Smoke control can be used as a tactical option to address wide range of barricaded situations to aid in rational environments.
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INTRODUCTION

History of Tear Gas. The use of tear gas as a means of combating civil disturbances owes its origin to America. In that country a serious outbreak of bank robberies and other forms of lawlessness, immediately after the first World War, set authorities searching for an effective means of meeting this threat. Tear gas was thus first used in fixed installations in banks which could be operated without any of the staff leaving their places. This proved so effective that the next move was in the direction of portable projectors from which have been evolved the tear gas grenade, the riot gun firing tear gas shells, and the tear gas truncheon.

Problem of Civil Unrest. In dispersing riotous mobs the main principle to be observed is that the degree of force used shall be the minimum necessary to restore order and to enable such arrests as may be desired to be made. Tear gas provides the solution of this problem. Its effect is purely temporary, and with the right type of tear gas munitions there is practically no risk of bodily injury. Furthermore, the aftermath of riots which expresses itself in disturbances at the funerals of victims is done away with and normal relations between the police and the public can be quickly re-established.

Advantages of Tear Gas. Tear gas is an essential part of the equipment of a modern police force in countries liable to civil unrest for the following reasons:

1. It reaches the whole of a mob instead of only the front rank.
(2) It can be used without compunction against passive resisters, including women, under circumstances in which the use of other forms of force would be objectionable.

(3) By its use police are not dispersed or tired out, and a considerable saving in manpower can be effected.

(4) By causing every person in a gassed area to think of his own physical discomfort to the exclusion of everything else, tear gas rapidly breaks up the common object of a mob.

The last point is psychologically the most important, because it enables mobs to be dealt with before mass hysteria has taken hold.

Mob control has always been a major problem in countries where there are racial or religious antagonisms, and this problem has increased a hundredfold since two World Wars have created waves of nationalism amongst backward people who must proceed gradually to self-government. All civil governments forbid people to collect in times of excitement, but the trouble is to enforce this order. An unlawful assembly invariably has a common objective, and in pursuance of this any large collection of people will quickly develop a composite mind, and will surrender their individuality to a leader. The result is mass hysteria, and once this develops people ordinarily law abiding may commit acts of extreme violence. The cure for mass hysteria is dispersion, and the only method of dispersing a violent mob without bloodshed is by the use of tear gas.

**Use of Firearms in Rioting.** Although at times it cannot be avoided owing to sabotage or arson, shooting unarmed rioters is not a solution for disorder, and whenever it is done it has endless repercussions and raises more devils
than it lays. Humane methods of mob control are nowadays generally appreciated throughout the world, and no government can afford to neglect them, yet situations are constantly arising which may alter a country’s history, and for which governments are totally unprepared.

The moment a civil government has to resort to the use of firearms to quell rioting, and dead and wounded people are seen lying on the streets, public opinion changes completely and the government instead of the rioters are on trial.

Compared with the cost of a modern police force, the extra expense involved in equipping and maintaining a few tear gas squads is negligible, and its insurance value is incalculable. A government which has to use firearms to deal with a few riotous students cannot expect to maintain its prestige or the confidence of its public.

The answer to the question whether tear gas is required for a police force is the same as whether a fire brigade is required for a city. Mass hysteria has to be checked at the start or it will spread like a flame and just as quickly.

**Tear Gas Technique.** The essentials for the successful use of tear gas are highly trained police, the use of gas in sufficient quantity, and the selection of the right munition for the job. Where tear gas has not been successful in the past it was due to neglect of these essentials. No mob, however violent, will stand up to properly laid down tear gas, but police are apt to place too much reliance on grenades, whereas the key to riot control is the riot gun, and the liberal use of the baton shell to back up the tear gas shell and keep crowds on the move.
Colonial police forces on riot duty nowadays generally include tear gas squads, and the training of these squads in the special technique of putting down tear gas so that it will be really effective is of the first importance. It is described in Part V of this manual.

**Life of Tear Gas.** Tear gas grenades and shells are dated and should be used within the time specified (3 years). Out of date ammunition may appear to function all right, but the gas loses its potency if kept too long, especially in hot and damp climates.

Out of date ammunition is required for training squads, and for demonstrating how tear gas behaves under different wind conditions. It should also be used for periodical tests of respirators.

**Extracts from Manual.** Where tear gas squads are drawn from races who do not speak English, but have officers who are literate in their own language, extracts from this manual should be translated into the local vernacular for the use of such officers as it is essential that police should understand the composition and potentialities of the weapon they are using.
Police spray unruly crowd with tear gas

TEMPE, Ariz. – Police officers used tear gas to break up a crowd of about 500 people who vandalized street signs and set small fires in the streets following the World Series.

The disturbance Sunday night in this Phoenix suburb, several miles east of Bank One Ballpark, lasted about 90 minutes and was considered minor, Tempe police Sgt. Randy Fougner said.

Two people were injured. A police officer broke his leg while subduing a man who had charged a police line and a man in the crowd burned his hand when he tried to pick up a tear gas canister to throw it back at police, Fougner said Monday.

He said the crowd began to gather after the Arizona Diamondbacks won the championship by beating the New York Yankees at the ballpark in downtown Phoenix.

— The Associated Press
Police use tear gas

Associated Press

BOULDER, COLO. — Police used tear gas and pepper spray to disperse fans celebrating Colorado’s victory in the Big 12 championship game.

Two officers were injured slightly, and 18 people were arrested Saturday night after the 39-37 win over Texas, police spokeswoman Jennifer Bray said.

Two people were hospitalized after being injured when the gas was released into the crowd and will face charges.

Some in the crowd threw firecrackers, tore up sidewalks, clogged traffic and smashed cars.

Another crowd...

Police have...

By KIMBERLY HEFLING
Associated Press Writer

BLOOMINGTON, Ind.—Basketball fans upset by Indiana’s loss in the NCAA championship torched couches, toppled street signs and threw beer bottles at officers, while Maryland fans set bonfires and shot off fireworks in celebration.

Bloomington police broke up the crowd with tear gas, sending hundreds of students and fans from an intersection near the edge of the Indiana University campus at about 1:30 a.m. yesterday.

About 30 people were arrested on charges including public intoxication, criminal mischief and disorderly conduct, police said. Four others were charged with battery on a police officer.

“When students started getting pelted with bottles, that’s when we decided to move and disperse the crowd,” Bloomington Police Capt.
bought treatment for
inflammation, while another
while running from

They videotaped the
scan the tapes for

A crowd of 500 lighted
street signs and traffic
tried to overturn
of about 100 gath-
ered a few blocks away.
Police used tear gas on the larger crowd and stinger grenades and pepper balls on the smaller crowd. Stinger grenades make a loud bang and bright flash and dispense small rubber pellets . Pepper balls are fired from a paintball gun.
The University Hill neighborhood has been the site of riots at least six times since 1997.

Mike Deikhoff said, “If the crowd hadn’t started throwing beer bottles and setting fires we wouldn’t have had to act.”

The violence came after some students and fans turned bitter following Indiana’s 64-52 loss to Maryland late Monday.

In Maryland, police on horseback pushed thousands of revelers off the streets early yesterday, trying to rein in a victory celebration by fans ecstatic over the school’s first national basketball championship. A total of 15 people were arrested by university and Prince George’s County police, with charges ranging from aggravated assault to disorderly conduct, an official said.

“This is terrible. We’ve finally started to lose the reputation as the Len Bias death school, and now we’re known as the riot school,” said student Josh Fingold, 21, referring to the 1985 cocaine overdose death of the Maryland basketball star.

Despite the victory and an increased police presence, the Maryland crowd turned riotous, breaking the window of a bicycle shop, throwing bottles and other objects at police and lighting bonfires.

Several officers suffered minor injuries when they were struck by bottles and other objects, state police Lt. Bud Frank said.

In Bloomington, about 40 people were treated for injuries including burns, cuts and too much alcohol, a Bloomington Hospital official said. Flying debris caused cuts on the heads of two state troopers, who required stitches, and minor injuries to 21 Bloomington officers, officials said.

Police shut down intersections in downtown Bloomington about 11:15 p.m., before fans spilled out of bars, houses and dorms to share their disappointment.

Minutes later, vandalism reports began pouring in, starting with a trash fire near an apartment complex and students setting fire to couches, trash bins and others items. Street signs were torn down and post office deposit boxes were toppled. By 2:30 a.m., most of the crowd had dispersed.

The damage in Maryland did not appear to be as bad as after last year’s Final Four loss to Duke when one bonfire caused an estimated $500,000 in damage and disrupted cable service when it burned through a fiber optic line.

Maj. Jeff Cox, head of the Prince George’s County Police Department’s patrol unit, said most of the revelers did not cause trouble, blaming a few rogues.

“I wish I knew why we keep having this problem. I’m hoping tonight we found the formula for taking care of it,” Cox said.
45 arrested in riots after Ohio State victory

Nine cars are burned near the campus following a football victory over Michigan.

The Associated Press

COLUMBUS, Ohio — Police fired tear gas and wooden pellets to break up rioting by college football fans who set fire to cars, threw bottles and burned furniture in the streets early Sunday in celebration of Ohio State University's victory over rival Michigan.

Other football crowds got out of control in South Carolina, California, North Carolina and Washington state, leaving several people injured.

In the minutes after Ohio State's 14-9 victory Saturday, which assured a Fiesta Bowl appearance for the unbeaten Buckeyes, fans swarmed the field and threw chunks of turf at state troopers who used pepper spray to try to keep them from pulling down the goal posts.

Police said the crowds finally left the stadium, then got rowdy again around midnight.

"Once we'd get one street under control, the crowds would move to one or two others and things would break out again," said police spokeswoman Sherry Mercurio.

At least a dozen fires were set near the campus, nine cars were burned, and 45 people were arrested for disorderly conduct and alcohol violations. Officers used wooden pellets known as "knee-knockers" to disperse one crowd of several hundred people, Mercurio said.

Rioting fans celebrating Ohio State's football victory, Columbus, Ohio.

"I'd like to say most of these people are not our students, but unfortunately they are our students," said Bill Hall, university vice president for student affairs.

By midday Sunday the burned cars had been removed and broken windows in nearby homes and other cars had been replaced or covered over.

"Everyone pretty much expected this; everyone was drinking for like 12 hours," student Mark Stevenson, 21, said Sunday on the porch of his apartment.

During another Saturday game, at Washington, fans from the University of Washington rushed the field with bottles and other debris.

"I feared the worst," said University of Washington athletic director Barbara Hedges, whose dramatic 26-23 win, which cost the referee's career, gave the Cavaliers the Rose Bowl.

In Clemson, a police report said a male fan who tried to break down a goalpost at Clemson was hit by a thrown bottle.

During another Saturday
Fans get rowdy across nation

Hedges of U.W. feared for her life

By JOHN McCARTHY
Associated Press writer

COLUMBUS, Ohio —
Police fired tear gas and wooden pellets to break up rioting by college football fans who set fire to cars, threw bottles and burned furniture in the streets early Sunday in celebration of Ohio State University’s victory over rival Michigan.

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“Everyone pretty much expected this; everyone was drinking for like 12 hours,” student Mark Stevenson, 21, said Sunday on the porch of his apartment. Nearby, a paper plate was taped over a hole in a...
Police take a man into custody in **East Lansing**, Mich., after riots broke out following Michigan State University's loss in the men's division of the Final Four basketball tournament.

**EAST LANSING, Mich. (AP)** — Michigan State basketball fans overturned four cars, tipped vending machines and set fires in trash bins after the Spartans lost in the NCAA tournament.

Officers in riot gear dispersed the crowd using tear gas. Seven people were arrested on charges of disorderly conduct, six of them Michigan State students.

The damage overnight near the university administration building was estimated at $2,000,000. People had gathered in the evening on University Avenue, which borders campus and downtown.

They had tied up traffic in the evening on University Avenue, which borders campus and downtown. Daley of the East Lansing Police Department.

Sunday night's
Police arrest 60 and use tear gas to quell riots at Michigan State

SOCIATED PRESS

EAST LANSING, Mich. — Tense Michigan State fans were used with tear gas, and more than 60 people were arrested after the university's men's basketball team lost in the Final Four last night.

Police said they planned to have a large presence ready in East Lansing in case trouble broke out after that game.

Thousands of fans took to the streets after Saturday night's contest. Police reported one serious injury — a possible broken arm suffered by someone in the celebration — and several minor injuries.

The main centers of activity were downtown and near the Cedar Village student housing complex bordering the northeast side of campus. The complex has been a problem spot in the past.

Police fired several canisters of tear gas into both areas to scatter clusters of people that at times exceeded 1,000 people. Police said they broadcast warnings before using the gas, but several targeted unnecessarily.

"It's not pleasant, but it is effective in moving crowds," East Lansing Police Chief Louis Muhlen said. "We felt it was justified and effective."

At least five officers were assaulted, police said. Three were struck with bottles, one was hit with a ball bearing launched by a rubber band, and another was smacked in the face shield of a riot helmet with a chunk of asphalt.

Police reported 15 fires, all relatively minor.

It was not known how many of those arrested were Michigan State students. The campus has been a magnet for visitors since Thursday, drawn to East Lansing as the community celebrated the Spartans' twin appearances in the Final Four.

Turns overturn cars

Recurred Sunday morning, where about gathered. Up traffic earlier on Grand River divides the campus, said Lt. Kevin Lansing Police said. Disturbances caused about $40,000 in damage to university property, Michigan State police Chief Jim Dunlap said.

The violence followed Michigan State's 85-76 loss to Texas on Sunday in the South Regional final in San Antonio.

On Friday night, 18 people were arrested after a victory over Maryland, Daley said.
PART I

PROPERTIES OF TEAR GAS

Chemical Nature of Tear Gas. The chemical known as tear gas is chloracetophenone or CN and is one of many lachrymators, i.e. it causes a flow of tears to the eyes and temporary blindness. CN has been selected for police purposes because it is safe, and leaves no harmful after effects. It has now been used in so many disturbances in the last quarter of a century that its efficacy is no longer in question, and its harmlessness has been definitely established.

CN in its pure form is a white liquid and the gas which it gives off is invisible and volatile. For police purposes, in order to slow down its action, it is solidified in the form of yellow crystals which are mixed with certain inflammable ingredients and ground to a very fine powder. When generated in this form it is visible and sufficiently heavy to spread laterally before ascending. It is in fact not a gas but a particulate smoke and leaves a deposit which must be brushed off clothes and swept out of buildings to be got rid of.

Effects of Tear Gas. People subjected to tear gas are incapacitated for anything up to half an hour, and it causes an intense desire for fresh air which cannot be resisted. It also makes ringleaders of mobs look ridiculous, and puts them out of action. Furthermore it can be used to isolate localities which are the particular objective of riotous mobs, such as embassies, jails, government offices, etc.

Generation of Tear Gas. For blast charges at close quarters, tear gas is generated, either by pressure mixed
with nitrogen, as in the projector, or by a charge of gun-
powder, as in the truncheon. For longer ranges the method
of generation is to ignite the tear gas while restricting the
amount of air admitted. In this way it smoulders and the
smoke carries the CN with it. This is the method used
with grenades and shells.

**First Aid for Tear Gas.** People temporarily blinded by
tear gas should be warned not to rub their eyes as this only
increases lachrymation. The best treatment is to stand
facing the wind after bathing the eyes with cold water.
For obstinate cases, or skin irritation which sometimes
occurs with peculiarly sensitive people, a solution of water
to which has been added a small quantity of sodium
sulphate, alcohol, or glycerine should be used.

**Effect of Tear Gas on Animals.** Domestic animals
do not seem to suffer as much discomfort from tear gas as
human beings. Horses particularly are not affected and
mounted police can operate in gassed areas without
difficulty.

**Fire Hazard from Tear Gas.** Fire hazard has been
reduced to a minimum by the great care taken in the
manufacture of C.P. munitions. Grenades and shells
become too hot to handle but not red hot; still there is
frequently combustible material in Eastern bazaars which
should be avoided if possible. All munitions are absolutely
safe to use inside buildings.
ATTACK ON WAR

Anti-war protesters gather by the

Thousands of anti-war demonstrators packed more than 20 blocks near the United Nations headquarters Saturday, the largest of an estimated 150 peace rallies across the nation that filled city streets with banners, chanting and people from all walks of life.

"Just because you have the biggest gun does not mean you must use it," Martin Luther King III told demonstrators in New York as he stood before an enormous banner reading: "The World Says No To War."

Protests were held across the nation, from Maine to Hawaii, and from Texas to Minnesota.

The protest was represented in Southeast Missouri with a two-hour protest in Cape Girardeau. Beginning at Cape Park's Freedom Corner, at Broadway and West End Boulevard, about 90 anti-war protesters braved the misty cold by standing on the sidewalk with signs promoting peace and making a statement against a U.S. led war on Iraq. The SEMO Coalition for Peace and Justice organized the local protest, which started at 1 p.m.

"The turnout was wonderful," said Gail Lowrance of Cape Girardeau. "We had over 90 people, and everyone had a sign."

In St. Louis, about 2,000 people rallied inside the 1,200-seat Pilgrim Congregational Church, where many sat on the floor. Dozens of others made do outside in a wintry mist, listening to the rally on loudspeakers.

About 150 people also gathered inside the state Capitol in Jefferson City in a rally held by a newly formed organization known as People for Peace.

"As a Christian, I think we have a theory of when war is justified," said Jim Kemna of Jefferson City. "War is only justified when there is an attack or a real imminent attack — which there isn't with Iraq."

In Columbia about 700 people, including the local Buddhist Peace Fellowship, gathered to demonstrate, said the Columbia Peace Coalition.

In New York

Organizers of the New York rally, who had hoped for 100,000 people, estimated the crowd at anywhere from 375,000 to 500,000. NYPD Commissioner Raymond Kelly said about 100,000 people were in the crowd, which stretched 20 blocks deep and spanned three avenues.

Fifty arrests were made and two protesters were hospitalized — one with an epileptic seizure and another who had diabetes. Kelly said. Eight officers also were injured, including a mounted police officer who was pulled off his horse and beaten, Kelly said.

"I think it went well. It was orderly," he said. "We facilitated people's ability to make their opinions known."

Police in Colorado Springs, Colo., fired tear gas at protesters, sending at least two to a hospital, and made arrests after the demonstrators blocked a major thoroughfare near an Air Force base.

Police spokesman Lt. Skip Arms said police fired tear gas after the protesters failed to heed repeated warnings to disperse. He denied press reports that officers also fired rubber bullets at protesters, then later said a single rubber bullet was fired at a demonstrator who picked up a tear gas cannister and threw it back toward officers. He said the man was then subdued by a stun gun but was not injured.

Anti-war rallies had been planned in about 180 U.S. cities, from Yakima, Wash., to Augus-
thousands

ta, Maine, as well as in major
cities including Chicago, Philadelphia, Miami and Seat-
tle.

“We need to leave Iraq
alone,” said Detroit rally
organizer Kris Hamel of the
Michigan Emergency Commit-
tee Against the War on Iraq.

Rallies including the one in
Knoxville, Tenn., drew young
and old, in tie-dyes and dread-
locks, in collared shirts and
khaki slacks. Protester Rick
Held said he was “surprised
it’s not just the usual sus-
ppects” participating. “Bush
must really be screwing up to
bring out the mainstream.”

In Los Angeles, activist
actors Martin Sheen and Mike
Farrell and director Rob Reinh-
er were among the thousands
of chanting marchers who
filled Hollywood Boulevard
from curb to curb for four
blocks. Organizers estimated
the crowd at 100,000; police put
it at 30,000.

Justin Giles, a former Marine who fought in the Gulf War,
voiced his support for military action against Iraq during an
anti-war rally in Anchorage, Alaska, Saturday.

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Cape
Jackson
Perryville
Marble Hill
Nearly 2,000 nationwide arrested in anti-war protests

Associated Press, Washington Post

Galvanized by the American attack on Iraq, thousands of anti-war activists around the country set off their own barrage of street protests, chaining themselves together, blocking workers and traffic, walking out of classes, and parading in mock chemical suits.

Nearly 2,000 people were arrested from San Francisco to Washington, D.C.

But the anti-war ground-swell brought out thousands of counterdemonstrators. One in Mississippi carried a sign saying “Support the U.S. or keep your mouth shut.”

According to a Washington Post-ABC News poll, more than seven in 10 Americans support the war with Iraq. Two out of three believe President Bush had worked hard enough to try to find a diplomatic solution before ordering the attack.

Still, Thursday was one of the heaviest days of anti-government protesting in years.

“This is no ordinary day,” said Jason Mark, a San Francisco activist. “America is different today: We’ve just launched an unprovoked, unjust war.”

San Francisco had some of the largest anti-war activity, hobbling the morning and evening commutes. Thousands in roving bands temporarily took control of some downtown streets and closed several exits from the San Francisco-Oakland Bay Bridge.

Police wearing helmets and carrying nightsticks made more than 1,300 arrests.

Several thousand marchers snarled afternoon rush-hour traffic along Chicago’s main arteries, repeatedly breaking through lines of police on horseback or in riot gear. At least 200 people were arrested.

“I supported the first Gulf War. I think this is going to send a message,” demonstrator Bill Quigley said. “I think a broad-based protest against the war is the way to go.”

In Washington, dozens of activists temporarily shut down inbound lanes of a Potomac River crossing in a morning commotion. White House, chilly rain and blood for oil!

Anti-war and counterdemonstrators blocked the downtown highways, forcing motorists awry. Police arrested 500.

In Portland, demonstrators dragged protesters into Interstate hi-wayways, some with mouth shut. Elsewhere in the U.S., protesters smashed a McDonald’s and horses used to hold back the crowd were no match for how many around.

At the University of Texas, explosive, tear gas was used to force to leave campus blocked a main
Protesters marched, holding up the red, white and blue. Outside the White House, about 50 stood in silence, while 500 yelled and shouted, "No war!"

Activists in Philadelphia blocked entrances to downtown federal buildings and police to detour traffic away from the area. At least 107 protesters were arrested.

Near, Ore., anti-war protesters blocked two highways. Police removed protesters from the entrance in handcuffs. In the city, a protester broke the window of a police car, and police on horseback used pepper spray to disperse the crowd. There was immediate word on where arrests were made.

At the University of New Mexico in Albuquerque, the protests began with a sit-in between police and demonstrators.

Demonstrators left an office in the campus, and police used pepper spray on protesters to move them as well and in thoroughfare.

**ANTi-POVERTY MARCH**

**Tear gas used on protesters**

ST. PAUL, Minn. — At least three people were arrested Tuesday during a tense march against poverty that ended near the Republican convention arena with police using tear gas and flash-bang grenades to disperse protesters they said were trying to get past security fences.

"There's a group that appears to be trying to breach the (Xcel Energy) Center," said Tom Walsh, a St. Paul police spokesman. Police successfully moved the protesters away, he said.

Police said about 2,000 people took part in the march, which lasted about three hours.

A day after nearly 300 people were arrested and violence broke out following an anti-war march, police were on alert Tuesday. An Associated Press photographer and a Democracy Now! TV and radio show host were among those arrested at the Monday march.

Hundreds of officers, many in riot gear, shadowed the rally and march by a group called the Poor People's Economic Human Rights Campaign. Officers handcuffed a woman in a black bicycle helmet, and in a separate incident, handcuffed a man and a woman after a brief skirmish.
S. Marshal, DC Cops attack World Bank/IMF Protesters
J.S. Marshal, DC Cops attack World Bank/IMF Protest
larrowal, DC Cops attack World Bank/IMF Protesters A
COPS USE TEAR GAS ON CROWD RALLY

Nov. 14, 2010 2:28pm | Scott Baker

Your rank and file neo-Nazi is evidently not happy with things.

A neo-Nazi rally in downtown Phoenix became a free-for-all when police gear forced to step in to get things under control.

Phoenix police sprayed pepper spray and tear gas on about 100 people gathered to protest a demonstrator attracted by a federal judge’s ruling that weakened SB 1070.

When angry protestors surrounded the neo-Nazis, a curtain of purple tear gas was meant to shut them down.

A army of officers attacked the crowd stood united. An army of officers attacked the crowd and they retreated.
with any effort to weaken Arizona’s SB 1070:

In a very nasty Saturday afternoon, with police in riot gear. The federal courthouse was in chaos as tear gas into a crowd of demonstrators.

A demonstration being held by the neo-Nazis to protest a non-Nazi group, police took action.

About anarchists and protestors — but the unfazed protestors flooded with streams of pepper spray, and protestors
PROTESTS

Tear Gas Disperses Group

The Denver police used tear gas on Monday night to disperse a small group of demonstrators outside the hotel where many of New York's delegates to the Democratic National Convention are staying, witnesses said.

The police action stranded many delegates in the lobby and left one woman wheezing and coughing from the gas.

The scene at the Sheraton Denver Hotel was hectic and confused as delegates, including Representative Charles B. Rangel and Gov. David A. Paterson, entered the lobby unaware of what had happened and were told by hotel employees that they could not go to their rooms.

The protest's purpose was not clear. People gathered outside the hotel to watch as throngs of police officers in riot gear blocked the streets.

According to witnesses, the group of protesters appeared to be small. The police repeatedly told bystanders to back away from the street before the tear gas was released.

Lt. Ron Saunier of the Denver police said "50 plus" people were arrested. The police began taking protesters into custody once the group, which included 200 to 300 people, started blocking traffic and pedestrians, he added. "They were contained fairly quick," Lieutenant Saunier said. No injuries were immediately reported.

Members of the hotel staff said the police told them to lock down the premises. They shut the elevators down, leaving guests stranded in the lobby and unable to leave through the main entrance, where the police had formed a blockade by standing arm to arm.

JEREMY W. PETERS
Violence Halts White Supremacist March

TOLEDO, Ohio, Oct. 15 (AP) — A crowd that gathered to protest a white supremacists' march turned violent on Saturday, throwing baseball-size rocks at the police, vandalizing vehicles and stores, and setting fire to a neighborhood bar, the authorities said.

Mayor Jack Ford blamed the rioting on gangs taking advantage of a volatile situation. He declared a state of emergency, set an 8 p.m. curfew through the weekend and asked the State Highway Patrol for help.

"It's exactly what they wanted," Mr. Ford said of the organizers behind the march, which was canceled because of the rioting.

At least two dozen members of the National Socialist Movement, which calls itself America's Nazi Party, had gathered at a city park to march under police protection. Organizers said they were demonstrating against black gangs that they said were harassing white residents.

Violence broke out about a quarter of a mile along the planned route shortly before the march was to begin. One group of men pounded on a convenience store, and others overturned vehicles. There was a report of a shooting, but the police did not find a victim, Chief Mike Navarre of the Toledo police said.

For several hours, about 150 police officers chased bands of young men through the area. Officers wearing gas masks fired canisters of tear gas and flash-bang devices designed to stun suspects, but the men continued throwing rocks and bottles. Several officers and firefighters suffered minor injuries, Chief Navarre said.

Finally, the police marched shoulder to shoulder down the street shouting to people to stay inside, and the crowd of several hundred dispersed.

At least 65 people were arrested on charges that included assault, vandalism, failure to obey the police and failure to disperse.

"We frankly could have made a couple hundred arrests easily," Chief Navarre said. "We just didn't have the resources on hand to arrest all of them."
ist black bloc clash with police at G20 Pittsburgh

glassbeadian · 188 videos
Anarchist black bloc clash with police at G20 Pittsburgh.
Fired after police deployed tear gas in Oakland.

**dated 9:48 a.m.** Riot police in Oakland dispersed hundreds of protesters with tear gas on Tuesday night as crowds tried to re-enter a plaza in front of City Hall that the authorities had cleared of an encampment...
PART III

HOW TO USE TEAR GAS

General Principles. It is impossible to lay down hard and fast rules for dealing with rioting. It frequently goes on for days in different parts of a city and on each occasion presents a separate problem.

For general guidance, in order to get the best results from tear gas, squads should use projectors for elbow room, and grenades at close quarters, standard grenades for moving crowds, and three-way grenades for squatters, or people trying to cover their heads. When the mob has been driven back 50 to 75 yards, volleys of short range shells should be used with alternating volleys of baton shells. If the mob is dense, high angle volleys of long range shells should be dropped at the back, care being taken to leave exits open. When knots of rioters collect at a distance as they usually do, these should also be broken up with high angle fire. The golden rules are (1) to attack down wind, (2) to use sufficient gas to start with, (3) to keep pressure up until the mob is entirely dispersed.

Arrival of Tear Gas Squad. When the police officer-in-command at the scene of a riot decides to use tear gas, he should be in a position to let the tear gas squad know on arrival exactly how matters stand.

The arrival of the squad will have a definite psychological effect, and the commanding officer of the squad should first address the crowd through a portaphone (Illus. 19) and order them to disperse. After this there should be no hesitation and half measures are useless.

In the event of munitions running short, gas action should be concentrated on the most threatening part of the mob.
Factors Governing Release of Tear Gas. The tactics to be employed in any tear gas action will depend on several factors all of which must be taken into account before gas is released. The most important of these are:

1. The direction and force of the wind.
2. The size and temper of the mob.
3. The lines of escape for the mob.

Utilization of Wind. The proper use of wind currents is the most important single factor in laying a successful barrage of tear gas, and can only be acquired by constant practice.

In the open air there is generally more or less wind which tends to divert a tear gas cloud from the vertical to the horizontal. This tendency is accentuated by the fact that tear gas is generated under pressure.

Usually the greater the force of the wind the more horizontal will be the path of the tear gas cloud, but in towns and broken country wind currents are so variable that it is always advisable first to use a pilot shell.

As a general rule Spedeheat grenades and shells should be laid down 3 to 5 yards apart, and about 10 yards to windward of a mob, but if the wind is very high it may be best to put them direct into the mob in the same way as the Three-Way grenade.

If the police are forced into the position of having to make contact with the mob up-wind, as may happen sometimes in built up areas, the tear gas barrage should be laid down by firing shells at high elevation to land on the windward side of the mob. In such cases the correct line of release should be first ascertained by firing a pilot shell.
Line of release of Tear Gas. The direction of the wind will determine generally the line from which the gas cloud must be released in order to drift across the area occupied by the mob. The force of the wind will influence both the distance of the line of release from the mob, and the interval between the grenades or shells on the line of release. The line of release will normally be at right angles to the wind direction, but it is not necessary for the squad to be along the line of release. All that is required is to determine the line and then distribute the grenades or shells along it.

Diagram 9. Line of Release of Tear Gas
Lateral Spread of Tear Gas. The lateral spread of tear gas driven by wind may be taken as approximately one fifth of the distance travelled. This means that if grenades or shells are planted at intervals of 5 yards their respective gas clouds should combine to form a screen at a range of
approximately 25 yards. This one fifth rule may be taken as a rough guide when putting down a tear gas barrage, but it is a minimum and a generous extra allowance of grenades or shells should be allowed for other atmospheric conditions.

These conditions are varying wind velocities close to the ground, heat and damp. The closer gas hangs to the earth, the slower will be its motion. Therefore heat which causes it to rise lessens its concentration, whereas damp conditions increase its concentration. Fortunately, however, even a weak concentration of tear gas can be quite effective.

**Size and Temper of the Mob.** The area occupied by a mob determines the length of the line of release of tear gas which should be sufficient to overlap the mob on both sides. The temper of the mob will determine the quantity of gas required. A violent and fanatical crowd will require much more severe treatment than a non-violent one.
Splitting Crowds. In case of very large crowds splitting action is necessary. This is effected by attacking the mob from two sides. In the first stage, No. 1 squad should operate down wind, and No. 2 squad should operate simultaneously on the flank. When the squads make contact No. 1 should turn right, and No. 2 half left. In this way the mob can be divided into three sections.

Diagram 11
Police quell Wisconsin's state Capitol by throwing bottles at them.

"I'm sure alcohol had a big part of this," Grady said.

People threw bottles at apartment windows, and some residents retaliated with bottles, injuring at least two people, police said. Others ripped out street signs and bike racks, threw bricks, tipped trash barrels and newspaper vending machines and started a small fire.

For several hours, the crowd smashed windows in nine businesses and looted two in a two-block area before police regained control. Lt. Cameron McLay said those arrested were charged with battery and looting.

The huge crowd early Sunday included many out-of-towners.

"It's not unusual for a lot of people to come from around the nation," Grady said. "It's usually a good time and a safe time."

State Street was still closed late Sunday morning.

"We had to reroute buses. It's so trashed they just can't go down there," Grady said.
An unidentified man kicks a store window on State Street early Sunday morning in Madison, Wis. Police used tear gas and pepper spray to break up a crowd of thousands of people who were looting, throwing bottles and smashing windows. Police arrested at least six people on charges including battery, negligent handling of burning materials and looting a store.
Attacks on agents rising, Border Patrol reports

Tear gas, pepper spray fired into Mexico

ASSOCIATED PRESS

SAN DIEGO — Border Patrol agents are firing tear gas and powerful pepper-spray weapons across the border into Mexico to repel what the agency says are an increasing number of attacks by assailants hurling rocks, bottles, and bricks.

The counteroffensive has drawn complaints that innocent families are being caught in the crossfire.

"A neighbor shouted, 'Stop it! There are children living here,'" said Esther Arias Medina, 41, who fled her shanty in Tijuana, Mexico, Wednesday with her 1-year-old grandson. The infant had begun coughing from smoke that seeped through the walls.

A helmeted agent on the U.S. side said nothing as he stood with a rifle on top of a 10-foot border fence next to the three-room home that Ms. Arias shares with six others.

"We don't deserve this," Ms. Arias said. "The people who live here don't throw rocks. Those are people who come from outside, but we're paying the price."

Witnesses in her hard-scrabble neighborhood described eight attacks since August that involved tear gas or pepper spray. Some forced residents to evacuate, they said.

The Border Patrol says its agents have been attacked nearly 1,000 times in a year.

The agency's top official in San Diego, Mike Fisher, said agents are taking action because Mexican authorities have been slow to respond. When an attack happens, he said, American authorities often wait hours for them to come and help usually never arrives.

"We have been taking steps to ensure that our agents are safe," Mr. Fisher said.

Mexico's acting consul general in San Diego, Ricardo Pineda, has insisted that U.S. authorities stop firing onto Mexican soil. He met with Border Patrol officials last month after the agency fired tear gas into Mexico. The agency defended that counterattack, saying agents were being hit with a hail of ball bearings from slingshots in Mexico.

U.S. officials say the violence indicates that smugglers are growing more desperate as stepped-up security makes it harder to sneak across the border. The assailants try to distract agents long enough to let people dash into the United States.

The head of a union representing Border Patrol employees said the violence also results from the decision to put agents right up against the border, a departure from the early 1990s when they waited farther back to make arrests.

"When you get that close to the fence, your agents are sitting ducks," said T.J. Bonner, president of the National Border Patrol Council.

Border Patrol agents were attacked 987 times along the U.S.-Mexico border during the 12-month period that ended Sept. 30, the agency said. That's up 31 percent from 752 attacks a year earlier. It is the highest number since the agency began recording attacks in the late 1990s.

About two-thirds of the attacks
Agent Joseph Ralph stands in San Diego with his back to the border fence and Tijuana, Mexico, as he describes attacks on Border Patrol members from the far side, including rock throwing.

were with rocks. Many of the rest involved physical assaults, such as illegal immigrants getting into fist fights with guards.

About one of every four attacks occurred in San Diego, and most of those happened along a heavily fortified, 10-mile stretch of the border starting at the Pacific Ocean.

Agent Joseph Ralph estimates he has been struck by rocks 20 times since joining the Border Patrol in 1987, once fracturing a shoulder blade.

About four months ago, a large rock struck the hood of agent Ellery Taylor's vehicle. "The only thing you can think is, I'm glad that that wasn't my head. There's no way to see it coming," Mr. Taylor said.

In October, agents in California and Arizona received compressed-air guns that shoot pepper-spray canisters more than 200 feet. Agents had less powerful pepper-launchers that lose their punch after about 30 feet and even less if absorbed by thick clothing or cardboard.

The Border Patrol says the pepper weapons are less lethal than regular guns, but have caused at least one fatality.

In October, 2004, a college student died after she was struck in the eye by a pepper-spray canister that officers fired to control a celebration of the Red Sox's pennant win.

Border Patrol SWAT teams along the 1,952-mile U.S.-Mexico border also may use tear gas, "flash bombs" that emit blinding light, and "sting ball" grenades that disperse hundreds of tiny rubber pellets.
Elian Gonzalez Seized From His Miami Home, April 22.
Cincinnati Mayor Imposes Curfew to Quell Violence

More Unrest Following Killing by Officer

By FRANCIS X. CLINES
CINCINNATI, April 12 — This racially tense city was placed under a strict nightlong curfew today as the authorities struggled to stop sporadic vandalism and the confrontations with police officers that followed the fatal shooting of a black teenager by the police.

"Despite the best efforts of the good citizens of our city, the violence on our streets is uncontrolled and it runs rampant," Mayor Charlie Luken declared as he announced a state of emergency and ordered that the streets be kept clear of most people from 8 p.m. until 6 a.m. until further notice.

Acting after four days of confrontation between the police and roving crowds of protesters and vandals, Mayor Luken conceded that there might be "very legitimate" validity to complaints by blacks about racial profiling by the police. But he said the more immediate problem was to restore civil order.

"Knock it off now," the mayor, a Democrat, told violent protesters who have emerged among groups of young black men protesting the shooting on Saturday of an unarmed teenager in an alley by a pursuing officer. He was the 15th black suspect killed by police officers here in the last six years and the fourth since November.

In the first hours of the curfew, the city was a ghost town under lockdown. Police reported a few violent incidents and more than a score of arrests of curfew violators, while the mayor, claiming initial success, cautioned that a long weekend lay ahead.

The White House announced that President Bush had asked Attorney General John Ashcroft to "help calm and resolve the situation" by dispatching two Justice Department mediators to investigate the trouble.

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See full page image microfilm.
Mayor, cautioning initial success, cautioned that a long weekend lay ahead.

The White House announced that President Bush had asked Attorney General John Ashcroft to "help calm and resolve the situation" by dispatching two Justice Department mediators to investigate the trouble.

With the city's 1,030-member police force working 12-hour shifts, the mayor said there was "active consultation" with Gov. Bob Taft about the use of National Guard troops, if necessary, to provide relief.

"I don't expect that situation will arise," Governor Taft said tonight in a broadcast interview. Seventy-five State Police officers have been ordered to assist the local police.

Through the day, political and church leaders met, emphasizing the need for order.

"We are trying to keep our youth in tonight," said Juleana Frierson, an assistant to the Rev. Damon Lynch III, the influential pastor of New Prospect Baptist church, who traveled from meeting to meeting.

Some families left Over-the-Rhine, a black neighborhood where much of the vandalism has occurred, to seek refuge in calmer neighborhoods, complaining of violent young people compounding the problem.

"We don't want any of this," one resident, Fantasy Keahan, said as she left.

"Cincinnati's a microcosm, the belly of the whale," said Kwesi Mfume, national president of the N.A.A.C.P., who addressed community leaders on the need to solve the problem of racial profiling by the police. "It's important for the nation to focus here on ground zero. If we can fix it here, we can fix it elsewhere. But if it doesn't get fixed here, it turns into anarchy and all of us are left wondering. Is justice blind?"

No deaths have occurred in the four days of street violence in which groups of vandals have staged hit-and-run raids on dozens of stores, looting some of them. More than 40 people have sought treatment at hospitals, including some struck by the rubber bullets, beanbags and tear gas the police have fired in efforts at crowd control. The police made more than 100 arrests, most of them on Monday and Tuesday.

Shopkeepers in some of the quieter parts of the city could be seen boarding their windows as the curfew was announced. The police were instruct-

Mayor Charlie Luken of Cincinnati declaring a curfew yesterday.

the city administration's leading critics did not disagree.

"The fringes have taken over the protest," said Scott Greenwood, a Cincinnati resident and general counsel for the American Civil Liberties Union. The A.C.L.U. and prominent blacks filed a federal lawsuit against the city last month accusing the police of systematically violating the rights of black residents for 30 years with frivolous arrests and the excessive use of deadly force.

"We can't negotiate about police behavior while the entire city is under siege," Mr. Greenwood said, citing the fatal shooting on Saturday of Timothy Thomas, 19, as an example of "the very conditions that led us to file a lawsuit."

The police said Mr. Thomas was shot when Officer Steven Roach, who is white, thought he was about to draw a weapon. No weapon was found, and on Tuesday, Mayor Luken said of Officer Roach's account that "the initial finding don't back him up."

The police said Mr. Thomas had 14 outstanding warrants when he was shot. But Mr. Greenwood said all were for misdemeanors or for traffic infractions.

"Five of them for not wearing a seat belt while driving," Mr. Greenwood said.

"That's a charge of last resort when they can't get you for something else," he said, contending that countless blacks had been similarly stopped by police officers.

The last racial protests that attracted outside attention in this city were in 1968, in the aftermath of the assassination of the Rev. Dr. Martin Luther King Jr.
Appeals for Peace in Ohio After Two Days of Protests

Unrest Erupts Over Police Killing of Black

By FRANCIS X. CLINES

CINCINNATI, April 11 — This city’s clergy and political leaders pleaded for peace on the streets today after two days of sporadic protests and vandalism that followed the fatal shooting of an unarmed black teenager by a white policeman.

“This situation has been festering for over five years,” City Councilwoman Alicia Reece said. She surveyed the 66 arrests and damage to dozens of city stores as evidence of deepening tensions between the police and black residents who have long complained of racial profiling by officers.

“It is a time bomb that has exploded,” Ms. Reece said, standing outside City Hall, which was unusually quiet at midday, cordoned off by mounted police officers with riot gear. Twenty-five people were reported to have received hospital treatment, some struck by the nonlethal ammunition the police used.

Today’s calm was broken at nightfall as small hands broke windows at businesses, threw stones and bottles at automobiles and looted stores. A police officer was shot, but a bulletproof vest deflected the shot, The Associated Press reported.

Mayor Charlie Luken said the city might request help of the National Guard if the trouble continued, The A.P. said.

Last month, a coalition of black civil rights groups and the American Civil Liberties Union of Ohio filed suit in federal court in Cleveland accusing Cincinnati of a “30-year pattern of racial profiling.” The suit says that blacks are routinely singled out by the police for minor offenses far more than whites are and that police officers “tend to use excessive and deadly force against African-Americans more readily than
Gene Jones swept up glass yesterday in a Cincinnati furniture store.

sources into cracking down on us, without asking who's guilty or innocent. It's at the point now where we talk of D.W.B. arrests — the crime of driving while black.”

Broken glass crunched underfoot on Elder Street in Over-the-Rhine this morning as cleanup crews arrived before a mayoral visit.

“Brother, let reason and judgment prevail!” boomed the voice of the Rev. Isaiah Gaines, a retired judge and black leader who walked the streets near the New Prospect Baptist Church, greeting black residents and white and black merchants.

Mayor Luken emphasized the need to bolster trust between residents and the police force. “We’ve got a long way to go,” he admitted in a scene reminiscent of the 1960’s, a white mayor in shirt-sleeves trying to calm black residents before a phalanx of television cameras.

The city’s airwaves crackled with a virtual duel of talk radio programs. “Most of my friends will run from police,” said a caller to “The Buzz” on WBDZ, a station favored by black residents “They just don’t respect us.”

Defenders of the police called WLW, denouncing “that wimp of a mayor” and complaining that blacks kill most of the city police slain in the line of duty.

“Call out the National Guard,” demanded one caller. Gov. Bob Taft, a Republican, declined to take that step, urging the city in a statement to “cool and calm the rhetoric.”
Riots rock Michigan city

BENTON HARBOR, Michi- gan—Hundreds of people rioted for a second straight night following the death of a biker who was being chased by police, setting houses and cars ablaze as authorities declared a state of emergency.

Police confirmed one person was shot in the shoulder and said there have been a couple stabbings as well as beatings. Four houses and five private cars were on fire and several police cars were damaged in this southwestern Michigan city of about 12,000 people where allegations of police harassment have been a source of tension.

More than 100 police officers from the Michigan State Police, Benton Harbor and other nearby cities were on the scene in riot gear and preparing to use tear gas on the crowd early Wednesday morning.

At least seven people had been arrested.

The violence stemmed from the death, early Monday of Terrance Shurn, 28, of Benton Har- bor, who lost control of his speeding motorcycle while being chased by a police officer.

Police said they did not know why Shurn was fleeing from the officers, although his operator’s license had been suspended and officers found a small amount of marijuana on him, state police Lt. Joseph Zangaro said.

The death sparked three hours of unrest late Monday and early Tuesday in which police officers were pelted with bricks and bot- tles, and several police and fire de- partment vehicles were damaged.

The initial wave of chaos subsided at about 2 a.m. Tuesday, but more vi- olence broke out Tuesday night. AP

POLICE officers move toward a building set on fire by rioters June 17, in Benton Harbor, Mich. Hundreds of people rioted for a second straight night following the death of a biker who was being chased by police.
All those billions of dollars spent to prepare law enforcement and the US military for civil unrest are not going to waste.

This past week, police converged on Western Illinois University (situated in a town of about 20,000 people) as students engaged in their annual block party. Unlike previous years, however, this year a decision was made to respond with riot gear, tear gas, sound weapons, intimidation and mass arrests.

The most curious issue surrounding the response is that students, by many accounts, were not engaged in any significant unlawful behavior (open containers, maybe some intoxication and tomfoolery) and the block party was behind held, for the most part, at private residences.

Bored with the usual, local and surrounding police forces decided to deploy officers in full riot gear – at least a hundred of them. They were undoubtedly anxious to play with their new federally funded non-lethal anti-personnel weapons, as evidenced by their use of everything from LRAD sound weapons to tear gas to disperse and aggravate the crowd.

The events that unfolded at WIU are just the latest in a trend we’ve seen develop around the world in recent years. We’ll note that the governor of Wisconsin, when recently faced with mass protests, responded similarly by putting the National Guard on alert within hours of demonstrators gathering in the Capitol.

We would like to say that in the very near future large-scale police response will be the norm, but this is not the case. The future is now. Block parties, protests and any gatherings of large groups of people are already seeing a strong storm trooper presence and being dealt with swiftly once the order is given.
The Associated Press State & Local Wire

**November 3, 2009 Tuesday 10:06 PM GMT**

**Tear gas used at school fight in St. Louis**

**SECTION**: STATE AND REGIONAL

**LENGTH**: 117 words

**DATELINE**: ST. LOUIS

St. Louis public school officials are investigating after security guards sprayed tear gas to break up a fight at Sumner High School.

The incident happened around noon Tuesday in the school cafeteria. District spokesman Patrick Wallace said that from eight to 12 male students who were involved in the altercation were treated for exposure to the tear gas. Details of their injuries were not available.

Wallace said the security guards who broke up the fight told the students to disperse. But not everyone did. He said other students who were not involved in the fight but who didn’t leave the area also may have suffered the effects of tear gas.

He said no arrests were made, but students may be punished.

**LOAD-DATE**: November 4, 2009

**LANGUAGE**: ENGLISH

**PUBLICATION-TYPE**: Newswire

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Police Arrest 2 in Riot at University of Oregon College Town

Published September 25, 2010 / Associated Press

EUGENE, ORE. – Police in the Oregon college town of Eugene used tear gas to disperse about a crowd of 400 people who threw bottles at officers, broke car windows, and tore down street signs in a residential neighborhood.

Police say no injuries were reported, but two people were arrested on charges stemming from the riot late Friday.

Eugene is the home of the University of Oregon. Officers say college students often rent large homes in the area with basements that can hold several hundred people.

Police say they called in 50 officers from three other agencies to assist them in dispersing the crowd. Twenty-four-year-old Odin Erickson faces rioting, interfering with police and criminal mischief counts; 19-year-old Derek Brown was charged with disorderly conduct.

Police chief Pete Kerns calls the incident "disappointing."
Sterling University Vista Apartments

Location
625 Cantrill Drive

Phone
(530)753-2440

Email
sterlingvista@suhvista.com

Website
http://suhvista.com

Note: This is historical information; see University Village for the current

Sterling University Vista Apartments was the site of an infamous Davis riot in 2004. Sterling University has since been sold by Sterling University Housing, so look at Sterling University Housing's website, and you'll understand how the riot worked.

On the Friday evening of Picnic Day 2004, multiple private parties within the complex were increasingly aggressive; bottles were thrown, individuals jumped on vehicles, and all people were pelted by glass and other items. On the way home, we came across a group of people who had escaped from the riot and saw police across the street suit up in riot gear and immediately parked, jumped out, and ran up to a friend's place on the street. It was a kind of insane. Tear gas cannisters up on the balconies, setting off fire alarms, and did see bottles being thrown from balconies across the way. It was insane. After an hour or so, we headed downstairs to leave, but when we opened the doors, they were shouting "STAY INSIDE" at us. It was one of the more startling moments of my life. I think it was around 3:30 a.m. The experience with Sterling University Vista Apartments. — TomGarberson

(Please note that other apartment complexes in Davis, Sterling Court and St...

See Police Misconduct Stories for commentary on the Sterling riot.
Rent complex.

A riot that broke out on Picnic Day in the complex joined to form a massive event. As Davis Police responded to complaints and obscenities hurled. Police estimated the crowd size at 500, and because of this event.

Riot gear was donned and law enforcement re-entered the complex and found someone a ride home from another party. We saw and heard fire alarms (the riot gear (apparently a second... or third... wave). Being the wise and discerning we hung out on the balcony for a while with fire alarms throughout much of the complex. From our angle, we couldn't see a lot incredibly loud, with people on almost every balcony, lots of them shouting, either opened the door to step out, it was only to discover a long line of officers in full riot gear in my life. Naturally, rather than staying inside while things cooled down, we turned on the stereo by that point, and things in the complex were quieting down a bit. And that's

Sterling Pointe Apartments, are unrelated to Sterling University Vista Apartments.
By The New York Times

JERSEY CITY, April 24 — About 50 people, most of them firefighters, were injured late Monday when someone threw a canister of military-strength tear gas into the lobby of an apartment building here, spreading a thick white smoke that burned the skin and eyes.

"It was the most horrifying, terrifying experience of my life," said Minda Manalac, 39, who fled her second-floor apartment to the lobby. "I didn't think I could make it because I couldn't see at all, and I was gagging and vomiting, and I kept tripping and falling. I thought I was going to die."

Steven McGill, assistant director of the Jersey City Fire Department, said that someone had thrown the canister through a plate-glass window or had smashed a hole in the window and lobbed the canister into the lobby at the eastern entrance of the building, at 283-285 Stegman Parkway. The gas set off smoke detectors, to which firefighters responded at 11:56 p.m. Monday, he said.

At the scene, Mr. McGill said, residents stumbled from the clouded lobby of the four-story building, coughing and gasping for air, their eyes watering. "Some of the people were actually jumping out of windows," he said.

Firefighters had thought that they would be battling ordinary smoke and fire, and 28 were injured by the gas, Mr. McGill said. Four residents in the building's 36 apartments were hospitalized. About 20 were injured, and most of them declined further treatment after being hosed down and scrubbed by the department's hazardous materials unit, Mr. McGill said. Residents were allowed to return to their apartments at 2:30 a.m.

The Jersey City Police Department is investigating the incident, with help from the Federal Bureau of Investigation and the Bureau of Alcohol, Tobacco and Firearms. The police said they had no suspects.

The gas, in a canister the size of a shaving cream can and with the letters M7CS, was the type used by the military, Mr. McGill said. "The normal, everyday person shouldn't have that," he said.
Grenade in hand ready for throwing
(safety pin withdrawn)

Illustration 5
PART IV

STRENGTH AND EQUIPMENT OF TEAR GAS SQUADS

Strength of Tear Gas Squads. The strength of a tear gas squad is a question for the Chief of Police in the territory concerned, according to the strength of the police force. Ordinarily a squad should consist of 1 Officer-in-Charge, 1 Junior Officer and 12 to 20 Constables. The introduction of the baton shell for riot control has made it advisable to have squads of greater strength than formerly in order to supply the requisite gun power.

Distribution and Transport of Squads. The distribution of tear gas squads will depend on the size of the police district, and should correspond more or less to the distribution of armed police, but tear gas can be used most effectually in the earlier stages of rioting, so squads should be readily available, and provided with motor transport, which is essential owing to the bulk and weight of tear gas ammunition.

Munitions Carried by Squads on Duty. The equipment which should be carried by squads on duty is shown in the attached table.

Munitions in Reserve. These should be carried in the wagon and should consist of:

<table>
<thead>
<tr>
<th>Munitions</th>
<th>Quantity</th>
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<tr>
<td>Spedehot Grenades</td>
<td>48</td>
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<tr>
<td>Three-Way Grenades</td>
<td>48</td>
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<tr>
<td>Short Range Shells</td>
<td>72</td>
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<tr>
<td>Long Range Shells</td>
<td>72</td>
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<tr>
<td>Flite-rite Shells</td>
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<tr>
<td>Baton Shells</td>
<td>144</td>
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<tr>
<td>Buckshot Cartridges</td>
<td>72</td>
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# Equipment to be Carried by Tear Gas Squads on Duty

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<th>Carried individually by</th>
<th>Grenades</th>
<th>Guns with Attachment</th>
<th>Shells</th>
<th>Buckshot Cartridges</th>
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<td>Speeheat</td>
<td>Three-Way</td>
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<td>Officers</td>
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<td>Constables</td>
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PART V

TRAINING OF TEAR GAS SQUADS

Curriculum. A tear gas squad should train as a single unit under its own officers, and should specialise in this work only. Training should consist of lectures in a classroom with enlarged diagrams from this manual and a blackboard, followed on each occasion by field exercises to illustrate the points explained.

The training should occupy at least a month, as many days being allotted to each exercise as the field training requires. At the end of each exercise the squad should be examined to see if they have assimilated the instruction.

A special target is required for training tear gas squads. The one recommended is a wooden erection of 1-inch planks measuring 20 feet long by 16 feet high covered with Celotex or similar insulation board, a builder's material which will take colour wash and is soft enough not to injure practice shells. The insulation board should be at least 1 inch thick. On this target, about 6 feet from the ground, a space 6 feet by 4 feet should be aligned with an extra covering of insulation board for use of the practice flite-rite shells. Shells will ordinarily penetrate this target four inches and can be easily removed without injuring the fins. In case they do fall there should be a line of sacks, filled with straw, at the base of the target. There should be a line across the target, at 4 feet from the ground, for buckshot practice with both gun and truncheon.

In addition to the target described above, there should be a shed on the range used for training tear gas squads. This shed should be about 30 feet by 20 feet, with doors at each end and removable windows. It is required for training in the use of the flite-rite shell and the respirator, as described in Exercise 5.
1 inmate dies, 100 hurt in Calif. prison riot

CASTAIC, Calif. — A riot at a maximum-security jail yesterday left one inmate dead and more than 100 injured, nine critically, authorities said.

Numerous ambulances were summoned to the remote North County Correctional Facility north of Los Angeles after fighting began and guards fired tear gas. No law enforcement personnel were injured, officials said.

Jail officials were not available for comment.

Mega Millions jackpot
Five critically injured in California prison riot

A riot involving more than 300 inmates causes a California prison to remain locked down.

CHRISTINA ALMEIDA
THE ASSOCIATED PRESS

LANCASTER, Calif. - A state prison in the Mojave Desert remained locked down Friday after a prison-yard riot involving more than 300 inmates left five critically injured.

The California State Prison, Los Angeles County, has been under lock-down since Dec. 11, when a guard was beaten by four inmates, said Terry Thornton, a spokeswoman for the state Department of Corrections. The inmates were just starting to get some of their privileges back when the fighting erupted Thursday morning.

The fight apparently began when a group of white inmates began fighting among themselves, and some black and Hispanic inmates used the opportunity to attack each other, said Russ Heimerich, a spokesman from the Department of Corrections.

The riot drew in 300 to 400 maximum-security inmates in a recreation yard of the prison, 40 miles northeast of Los Angeles, said prison spokesman Ron Nipper. Guards quelled the violence within 15 minutes, he said.

The guards used pepper spray, tear gas and wooden bullets on the prisoners before firing several warning shots, said Margot Bach, a Corrections Department spokeswoman.

"The inmates started to fight, and it just gained momentum," with prisoners using fists and homemade weapons, Nipper said.

When it was over, authorities recovered 26 homemade weapons. No guards were hurt, but five inmates were hospitalized with deep puncture wounds and 12 others were treated for cuts at the prison infirmary, Bach said. The five remained hospitalized in critical but stable condition Friday, officials said.

By Thursday afternoon, many inmates were confined to their cells.

Those from the section of the prison involved in the riot will slowly be returned to their normal routines over several weeks as authorities try to determine what started the fighting and who was directly involved. Those found to be responsible could face criminal charges, Nipper said.

The prison was designed to hold 2,200 inmates but has...
A wounded prisoner is removed from a helicopter at Holy Cross Hospital in Mission Hills, Calif., after being injured in a prison riot Thursday.

more than 4,000 in its minimum- and maximum-security wings. It was not immediately clear whether crowding may have contributed to the rioting.

Overcrowded prisons have been the scene of brawls involving racial unrest in recent years. Last year, a racial brawl involving more than 120 inmates left 10 people injured.

In 1999, an inmate was shot by guards during a brawl between whites and Hispanics.

The 262-acre prison opened in 1993 and has more than 1,200 employees.
Prisons director: Money needed

Ozmint says lack of funds keeps system behind

Associated Press

COLUMBIA — The leader of South Carolina’s prison system said that if his agency was receiving enough money, it could have reacted faster to a disturbance last week at a state prison.

Years of inadequate funding have left prisons behind in staffing and technology, Jon Ozmint told The Greenville News.

The lack of officers became an issue last week when several inmates refused to return to their cells at Lee Correctional Institution in Bishopville. The disturbance at a wing of the maximum-security prison overwhelmed the guards on duty, who fired tear gas into the unit and sealed it off.

Additional officers might not have been able to prevent the disturbance, in which three inmates suffered minor injuries, but Ozmint said it likely would have taken only 15 to 20 minutes to get back inside the wing and restore order instead of the two hours officers spent trying to round up enough people to re-enter the area.

The agency lost 1,600 staff several years ago in budget cuts. Many of those were security positions, leaving fewer officers in housing units and no officers in watchtowers.

Some lawmakers want to make sure the prison system is spending the money it does have properly. Senate Finance Committee Chairman Hugh Leatherman suggested a review of the agency's finances to make sure there isn’t any mismanagement.

Ozmint called allegations of mismanagement "a joke."

"We’re not perfect, but we’ll be glad to compare ourselves to any other agency in state government," he said. Every agency in the state knows we do more with less than any prison system in the country. We welcome the review. The problem is it’s just politics and a waste of time."

Ozmint said prisons also need more money to replace worn locks. Locks are supposed to be changed every 15 years, but some have not been replaced since the facility opened 30 years ago.

Older locks are easier to pick, Ozmint said.

The head of the Senate committee that oversees prisons said members are aware of the problems but struggle to get the agency any more money.

"Even though they are the third largest agency in the state doesn’t mean they are funded adequately from anybody’s perspective," said Sen. Mike Fair, R-Greenville.
“Every agency in the state knows we do more with less than any prison system in the country. We welcome the review. The problem is it’s just politics and a waste of time.”

Jon Ozmint, South Carolina Corrections Department
Guards end blockade to put down inmate uprising

Associated Press

NEW YORK — Guards who blockaded the Rikers Island jail in a protest over prison violence rushed back from the picket line to put down an uprising by about 800 inmates. At least 12 guards and 35 prisoners were reported hurt.

Guards used tear gas to quell the disturbance, which erupted just before a settlement was announced in the two-day blockade of the giant jail.

The inmates apparently were angry over the blockade, which had kept prisoners from having visitors, disrupted meal schedules, kept thousands of workers from going home and left the prison short of guards, officials said.

“They were just fed up and they knew there weren’t too many of us, and that we were tired,” said a guard, speaking on condition of anonymity.

As word of the uprising spread, many guards who took part in the blockade rushed to the prison to help put down the riot.

The inmates barricaded themselves in 14 dormitories at the Otis Bantum center and smashed pipes and windows, said Corrections Department spokeswoman Ruby Ryles.
Blockade of jail mate uprising

to gas them.

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Center holds 1,450
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However, Emer-
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said 20 guards
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were treated on the is-

were two offi-
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mate was reported
ously hurt.

City officials had met with union
leaders to negotiate an end to the
blockade, which was prompted by
the Aug. 7 robbery and beating of a
guard by inmates. Three inmates
were later charged with robbery
and assault.

Corrections officers had demand-
ed measures to protect them from
inmates, and about 600 took part in
the blockade of a bridge to the is-
land in the East River.

“We're getting beaten, stabbed
and cut with razors day in and day
out,” said guard Bob Hoops. “And
that’s why we’re here.”

Phil Seelig, who heads the Cor-
rection Officers Benevolent Associa-
tion, said the guards' 33 demands
had been met, including the elimi-
nation of a rule that prevented
guards from using force unless they
were threatened.

Under the new regulation, he
said, guards may “exercise authori-
ty where appropriate.”

But the city's Corporation Coun-
sel, Victor Kovner, said the new
rule does “not materially change
the circumstances under which
force may be applied.” The new
rule is subject to court approval.
An injured correctional officer is removed from Rikers complex Tuesday evening.
Island by ambulance personnel after a riot at the jail.
FRANKFORT, Ky. (AP) — Despite previous assertions, investigators said Friday that bad food was not the primary cause of a riot at a central Kentucky prison.

The inmates at Northpoint Training Center were instead reacting to a partial lockdown and to planned restrictions on their movement, investigators said in a 22-page report released Friday.

On Aug. 21, prisoners started fires in trash cans at Northpoint, a medium-security facility near Burgin, about 30 miles south of Lexington. The fires spread, seriously damaging several buildings.

Officers in riot gear rushed in with tear gas, and all inmates were subdued within two hours. Eight inmates were taken to hospitals, and eight prison workers were treated at the scene.

The damage to the prison,

On Wednesday night, two dozen inmates were injured in a riot among 300 people that ended after teams of deputies fired rubber pellets. That riot, as well as those that occurred on Monday and Tuesday, was at the Pitchess center.

Since the worst of the rioting on Saturday, when a 43-year-old inmate was beaten to death, the sheriff’s department has locked down all jails, suspending activities and privileges in the system — the nation’s largest, with 21,000 inmates.

“We are convinced it is traced back to an age-old gang war in South Los Angeles,” said Steve Whitmore, a spokesman for the Sheriff’s Department. “It is a small core group of people, and most of the inmates don’t want to fight.”

Mr. Whitmore declined to elaborate on a motive for the violence, but members of the clergy and community advocates who met on Thursday with inmates said they were told that a gang called the Mexican Mafia had ordered retaliation on black gang members who had apparently attacked Latino gang members in Los Angeles in a dispute involving drugs, turf or both.

In a move deployed only in emerg-
which opened in 1983, was so severe that about 700 inmates had to be transferred to other prisons around the state.

A corrections officer, Matt Hughes, told lawmakers this month that he believed that inmates had rioted because they were upset over the quality and quantity of food rations. But investigators said in the report that interviews with the inmates determined that there was a general concern about the quality of food and the prices of canteen items, but most inmates said neither was a primary cause of the disturbance.

Investigators said the prison was put under partial lockdown after a fight, involving weapons, between about 10 Hispanic inmates and two others, one black and one white, who had stolen canteen items from one of the Hispanic prisoners.

With substantial support from black voters, Mr. Villaraigosa last year became the city’s first Latino mayor in more than 100 years.

But he took office after a spate of fights among black and Latino students at several schools in Southern California, including one in South Los Angeles that endured at least three such brawls.

“What you are seeing in the jails is symptomatic of a much deeper malaise,” said Earl Ofari Hutchinson, a radio talk-show host who organizes the weekly Los Angeles Urban Policy Roundtable, a discussion group that recently addressed the conflict among blacks and Latinos.

“Blacks and Latinos have been clashing in schools, on the streets, in the workplace, in hospitals,” Mr. Hutchinson said, noting the decline in the black population as the number of Latinos increases. “I don’t necessarily mean physically clash, but struggling over turf as neighborhoods change and become predominantly Latino.”
Inmates Set Fires in Riot In Kentucky

BURGIN, Ky. (AP) — Four prisoners remained hospitalized and hundreds of others had to be relocated Saturday after rioting inmates set their central Kentucky prison on fire.

Flames shot into the air during the riot on Friday night, seriously damaging several buildings. Parts of the medium-security Northpoint Training Center continued to smolder nearly 24 hours later.

The 500 inmates who remained at the prison, 30 miles south of Lexington, were being compliant, said Jennifer Brislin, a spokeswoman for the Kentucky Justice and Public Safety Cabinet. About 700 others were being taken to other facilities across the state.

Officials would not say what caused the rioting, which injured eight staff members and eight prisoners. None of the injured staff members were hospitalized, said Cheryl Million, a spokeswoman for the Kentucky Department of Corrections. The authorities declined to provide conditions for the inmates still being treated.

Those who remained at Northpoint were getting food and medical care from temporary stations because the fire destroyed six buildings, including a kitchen, a medical center, a canteen and a visiting area. They were to be moved into a 196-bed dormitory that remained habitable, as well as a unit of single cells.

The disturbance started when prisoners set fire to trash cans and other items inside and outside the prison.

Officers in riot gear rushed in with tear gas, and all the inmates were subdued within two hours, the authorities said.

Local and state police formed a perimeter around the facility to prevent escape.

A prison spokeswoman, Mendolyn Cochran, had told The Advocate-Messenger of Danville that the facility had been on lockdown since Tuesday, when a group of inmates assaulted two others. Ms. Million would say only that some inmates had access to matches because smoking is allowed in parts of the prison.

Northpoint, according to its Web site, had more than 1,100 general-population inmates being housed in six open-bay dormitories.
APPENDIX 1

SICKENING GAS

As a supplement to tear gas a more powerful deterrent is available for extreme cases such as arrests of armed criminals, prison riots, sabotage, prolonged rioting, etc., where tenderness would be out of place. This is a mixture of CN and DM (diphenylaminechlorarsine), and is known as sickening gas.

The effect of sickening gas is a short but sharp attack of sea-sickness which lasts about three hours. It leaves no harmful after-effects although in extreme cases a headache and feeling of depression may persist until the following day. First aid for sickening gas is the same as for tear gas except that persons affected should lie down until the feeling of nausea has passed off.

DM munitions cannot be mistaken as they are painted green. They should be kept in reserve and only issued by the officer in charge of a tear gas squad. If it is considered necessary the amount of sickening gas kept in reserve should be as follows:

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77
Tear Gas—Harassing Agent or Toxic Chemical Weapon?

Howard Hu, MD, MPH; Jonathan Fine, MD; Paul Epstein, MD, MPH; Karl Kelsey, MD, MS; Preston Reynolds, MD, PhD; Bailus Walker, PhD, MPH

Tear gas has gained widespread acceptance as a means of controlling civilian crowds and subduing barricaded criminals. The most widely used forms of tear gas have been o-chlorobenzylidenemalononitrile and o-chloroacetophenone. Proponents of their use claim that, if used correctly, the noxious effects of exposure are transient and of no long-term consequences. The use of tear gas in recent situations of civil unrest, however, demonstrates that exposure to the weapon is difficult to control and indiscriminate, and the weapon is often not used correctly. Severe traumatic injury from exploding tear gas bombs as well as lethal toxic injury have been documented. Moreover, available toxicological data are deficient as to the potential of tear gas agents to cause long-term pulmonary, carcinogenic, and reproductive effects. Published and recent unpublished in vitro tests have shown o-chlorobenzylidenemalononitrile to be both clastogenic and mutagenic. Sadly, the nature of its use renders analytic epidemiologic investigation of exposed persons difficult. In 1969, eighty countries voted to include tear gas agents among chemical weapons banned under the Geneva Protocol. There is an ongoing need for investigation into the full toxicological potential of tear gas chemicals and renewed debate on whether their use can be condoned under any circumstances.

(JAMA. 1989;262:668-669)

TEAR gas is a weapon that has become familiar to the world. Hardly a week goes by without press reports of tear gas being used in a public setting, typically the dispersal of demonstrators or the subdual of a barricaded criminal. Recent years have seen the use of large amounts of tear gas in several countries, including Chile; Panama; South Korea; and the Gaza Strip and West Bank, Israel.

Tear gas is actually the common term for a family of chemical compounds that have been otherwise referred to as "harassing agents" because of their ability to cause temporary disbursement. Some 15 chemicals have been used worldwide as tear gas agents. Four of these—o-chloroacetophenone (CN), o-chlorobenzylidenemalononitrile (CS), 10-chloro-5,10-dihydrophenarsazine, and o-bromo-o-toluidine—have been used extensively.1 In the United States, Britain, and Europe, CN and CS have been employed most widely. o-Chlorobenzylidenemalononitrile, in particular, is a weapon that has gained widespread acceptance as a means of controlling civilian populations during disturbances.

The widespread use of tear gas agents naturally raises the question of their safety. Relatively little, however, has appeared in the mainstream medical literature regarding their toxicology. In general, authors of review articles have averred that, if used correctly, the noxious effects of exposure are transient and of no long-term consequences. Much emphasis has been given to the findings of the Hinseworth Report,4 the results of an inquiry by a committee appointed by the British Secretary of State for the Home Department following the use of CS in Londonderry, Northern Ireland, in 1969. In addition to investigating the use of CS in Londonderry, the committee reviewed a wide range of scientific data. Its main conclusion was that while exposure to CS can be lethal, most likely in the form of toxic pulmonary damage leading to pulmonary edema, such an occurrence would only be at concentrations that were several hundred times greater than the exposure dosage that produces intolerable symptoms.

Many questions remain, however. Epidemiologic inquiry following the use of tear gas under actual field conditions has been almost completely absent.

THE USE OF TEAR GAS IN SEOUL, SOUTH KOREA

This lack of information became apparent to us during a July 1987 visit to Seoul, South Korea, during the course of which we gathered information on the use and effects of tear gas. Political demonstrations resulting in the use of tear gas had taken place in Seoul, Pusan, Taegu, Kwangju, Taejon, and Inchon—almost every major city in South Korea—during the month of June. By its own account, the government had used 351,000 tear gas canisters and grenades against civilian demonstrators in that month (New York Times, July 1, 1987; p. 18). We interviewed more than a hundred people, including hospital and medical school staff, medical and other university students, individuals who had been exposed to tear gas, bystanders, religious and community leaders, and officials of the US Embassy in Seoul.

A compilation of our findings, including interviews, results of physical examinations, and a community epidemiologic survey, was summarized in monograph form.6 We were able to ob-
tain a sample of tear gas chemical that represented the typical compound being used by the South Korean government. Mass spectrometry analysis identified the substance as pure CS. We were struck by the indiscriminate use and effects of tear gas on bystanders and others in proximity to the demonstrators being teargassed. We heard pervasive accounts of police firing canisters and throwing tear gas grenades directly into crowds gatherings and enclosed spaces, such as rooms, motor vehicles, and subway corridors. Persons who were close to the exploding tear gas grenades and canisters commonly sustained penetrating trauma from plastic fragments that was exacerbated by the presence of tear gas chemical. Many individuals sustained blistering skin burns from direct contact with the tear gas powder. There were several accounts of people who were alleging to have experienced more severe toxic injuries requiring hospitalization. Our community survey of small shopkeepers close to university campuses where student demonstrations were common uncovered some symptoms, including cough and shortness of breath, among the interviewees and their children that persisted for weeks up to the time of the survey. Physicians noted that patients with asthma and chronic obstructive lung disease who were exposed to tear gas wafting into hospital wards through open windows experienced deterioration in lung function, some to a serious degree requiring a lengthened hospital stay.

We were especially struck by the lack of information available to the Korean medical community on tear gas. According to Korean scientists we interviewed, the government withheld the chemical composition of agents employed. Local laboratories apparently refused to perform chemical analyses on tear gas substances for fear of government reprisals. No guidelines had been issued to the public or health authorities on methods of treating injuries or toxic effects of tear gas weapons. Hospital authorities would not share with us medical records data, citing fear of persecution. Senior and junior physicians, without exception, confirmed that no one dared to undertake laboratory, clinical, and epidemiologic studies of tear gas effects for fear of serious governmental reprisals.

Similar findings have been reported in inquiries into the use of tear gas in Gaza and the West Bank of Israel. Of particular concern are allegations that exposure to tear gas has been associated with increases in miscarriages and stillbirths.

CS AND OTHER TEAR GAS AGENTS

While poisonous gases have been used sporadically in military history as early as 428 BC, when burning wax, pitch, and sulfur were used in wars between the Athenians and Spartans, it took the birth of the modern chemical industry and the circumstances of World War I for the invention of chemical warfare agents to begin in earnest. Agents that could temporarily incapacitate victims were among the first to be developed and were deemed "harassing agents." Of these, chemicals that produce lacrimation and uncontrollable blepharospasm, otherwise known as "tear gas agents," became the most popular.

Harassing agents are capable of a number of immediately perceived effects: intense irritation of the eyes, causing crying or temporary blindness; irritation of the mucous membranes of the nose, trachea, or lungs, causing coughing; irritation of the throat and stomach, with the induction of vomiting and possibly diarrhea; and irritation of the skin. Most harassing agents will cause several or all of these reactions to a greater or lesser extent.

For many years, CN was the most widely used agent by civil and military authorities. It is the active ingredient in Mace and is still used in many parts of the world. Dissatisfaction with its potency and chemical instability, however, led military scientists to search for alternative agents.

In the 1950s, the Chemical Defence Experimental Establishment (Porton, England) developed CS. alpha-Chlorobenzylidenedemonalonestere is a white crystalline substance that is usually mixed with a pyrotechnic compound in a grenade or canister for use. Its useful form is intended to be a smoke or fog of suspended particles. Effectiveness in crowd control derives from its properties as an extremely severe skin and mucous membrane irritant and lacrimator, even at minute doses. Instantaneous conjunctivitis with concomitant blepharospasm, burning, and pain are characteristic. These symptoms are exacerbated in hot or humid weather. alpha-Chlorobenzylidenedemonalonestere that has been micronized and mixed with an antiagglomerant or treated with a silicone water repellent (formulations known as CSI and CS2, respectively) can remain active for days to weeks when dusted on the ground.

Since its introduction, CS has virtualized substitution of CN as the riot control agent of choice in England and the United States. During the Vietnam war, the United States developed an array of delivery vehicles for CS, including small pocket grenades, the "Mighty Mite" (a continuous-spray device used in caves and tunnel systems), and 58-kg cluster bombs dropped from helicopters and planes.

TOXICOLOGY OF CS

Military studies among volunteers have noted that, in most cases, removal from exposure to CS results in fairly rapid recovery with cessation of all symptoms within minutes. Proponents of the use of CS believe that, when used properly, high or prolonged exposure to the substances would be precluded by an individual's natural aversion to remaining in an area where the substance is present (United Kingdom patent specification 967 600; 1990). Its popularity among military and police authorities stems partly from comparisons with the other tear gas agents, which suggests that CS is a more potent lacrimator and seems to cause less long-term injury, particularly with respect to the eye.

Inhalation toxicology studies(25, 26, 27) at high levels of CS exposure, however, have demonstrated its ability to cause chemical pneumonitis and fatal pulmonary edema. In situations in which high levels of exposures have occurred, the same effects, as well as heart failure, hepatocellular damage, and death, have been reported in adults. An infant exposed to CS in a house into which police had fired CS canisters to subdue a mentally disturbed adult developed severe pneumonitis requiring therapy with steroids, oxygen, antibodies, and 29 days of hospitalization.

The respiratory concentration of CS that would be lethal for 50% of healthy adults has been estimated to be 25,000 to 150,000 mg/m³ per minute, based on animal studies. When detonated outside, a CS grenade generates a cloud 6 to 9 m in diameter, at the center of which a concentration of 2500 to 5000 mg/m³ can be produced, with concentrations rapidly tapering off at the periphery.

If detonated in an enclosed space or in clusters, however, much higher levels of exposure could be expected. Moreover, chemical weapons have generally been noted to be notoriously uneven in their dispersal.

Oral toxicology studies(28, 29) have noted the ability of CS to cause severe gastroenteritis with perforation. Metabolic studies(30, 31) indicate that absorbed CS is metabolized to cyanide in peripheral tissues.

The potential for CS exposure at levels seen in the field to result in significant generation of cyanide at the tissue level is controversial. Authors who downplay this possibility reason that...
one would have to inhale massive quantities that could only occur if the gas were used improperly, and that severe pulmonary injury would overshadow the effects of cyanide generation. However, this argument ignores the ingestion of tear gas chemical that can occur with pharyngeal deposition of incompletely dispersed CS compound and swallowing of respiratory secretions.

Contact burns and the development of skin sensitization with contact dermatitis have been described in a number of experimental and observational studies on animals and humans. This is in keeping with the many skin burns encountered during our inquiry. Studies have not adequately examined the possibility that CS at less than high concentrations can cause lasting pulmonary effects. One study of CS exposure on volunteers showed no increase in airway resistance following several exposures. However, only seven healthy military recruits were examined and volunteers with a history of asthma were excluded. Previous studies have shown that single exposures to high levels of respiratory irritants similar to CS have been associated with the development of reactive airways disease syndrome in some individuals. The symptoms of prolonged cough and shortness of breath that were reported in our community survey suggest that such an effect may have occurred as a result of CS exposure in South Korea.

Only one study has assessed the effect of CS on pregnancy in animals and it found no significant effect. The Himsoworth committee found no significant increase in abortions, stillbirths, or congenital abnormalities in geographically restricted areas. Of concern is the 9-month period of tear gas exposure to a previous 9-month period. More sophisticated epidemiological studies do not exist.

**POTENTIAL FOR GENOTOXICITY**

The agent CS can allylate sulfhydryl groups and, possibly, DNA. As such, it is potentially genotoxic. The agent has not, however, been well studied for its genetic effects in vitro or in vivo. Some researchers have shown CS to be mutagenic in both Ames Salmonella assays and in the L5178Y tk +/− mouse lymphoma forward mutation assay. Zeiger et al. reported CS to be unquestionably mutagenic in the Ames assay, testing lower doses than von Daniken et al. When von Daniken et al accounted for the toxicity of CS, its mutagenic effects increased by a factor of 2. Thus, the toxicity of this agent can make it difficult to study in vitro. Cytogenetic testing done by the National Toxicology Program (unpublished data, 1988) and the National Institute of Environmental Health Sciences has shown CS to be clastogenic in Chinese hamster ovary cells and to induce sister chromatid exchanges in some mammalian cells. Other researchers have reported negative results in testing CS for mutagenicity on the Ames test. A single study of animal embryos did not reveal any teratogenic effects of CS.

The agent CS has been found to suppress nonspecific estrous activity in mouse skin sebaceous glands. This property has been suggested for use as a screening test for the carcinogenic potential of suspected chemicals. A study of the carcinogenicity of CS in A/J strain mice and Sprague-Dawley-Wistar rats done at the Edgewood Arsenal reported CS to induce more pulmonary tumors in exposed animals after 4-week inhalation experiments, conducted at 0, 50, and 500 mg/m³ per minute. The increase, however, was not strictly dose related and of borderline statistical significance. This report concluded that CS was not significantly tumorgenic in animals, but observed that chronic exposure to very low concentrations of CS is of greater concern and should be further studied. In addition, Marrs et al. studied the inhalation toxicity of CS in rodents. Owing to the limited number of animals studied, they were unable to draw a firm conclusion concerning the tumorigenicity of CS.

**TOXICITY OF CN**

Although CS has been the best widely used and well studied of the tear gas agents, other agents are still available. Of particular importance is CN, which is still being produced in the United States and was reported to have been used in the West Bank and Gaza Strip (Jerusalem Post, May 6, 1988:1). Chloracetophenone is generally acknowledged to be of greater toxicity than CS, being more likely to cause permanent corneal damage on contact with the eye and primary and allergic contact dermatitis. The maximum safe inhaled dose has been estimated to be several times lower than that of CS and at least five deaths have been reported following the use of CN in enclosed spaces. Little is known regarding its potential for chronic pulmonary or genotoxic effects or for potential effects on reproduction.

**TREATMENT**

Most exposures to CS and CN typically cause immediate and severe irritation of the eyes and respiratory tract, accompanied by blepharospasm, lacrimation, coughing, sneezing, and rhinorrhea, followed rapidly by a burning sensation of exposed skin surfaces and the mouth. Some persons also experience nausea and vomiting, photophobia, and headache. These symptoms usually disappear within a few hours after removal from exposure.

Clinically, signs of exposure consist of blepharospasm, conjunctival injection, palpebral edema, and lacrimation. Management is conservative, beginning with aeration and the disposal of all contaminated clothing in plastic bags. Skin should be washed, although contact with water can briefly exacerbate skin symptoms from CS exposure, and a mild alkaline solution (6% sodium bicarbonate, 3% sodium carbonate, and 1% benzoilum chloride) has been recommended to hasten decontamination of CS. Persistent eye irritation can be relieved with application of a local anesthetic preparation and a patch. Contact dermatitis may respond to corticosteroid creams and antipruritics.

Exposure to high concentrations of tear gas by inhalation or ingestion, as may occur in an enclosed space or in proximity to an exploding tear gas device, should be treated cautiously. Pulmonary injury with edema can be delayed and the patient should be kept under observation for several days. Initial treatment may begin with humidified oxygen; bronchodilators and ventilator therapy may be necessary. Prophylactic antibiotics have been suggested. We believe a thiocyanate assay should be considered in cases of ingestion early on; high levels may be present.

Persons with preexisting lung disease such as asthma or emphysema should be observed carefully for exacerbation of their condition.

**COMMENT**

From a toxicological perspective, there is a great need for epidemiologic and more laboratory research that would illuminate the full health consequences of exposure to tear gas compounds such as CS. The possibility of long-term health consequences such as tumor formation, reproductive effects, and pulmonary disease is especially disturbing in view of the multiple exposures sustained by demonstrators and noncombatants alike in some areas of civilian unrest. The development of tolerance to CS, a phenomenon that has been confirmed in studies of human volunteers, has likely increased the length and intensity of exposure sustained by some individuals. Unfortunately, the same social conditions that accompany political unrest and the use
of tear gas make epidemiologic research difficult, if not impossible.

We also believe, however, that the evidence already assembled regarding the pattern of use of tear gas, as well as its toxicology, raises the question of whether its further use can be condoned under any conditions. Fact-finding missions to areas of civil unrest in addition to South Korea have frequently observed secret forces using tear gas against peaceful demonstrators and not uncommonly against civilians in no way involved in protests.**

We recognize it is not adequate for health professionals simply to study and reject as "medically unacceptable" every modality of riot control. As with many hazards—for example, asbestos, industrial toxic emissions, or radiation—there is an important role for the independent professional: to study, document, analyze, and report on such hazards—and to advise government on what does and does not carry an acceptable risk. If a weapon is found to present too serious a risk, it is then the responsibility of those in charge of public safety to decide on alternatives. In doing so, active consultations should be sought with medical and public health specialists who are independent of law enforcement agencies and, ideally, drawn from both governmental and nongovernmental agencies and institutions. In the United States, for example, health specialists might be recruited from medical school faculties, state and local health departments, the Public Health Service, and the Centers for Disease Control.

At a time when the world has recently seen the recurrence of the use of mustard gas, this time in the Middle East, it is also worthy to note that in 1969, at the United Nations General Assembly, 80 countries voted to ban the use of chemical in war, including tear gas under the Geneva Protocol.***

Finally, we have been persuaded in many instances in which health agents have been used, dialog negotiation could have been possible. Often, public order might be served if riot police are not called: diately to duty. It is the halal repression regimes to equate telling of dissent with disorder and to enstire the flow of news or expression, rights guaranteed us along with the Declaration of Human Rights.
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