos** low toxicity, could be washed down drain, but understood to be
- **Murphos 25** (parathion) highly toxic, cover with dry sand or soda ash, avoid drains.

Workers paid extra, protective clothing & ventilators. Plugged holes with soap & rags. Leaking drums loaded onto truck. Port workers complained of smarting eyes, headache, dry throats. Police evacuated immediate area.

State of emergency

27 Feb Intense media interest

Advised highly toxic, could be fatal if inhaled – neutralise with caustic soda

Adding caustic soda to Merphos made smell worse

Parnell residents affected by smell - hospital

Parnell evacuated



Firemen carrying an unconscious elderly woman from her home near the scene of the emergency in Parnell yesterday

28 February 1973



1-2 Mar Removal & burial of material
>5000 people leave homes

Strange Smell

The first sign of the Parnell crisis came early yesterday morning when residents living in the labyrinth of lanes around the Franklin Transport company's depot noticed a strange aromatic smell.

and were taken to Auckland Hospital by ambulance.

They were the first of many.

By 10 a.m. houses and offices within a 100-yard radius were evacuated.

Became ill

Road blocks were set up in Gittos St and at the Parnell Rd-St Stephen's Ave intersection.

By 12.45 p.m. the normally busy Parnell shopping centre was like a ghost town. People stood around on street corners talking in small groups.

The evacuation proceeded

began complaining of headaches, chest pains and nausea.

The St John Ambulance established an emergency clinic and a mobile canteen.

Police Watch



The New

Telephones Classified Advertising - 78-999
Other Departments - 78-968

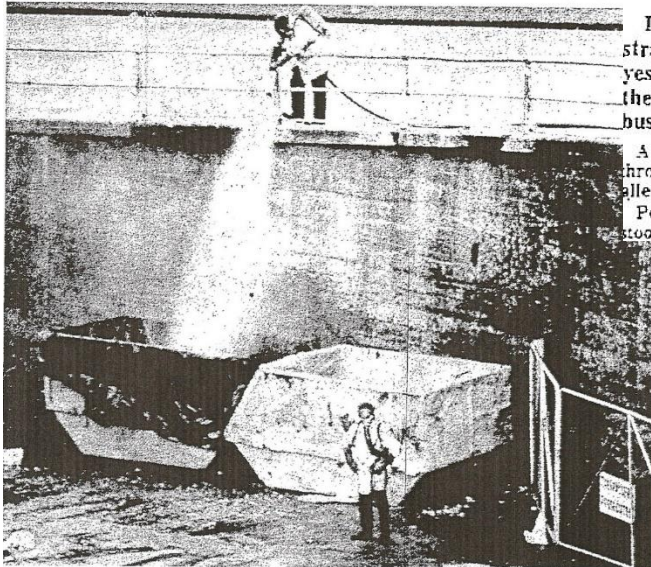
Fumes Toll Reaches Close To 500 Mark

The number of people treated at Auckland Hospital for illness from the Parnell fumes had climbed to around 500 by early today.

At the casualty department hard-pressed staff who had been working night and day were wondering when it was all going to end.

Decontamination with caustic soda

Zealand Herald
AUCKLAND, THURSDAY, MARCH 1, 1973
Price 6c



A fireman playing water on to bins containing the toxic sand-chemical mixture at the Gladstone Rd yard of Provincial Transport Ltd yesterday. The chemical had dripped on to sand in the yard and seeped through to the asphalt. Firemen used caustic soda to neutralise the sand-chemical mixture and later loaded it into the bins where water was added to help to break it down further.

Thank You
All Says
Proud
City Mayor

The Mayor of Auckland, Dove-Myer Robinson, last night that he was out of the people and officials of Auckland. The public has reacted indignantly," he said, "and

Declaration Is Legal Move

The Minister of Civil Defence, Mr McGuigan, announcing a state of local civil defence emergency in Parnell yesterday afternoon, made it clear that this action was being taken only for legal reasons.

EMPTY SILENCE FOLLOWS GAS LEAK INTO PARNELL

Lower Parnell was a strangely hushed place yesterday. Gone was the customary hustle and bustle of a normal week.

A slight breeze whispered through the deserted streets, alleys and lanes.

Policemen, mostly in pairs, stood in the shade on street

tests were on raw materials and stores in the factory.

"All tests have proved negative," he said, "but we will continue to carry them out."

The factory continued production throughout Tuesday and yesterday morning, but stopped yesterday afternoon, not because there was any danger of contamination, but

have been doing the same all had any ill effects from the day today."

He is the only member of the society allowed in the area and has lost count of the number of cats, bantams, budgies and dogs collected.

Pets are collected at the owners' request, but one stray dog with a Parnell phone number attached to its collar

Depressed

Fumes Ship In Today

After two days in isolation, the crew of the Good Navigator were given permission yesterday afternoon to bring their ship alongside Wynyard Wharf this morning for decontamination.

While others have been forced to leave their homes and vacate the contaminated areas of the city, the 27 men

damaged container (the one which punctured the drums of chemicals) was reloaded

ant general manager, Mr D. N. Morgan, the civil defence organisation had advised the board that all wharves,

Civil emergency over

3 Mar Area reopened

All Clear For Most Parnell Evacuees To Go Home

A strong smell of chemical fumes still hung last night in the narrow lanes of lower Parnell as residents were permitted to

Some reside for almost three straight out of 1 Department tea

The team, led by th Auckland medical office

NO FURTHER REACTIONS TO FUMES

People treated at Auckland Hospital for the effects of inhaling chemical fumes during the civil emergency should not suffer any further reactions, Dr M. Spence said yesterday.

Zealand Hera

AUCKLAND, FRIDAY, MARCH 2, 1973



Return Of Normal Life In Parnell

The Parnell chemical fumes should have died a natural death by this morning.

Mr R. S. Cox talking with Captain D. J. McGee, of the Salvation Army, before moving back into his Crockett St flat yesterday with some of the belongings he took with him during the evacuation of the Parnell area.

27 February to 4 March 1973

680 people treated in hospital

>4000 people treated in all

- 25 wharf officers effected by fumes, 4 admitted to hospital
- 31 fire brigade placed off duty – treated or admitted to hospital
- 11 had caustic soda burns

>5000 people evacuated from homes for 4 days



Mr Kirk talking to a fireman, Mr C. B. Thompson, who received caustic soda burns during the decontaminating of the freighter Good Navigator at Wynyard Wharf yesterday.

Commission Named To Make Inquiry

Press Association

Wellington

The Government yesterday set up a commission of inquiry into the Auckland defoliant incident, and the Attorney-General, Dr Finlay, announced in Parliament the provisional list of members of the commission.

Symptoms

- Symptoms mainly headache, nausea, vomiting, dizziness, dry mouth & throat constriction, sweating
- Symptoms associated with anxiety, fear, plus possibly use of respirators & protective clothing
- 49 people treated with atropine for organo-phosphorus poisoning, but
- Blood tests negative (no reduced cholinesterase levels)

Not effected

- Crew of ship
- Waterside Workers Union delegate who worked close to drums
- Workers who plugged up holes
- People who missed evacuation message & remained at home
- Pets left at home

BUT

Some people living up-wind effected

Commission of Inquiry & compensation

4 March 1973

April 1973

Mr Kirk Promises Protection For Parnell Victims

The Prime Minister, Mr Kirk, said yesterday afternoon that the Government was prepared to protect the long-term interests of the victims of the Parnell chemical emergency.

Because of the statutory limitation, he said, the Government would look at anything necessary to protect the interests of those involved, either individually or as a group.

Mr Kirk predicted that there would be a great variety and diversity of claims.

"I have no doubt that it will be a long, long time before the last is heard of this," he said.

Mr Kirk made these comments at Wynyard Wharf after watching firemen decontaminate the freighter Good Navigator, which brought the damaged drums of chemical to Auckland.

Visited Site

Earlier, and shortly after his arrival from Wellington, the Prime Minister visited the vacant section at the corner of Bradford St and Earle St where the main spillage occurred.

"We will be pleased to see the last of this," said the police civil defence co-ordinator, Inspector L. B. Woodgate, who also visited the site.

Mr Kirk watched a front-end loader scope up decontaminated material from the site and load it into bins for carriage to the Meola Rd dump at St Chevallier.

The work was being carried out under the supervision of Mr R. C. Selkirk, of the chemical division of the Department of Scientific and Industrial Research.

Later Mr Kirk inspected the civil defence headquarters in St George's Bay Rd, Parnell, where he met and chatted to the staff.

The Government was proud of the way the emergency was handled briskly and efficiently by the police, fire brigade, ambulance association, civil defence, and other groups, said the Prime Minister.

Main Concern

The evacuation had been done as quickly as possible and he was proud of the way the various groups had knitted together.

The co-operation of the groups had been a "grand partnership" and he thought Auckland should be proud of everyone concerned.

Commenting on the forthcoming inquiry, Mr Kirk said: "We want no stone unturned and do not want any time wasted either."

The question of compensation and related matters had to be considered at a number of levels.

The Government's main concern was to see that people affected by the crisis were

immediately assisted, said the Prime Minister.

Emergency services were gradually being wound down early yesterday as the clean-up of the three decontaminated sites in Parnell got under way.

Carted Away

Hundreds of cubic yards of soil, bitumen, and other material, were being carted to scientists.

Drums Ship Clearance Due Today

Late yesterday there were hopes that the winches on the "fumes" ship Good Navigator would rattle into life again and that she would begin discharging her Auckland cargo this morning.

Firemen and crew members spent all yesterday shifting cargo and decontaminating portions of the freighter's foredeck and deck cargo. An area of Prince's Wharf which may have been splashed by the leakage of the ship was

the Meola Rd dump by private contractors.

The last of the organophosphate landed at Auckland by the Good Navigator last Monday night was stored in the dangerous goods shed on Wynyard Wharf ready to be reloaded into the freighter.

The work will be carried out under the supervision of DSIR scientists.

Only people with physical contact with liquid could have organo-phosphorus poisoning
– Prof McQueen

Hallmarks of social contagion

- Absence of physical findings
- Negative laboratory tests
- Apparent transmission by smell
- Typical symptoms of anxiety & panic
- Benign morbidity
- Rapid spread & rapid remission of symptoms
- Evidence of fear

Contributing factors

- Gathering of people under stress
- Belief in physical contaminant
- Smell of chemical
- People seeing, hearing or hearing about other affected individuals
- Major role of media
- Compensation issues

Include as differential diagnosis

- Consider when outbreak with these types of symptoms
- Diagnosis of exclusion
- Often not explicitly identified – media goes silent



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