1969

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57 Geo. L.J. 1238-1268 (1969)

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OF MACE AND MEN: TORT LAW AS A MEANS OF CONTROLLING DOMESTIC CHEMICAL WARFARE

JOSEPH A. PAGE*

The use of MACE and other chemical sprays by the police and the public has caused considerable comment and controversy during the last several years. Recognizing the seriousness of the problem, Professor Page analyzes the efficacy of present law to control the misuse of chemical sprays. In this analysis Professor Page first discusses the development of the use of MACE and the heated controversy that surrounds both its employment and potentially deleterious effects. He then turns to the application of intentional tort, negligence, warranty, and strict liability concepts as methods by which victims of MACE might hold the user or manufacturer liable for injuries incurred. He then concludes that although legislation exists that to some degree can be utilized to regulate the public sales of chemical sprays, it has been left to the courts to impose effective public restraints on police use of these weapons.

I've grown accustomed to the MACE,
I breathe it out, I breathe it in,
I've grown accustomed to that breeze
That knocks me to my knees,
One whiff, one sniff,
And I go stiff,

In 1965, several police departments around the country purchased and initiated use of a new weapon, destined to have a considerable impact on law enforcement techniques.1 Manufactured by the General Ordnance Equipment Corporation (GOEC)3 and marketed under the trade name CHEMICAL MACE®4 this innovation in police

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1 From a parody included in "Dock- et To Me," in the Annual Christmas Spirits Production of the Chicago Bar Association, in Chicago, Ill., Dec. 16-20, 1968, reprinted with permission.


3 For an excellent account of the invention of MACE and its early promotion, see G. WILLS, THE SECOND CIVIL WAR 87-95 (1968) (paperback).

1 CHEMICAL MACE and MACE are trademarks of the General Ordnance Equipment Corporation. CHEMICAL MACE reg. U.S., Pat. Off. As used in this article, MACE refers specifically to the aforementioned product. Other spray devices are similarly indicated by the use of all capitals.

In common parlance the word "mace" is often used generically to describe any similar
weaponry was originally invented as a self-protection device for use by
the general public. Its potential in the field of law enforcement,
however, gained quick recognition, and it soon became celebrated as
an allegedly humane alternative to the pistol and billy club.

CHEMICAL MACE, or MACE as it is more commonly known,
is a liquid, pressurized in small canisters that can be carried in the
hand or even built into the tip of a nightstick. The canister projects a
stream of chemical droplets that vaporize on contact and take
immediate effect. Although MACE was not the first chemical spray
adopted for use by individual policemen, earlier sprays projected a fog
or mist that was not selective and could blow back on the user in
adverse weather conditions. In comparison, because MACE takes the
form of a relatively heavy liquid spray, it can be utilized effectively
against selected individuals and thus eliminates the risk of the hunter
becoming the quarry. Its effect upon the victim, as described by one
police consultant, is such that: "[W]hen even a small percentage of
the droplet burst pattern strikes the face, an intense burning and
tearing action takes place. . . . The combination of the two effects
will temporarily distract, disable and incapacitate the recipient."

THE RISING USE OF CHEMICAL SPRAYS AS POLICE WEAPONS

MACE quickly became popular, as favorable publicity led to
additional orders from law enforcement groups, which in turn led to
even greater publicity. For the new product, 1967 proved to be an
auspicious year. Urban unrest stimulated the full emergence of the
"law-and-order" issue as a matter of pressing national concern. At
the same time, police began to use MACE to quell social and political
disorders.

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chemical aerosol spray. Widespread use of the noun "mace" and the verb "to mace" has
become a matter of great concern to GOEC, lest the terms become generic and the trademark
rights be lost. See letter from GOEC's President John A. Campbell in COMMONWEAL, Apr. 18,
1969, at 142.

Pittsburgh physicist Alan Litman invented CHEMICAL MACE to provide his wife with a
self-defense weapon. G. WILLS, supra note 3, at 91. It is interesting to note that its usage has
began to revert to this original purpose. See notes 18-19 infra and accompanying text.

See, e.g., Applegate, supra note 2, at 51; TIME, Sept. 1, 1967, at 10.
2Coates, supra note 2, at 54-55.

Applegate, supra note 2, at 51-52. In addition, some of these earlier devices were considered
unreliable because of malfunctions in the delivery system. See note 17 infra.

Applegate, supra note 2, at 53.

In order to meet the increasing demand, GOEC quadrupled its production during a two
month period in the summer of 1967. Wall Street Journal, Aug. 10, 1967, at 1, col. 4; see, e.g.,
Duncan, Mace: The Methods of Madness. RAMPARTS, June 29, 1968, at 62; TIME, Jan. 3, 1969,
at 60; Columbus (Ohio) Dispatch, Oct. 17, 1966, § B, at 10, col. 3.

See also G. WILLS, supra note 3, at 94-95.
Because of the overemphasis on its capacity to disable, MACE originally acquired a somewhat deceptive mystique. The use of terms such as "instant apathy" and "stun gun" gave currency to the impression that it contained some mysterious new chemical, perhaps even nerve gas. According to officials in Newburgh, N.Y., the mere presence of MACE canisters hanging from the belts of policemen was enough to cut short a civil disturbance during the summer of 1967. However, in actuality, MACE is no more than liquid chloroacetenophenone (CN), the basic ingredient in standard tear gas, with a kerosene-like substance added to make the spray stick and persist.

GOEC's CHEMICAL MACE was not the only aerosol spray being manufactured during this period for sale to law enforcement agencies. Although some of the other sprays failed to interest the police, they soon joined a variety of chemical aerosol weapons being offered for sale to the general public. Even MACE itself has begun

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17GOEC's foremost competitor appears to be Federal Laboratories which produces PEACEMAKER and STREAMER, CN sprays using a formula similar to that of MACE. Other less successful competitors include Penguin Industries, maker of the CN spray DEPUTY, Maze Chemical and Mfg. Corp., maker of the CS spray PARALYZER, which is available to the public and is the only CS spray currently on the general market. MARKETING/COMMUNICATION, Dec. 1968, at 60. Both the DEPUTY and the PEACEMAKER have been found unsatisfactory by at least one police department. See memorandum from W. J. Collier, Crime Detection Lab, to Capt. R. Newton, Phoenix (Ariz.) Police Dept., August 25, 29, 1967, on file with author (DEPUTY's nozzle clogged, its range was only four feet, the container leaked and it produced a mist instead of a stream).
18CS sprays, which are comprised of chlorobenzylmalononitrile, a tear gas more powerful than CN in fog, smoke, or powder form, are considered ineffective since no eye irritation results unless the spray directly contacts the eye surface, and undesirable since the effects are of unnecessarily long duration because the agent tends to stay on the affected area rather than evaporate. See Crockett, Riot Control Agents, THE POLICE CHIEF, Feb. 1969, at 12, 13.
19The whole area of chemical aerosol sprays has recently become the focus of congressional attention. See Hearings on the Public Sale of Protective Chemical Sprays Before the Subcomm. for Consumers of the Senate Comm. on Commerce, 91st Cong., 1st Sess. (1969) [hereinafter cited as Consumer Hearings] (because these hearings have not yet been officially published,
to find its way into the hands of the public. A predictable corollary has been the increased use of aerosol weapons by criminals.

Early in 1968, the use of chemical weapons by law enforcement agencies received two important boosts. President Johnson, in a message to Congress, stated that "[r]evolvers and nightsticks are clearly inadequate . . . . New weapons and chemicals—effective but causing no permanent injury—have been and are being developed." Recognizing the limited knowledge of their potential and limitations, the President ordered that studies of the new weapons be undertaken. The second boost occurred shortly thereafter when the National Advisory Commission on Civil Disorders, in discussing police weapons, stressed "the urgent need for nonlethal alternatives," and recommended that the Government "undertake an immediate program to test and evaluate nonlethal weapons."

These statements, while endorsing the need for nonlethal police weapons such as chemical sprays, also underscored a disquieting aspect of the increased development and employment of MACE. Both the President and his Commission spoke of the need for research and testing; the sprays, however, had been widely used for more than two years. Their statements perhaps reflected concern for the growing MACE controversy, which paralleled the stepped-up police use of the sprays and their subsequent availability to the general public.

The MACE Controversy

An analysis of the MACE controversy reveals two levels of criticism and rebuttal. One concerns the question whether even when properly handled, chemical sprays may cause an amount of physical harm disproportionate to that which the manufacturers claim and the

citations herein refer to the printed statements of the witnesses on file with the author). See also Page, Mace for the Masses, COMMONWEAL, Apr. 18, 1969, at 141. There is very little data on how many of these weapons are in the hands of the public. In Aug. 1968 the Wall Street Journal reported that franchisers in 31 states had sold 250,000 PREVENTORS, a spray using the MACE formula. Wall Street Journal, Aug. 15, 1968, at 4, col. 2.

See Page, supra note 18; MAYDAY, Nov. 24-Dec. 6, 1968, at 1.


Id.

NATIONAL ADVISORY COMM'N ON CIVIL DISORDERS, REPORT 330-31 (Bantam ed., 1968).

Id. at 492.

By Mar. 1968, more than 3,000 law enforcement agencies had adopted aerosol sprays for use. CRIME CONTROL DIGEST, Mar. 13, 1968, at 7.
users intend. The other concerns risks of injury created by improper use of the sprays.

POTENTIAL FOR INJURY

The manufacturers of the sprays and the law enforcement agencies that have adopted them continually insist that the new weapons can cause only temporary harm to the victim. The record, however, would seem to establish beyond cavil that the testing of sprays before they were put on the market was not particularly thorough. Police departments often staged demonstrations with the sprays, but these were more in the nature of public relations performances than scientific experiments and took place only after the decision to adopt the sprays had been reached. In essence, inadequately tested chemical sprays were being added to police arsenals.

It is not surprising, therefore, that protests were soon raised. The most vigorous came from Dr. Lawrence Rose, a San Francisco ophthalmologist, who reported 12 cases of MACE exposure. In each

[26] The directions for the use of MK IV CHEMICAL MACE state that the victim will be "temporarily disabled without permanent injury or marking . . . ." The New York Times has reported GOEC's president as claiming "[t]here is no lasting damage . . . and within a half hour the person has completely recovered." N.Y. Times, Aug. 3, 1967, at 17, col. 3. A UPI dispatch attributed to Alan Litman, the inventor of MACE, the statement that "there are no known toxic after effects." Washington Evening Star, Aug. 4, 1967, § A at 3, col. 3. Perhaps the ultimate claim is the item in Time that some policemen call MACE the "gentle persuader." Time, Sept. 1, 1967, at 10.

The sprays actually do eliminate the principal danger of the tear gas gun, a weapon which has been in existence for decades. The guns fire cartridges filled with tear gas, which when discharged at close range, can inflict permanent damage by causing fragments of wadding, metal, or solid particles of the tear gas itself to penetrate the eye of the victim. See, e.g., Adams, Fee & Kenmore, Tear-Gas Injuries: A Clinical Study of Hand Injuries and an Experimental Study of its Effects on Peripheral Nerves and Skeletal Muscles in Rabbits, 48 J. OF BONE AND JOINT SURGERY 436 (1966) (Am. Vol.); Hoffman, Eye Burns Caused by Tear Gas, 51 BRIT. J. OPHTHALMOLOGY 265 (1967); Levine & Stahl, Eye Injury Caused by Tear-Gas Weapons, 65 AM. J. OPHTHALMOLOGY 497 (1968). The delivery mechanism of the sprays does away with this particular hazard.

[27] GOEC sponsored two experiments involving nine animals. Neither test indicated any injurious effects other than a redness of the eyes which disappeared in 72 hours. The sprays were discharged, however, at a distance of six feet. Hazleton Laboratories, Inc., Acute Eye Irritation-Rabbits: Mark IV Formula, Final Report, Apr. 12, 1966; Hazleton Laboratories, Inc., Acute Contact Exposure-Monkey: Mark IV Type A Chemical Mace, Final Report, Mar. 8, 1966; (reports submitted to GOEC; on file with author).

[28] See, e.g., (Rochester, N.Y.) Democrat and Chronicle, Aug. 3, 1967, § B, at 1, col. 4; letter from Jarrett Williams, President of the Taylor-Jones County Medical Society, Abilene, Texas, to Warren Dodson, Chief of the Abilene Police Department, Jul. 31, 1967, on file with the author. After testing MACE on four persons in a single experiment, followed the next day by an eye examination, the Society was "convinced and assured that the material produces no lasting injuries." Letter from Jarrett Williams, supra.

instance his patients had been hit in the face by a liquid stream from a distance of six to 12 inches and subsequently had been afforded no opportunity to wash out their eyes. Each suffered serious injuries. Dr. Rose also conducted tests on three rabbits, whose eyes were sprayed with MACE at a distance of six inches. He reported that one rabbit "developed a dense scar in the line of vision."  

An article in the New Republic, arguing that MACE could "add another dimension to police brutality," raised the first objections to the weapon on a national level. In addition, a number of developments since that time have fortified the heightening criticism of chemical sprays. In the spring of 1968, the Federal Bureau of Prisons issued a policy statement forbidding prison personnel to carry aerosol chemical dispensers except when authorized, limiting such authorization to situations in which a single prisoner "barricades himself and cannot be approached without definite danger to personnel or to himself." The report further called for the immediate treatment of prisoners who had been sprayed.

Less than two months later, the Surgeon General made public a warning letter which attracted nationwide attention. In cautious language, he noted that "the design of 'Chemical Mace' . . . clearly increases the possibility of more than transient effects to the exposed individual unless treatment is prompt," and set forth instructions on the proper treatment of MACE victims. A supplemental fact sheet, however, admitted that "the available evidence regarding the effects

\[\text{Footnotes:}\]

40 Four suffered second degree burns of the eyelids and facial skin. One sustained a superficial corneal scar outside the line of vision. In four cases, the victims "experienced confused cerebration with an accompanying difficulty in answering simple questions, loss of recent memory, dysequilibrium, and apprehension which lasted one to two hours after exposure." All incurred an intense burning pain on the eyes and skin, and some respiratory difficulty.  
41 Id. at 451.
42 Rapoport, Mace in the Face, The New Republic, Apr. 13, 1968, at 14, 15. Other subsequent publications and disclosures fueled the growing controversy over the use of MACE. A pediatrician, treating a teenager who had been sprayed by police, said "[t]here's no question about it (Mace) being bad for the respiratory system where there is already a lot of edema (swelling) in bronchial troubles, such as asthma." York (Pa.) Gazette and Daily, Apr. 4, 1968. A prison physician has gone so far as to say that "[i]f a person has heart trouble or acute asthma, this man could suffer a fatal dosage." Id. See also Kalman, A Critique of MACE, A Riot Control Agent, California's Health, Sept. 1968, at 3 (significant increase of victim's blood pressure); testimony of Dr. Stuart Frank to the San Francisco City Council on the Toxic Effects of Chemical MACE. May 9, 1968, on file with author.
44 Id.
46 Letter from William H. Stewart, supra note 35.
... is not complete and does not permit the drawing of final conclusions at this time. 37

On June 6, 1968, a research team from the Department of Pharmacology at the University of Michigan published the results of an investigation of Mark IV CHEMICAL MACE, undertaken at the behest of the Ann Arbor City Council and Department of Police. The study underscored the danger of injury "if the lacrymator were liberated in large quantities in a small room or other confined space, since breathing to survive would result in inhalation of the gas in spite of its irritant properties," 38 and pointed out that "misuse of Chemical Mace . . . has a potential for injury or even death." 39 Another study, released by the Berkeley, Cal., Director of Public Health, concluded, inter alia, that MACE is a potentially dangerous weapon, 40 and that its hazards are greatly increased if improperly used. 41

The criticism and controversy over the use of sprays has continued, 42 marked by such startling revelations as the failure of MACE to meet Army safety requirements. 43 A review of the available evidence, however, brings to light certain indisputable gaps in what is known about the potential hazards of the sprays. Almost all the testing has involved MACE and has focused on the risk of eye injury. 44 Minimal attention has been devoted to other kinds of harm.

37 Surgeon General, supra note 16.
38 Report of Macleod, Villarreal & Severs, Dept. of Pharmacology, Medical School, University of Michigan, to Ann Arbor Police Dept., June 6, 1968, at 7 [hereinafter cited as Michigan Report]. The experiments upon which the Report was in part based are described in Macleod, Chemical Mace: Ocular Effects in Rabbits and Monkeys, 14 J. FORENSIC Sci. 34 (1969).
39 Michigan Report 8. The Report further suggests that MACE can be used safely if the victim is alert, has normal protective reflexes, such as blinking, and is sprayed with the minimum dosage necessary for incapacitation. Severe or possibly permanent damage, however, may occur from direct exposure of the eye to the spray due to misuse of the weapon. Such misuse could result from a direct discharge into the eye area at close range, a prolonged discharge into the face or eyes, or an excessive discharge in a closed space. The Report also notes that there is no evidence to indicate the possibility of significant injury other than to the eyes, skin, or mucous membranes, and that such injury would be due to the CN agent, not the solvent or propellant. Id. at 18-19.
41 "With proper and prudent use, the danger of serious or permanent damage from this weapon is minimal. With improper use (too close to the person, person lacking normal reflexes, in a closed space), or delay in post-exposure treatment, the hazard increases sharply." Id.
44 See notes 27-28, 30 supra.
Some data exists on PEACEMAKER\textsuperscript{45} and STREAMER,\textsuperscript{46} but virtually nothing is available on the numerous other irritants offered for sale to the police and the general public.\textsuperscript{47}  

\textbf{MISUSE OF SPRAYS}

At least two explanations can be offered for the misuse of the sprays. First, the manufacturers made such extravagant claims concerning the harmlessness of the new weapons\textsuperscript{48} and the law enforcement agencies adopting them gave such inadequate instructions to the individuals to whom they were issued that improper handling was inevitable.\textsuperscript{49} An illustration which lends support to this argument is the police practice of resorting to chemical sprays during civil disturbances.\textsuperscript{50} Claims by GOEC of MACE's effectiveness in riot control,\textsuperscript{51} combined with pressures on police to meet the challenge of urban disorders, have led to reliance on MACE as a weapon against demonstrators. In actual practice, however, the police often direct the spray indiscriminately at crowds or groups in order to disperse them.\textsuperscript{52} In these circumstances it is virtually impossible to provide prompt medical treatment to MACE victims.

\textsuperscript{45}See note 17 supra.


\textsuperscript{47}The Younger Laboratories of St. Louis, Mo., conducted experiments using PARALYZER and concluded that the weapon was not an irritant to the skin, but was an eye irritant. The eyes of the three rabbits used in the tests cleared after 72 hours. Younger Laboratories, Certificate of Analysis ["Paralyzer"], Feb. 6, 1969 (submitted to Maze Chem. & Mfg. Corp.; copy on file with author).

It is interesting to note that GOEC has purportedly stated that "several competitive devices have come on the market of (sic) different formulation which have caused some injuries. [GOEC ascribes these injuries to an excessive Chloroacetenephone content and/or an inept choice of organic carrier solvents." Michigan Report 7.

\textsuperscript{52}Whether such inadequacy is sufficient to constitute a legal wrong should be forthcoming as a result of damage suits alleging that instructions given to police officers in the use of chemical sprays were inadequate. See cases cited note 68 infra.

A consultant to the International Association of Chiefs of Police testified before the Senate's Consumer Subcommittee that, regardless of instructions, it was unrealistic to expect policemen not to aim at the victim's face when using a chemical spray in any sort of emergency situation. Consumer Hearings, supra note 18 (testimony of Thompson S. Crockett). The Michigan Report suggests that discharge of a spray in this manner constitutes misuse of the weapon. Michigan Report, supra note 38, at 7-8.

\textsuperscript{51}See note 10 supra and accompanying text.

\textsuperscript{52}See Columbus (Ohio) Dispatch, Oct. 17, 1966, § B, at 10, col. 3; N.Y. Times, Aug. 3, 1967, at 17, col. 3. See generally Applegate, supra note 2, at 76.

\textsuperscript{53}One police expert has testified that this tactic can cause the people in the front ranks of the crowd to be trampled, and hence is improper. Consumer Hearings (testimony of Thompson S. Crockett).
A second explanation of excessive use of MACE is that it is merely another aspect of the police brutality problem. A possible new dimension is that the sprays require so little physical effort to fire that they may actually encourage the conscious application of unreasonable force, perhaps even as a punitive measure. Beyond scattered individual accounts of police brutality in the use of sprays, there is very little empirical data on this point. The Walker Report on violence at the Democratic Convention in Chicago, which describes twelve incidents in which the police employed MACE, is perhaps the closest approximation to a comprehensive study of the use of MACE during a civil disturbance. Each of the incidents arguably amounted to the use of unjustified or excessive force. On the other hand, a survey made by the Berkeley police department of 85 uses of MACE by the department over an 18-month period found only four instances of improper use.

ADDITIONAL OBJECTIONS TO MACE

In addition to the risk of bodily injury from the spray itself, another hazard merits mention. In certain situations, chemical irritants may not repel assailants—the sprays may not affect persons under the influence of drugs or liquor, as well as lunatics and individuals in a state of extreme emotional excitement. MACE, therefore, may act as an escalator rather than a pacifier in civil disturbances, since it tends to enrage victims with a sense of humiliation and impotence, possibly even leading to the use of "countersprays" by demonstrators.

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26See id. at 2; Crockett, Riot Control Agents, The Police Chief, Feb. 1969, 13. Notwithstanding the high state of emotion of rioters and attackers, some of the sprays on sale to the public advertise that they can rout such crowds. See, e.g., Silver Spring-Wheaton (Md.) Advertiser, Aug. 21, 1968, at 5 (advertisement for Preventor).

27Incidents of MACE escalating resistance to police have been numerous enough to question the wisdom of its use on large crowds. A Richmond, Va., policeman tried MACE out on a dog "[a]nd the dog promptly tried out his teeth on the officer's leg." Crime Control Digest, Feb. 11, 1969, at 3. In Orlando, Fla., an argument with a city clerk over a refund for a business license ended with the man being fatally shot by the police chief who had sprayed him with MACE to quiet him, but instead enraged him. Orlando Sentinel, June 6, 1969, at 1, col. 4.

Other objections to MACE and similar sprays go beyond the immediate issues of bodily injury and riot control. It has been argued, for example, that the use of MACE by police may produce such a state of mental disarray in the victim that a subsequent arrest infringes upon his civil liberties. Furthermore, in the broadest context, the general subject of police technology carries with it the perplexing problem whether such development should be permitted to proceed, lest the state assume excessive power to intervene in and control the lives of its citizens. A correlative consideration is the extent to which a newly emerging “police-industrial complex” may become powerful enough to influence policy by maintaining, or even creating, a mood of fear, which will insure the continuous expenditure of large sums of money on law enforcement hardware.

Finally, there is an ethical or moral challenge to the propriety of indulging in what amounts to chemical warfare on a domestic level. It has been argued that since this sort of weaponry has been disavowed internationally, it certainly should not be tolerated on the domestic scene. The fact that the Government has resorted to the use of chemical weapons in Vietnam is, of course, no answer to this objection. On the other hand, it is strongly urged that the use of incapacitating chemical agents is more humane, both in war and domestic riot control, because of its temporary, nonlethal, and less destructive effect. Nevertheless, an ethical or moral distinction can be drawn between using MACE on an individual and clubbing him with a night stick. One approach could derive from a judgment whether and to what extent it is permissible for society to expose a person to chemical agents that are intentionally sprayed upon him and

\footnote{Bodenheimer & Rose, MACE’s “Secret” Formula, THE NEW REPUBLIC, May 11, 1968, at 8; Duncan, supra note 10, at 63.}

\footnote{See Price, Criminal Law and Technology: Some Comments, 16 U.C.L.A.L. REV. 120, 133 (1968).}

\footnote{See 2 L. Oppenheim, INTERNATIONAL LAW § 113 (7th ed. 1952); Brownlie, Legal Aspects, in CBW: CHEMICAL AND BIOLOGICAL WARFARE 143-46 (Rose ed. 1968); Huddleston, supra note 16, at 15; 7 Cong. Rec. H2421 (daily ed. Apr. 1, 1969) (remarks of Congressman McCarthy).}

\footnote{One must recognize, however, that some of the more cogent arguments against chemical and biological warfare—its capacity for wholesale destruction and its nonselectivity—simply do not apply to the use of sprays by police. See Meselson, Ethical Problems—Preventing CBW, in CBW: CHEMICAL AND BIOLOGICAL WARFARE 163 (Rose ed. 1968).}

\footnote{See S. Hersh, CHEMICAL AND BIOLOGICAL WARFARE: AMERICA’S HIDDEN ARSENAL (1968); Kahn, CBW in Use: Vietnam, in CBW: CHEMICAL AND BIOLOGICAL WARFARE 87 (Rose ed. 1968).}

\footnote{Michigan Report, supra note 38, at 20. It must be admitted that if the effects of the sprays were limited to the manufacturers’ claims and if the police did not misuse these weapons, they surely would be more “humane” than guns or nightsticks. Unfortunately, such is not the case.
that act upon and penetrate his body without his consent. In other words, the focus of this judgment would be on the biosphere and the degree to which modern technology should be allowed to tamper with it.

The most cogent argument on ethical and moral grounds, however, is that a relaxation of restraints against the use of “humane” sprays may invite the introduction of more powerful chemical weapons for real or imagined needs. Indeed, the grim escalation of domestic chemical warfare has already begun. CS was discharged against students from a helicopter on the Berkeley college campus; demonstrators are now using chemical weapons and the Army is about to introduce more potent CS aerosols which attack the respiratory system. The end does not appear in sight.

TORT LAW

In the past year, a number of personal injury actions have been filed against law enforcement agencies and/or the manufacturers of chemical sprays. These cases will provide the judicial process with an opportunity to confront and assess the merits of the controversy which the sprays have spawned. They may also test the contemporary relevance of tort law. To the extent that the concern over the dangers posed by the sprays is well founded, MACE and its kin join a wide

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64A former Defense Department official alarmingly summed up the philosophy behind the use of chemical gas in civil situations:

"We accomplish two purposes: controlling crowds and educating people on gas..."

so that 'we [can] control the public outcry against chemicals which hinders their use in wartime. 'If one could change the environment of public opinion about CBW (chemical and biological warfare),' the official said, 'we might be able to use something that otherwise would be ruled out.'

Hersh, Your Friendly Neighborhood MACE, N.Y. REVIEW OF BOOKS, Mar. 27, 1968, at 42.

65See note 17 supra.

66See note 57 supra.

67HUDGE, supra note 16. CS was used in substantial quantities by the Paris riot police against rebellious French students during the events of May and June, 1968. P. LABRO, CE N'IST QU'UN DEbut 107-08 (1968) (paperback); U.N.E.F. & S.N.E. SUP., LE LIVRE NOIR DES JOURNEES DE MAI 86-91 (Seuil ed. 1968) (paperback).

range of hazards attributable to modern technology. The degree to which tort law, acting through the mechanism of the private suit for money damages, can effectuate societal control over such hazards will furnish a useful insight into the law’s vitality.\textsuperscript{69}

\textbf{LIABILITY OF THE USER}

\textit{Battery.} In the absence of a legal privilege to do so, a policeman or private citizen who intentionally sprays a person with a liquid chemical or who intentionally causes vapors from such a spray to come into contact with a person has committed an actionable battery\textsuperscript{70} and perhaps an assault.\textsuperscript{71} If such a person has a valid claim under a battery theory, he will be able to recover for all damages incurred, including those which the user had no reason to believe would result.\textsuperscript{72} Thus, although the defendant did not know and had no reason to know of the dangerous propensities of his chemical weapon, he nonetheless would be liable for harm which exceeded the damage he intended to inflict.\textsuperscript{73}

One privilege which can arise in intentional spray cases is that of self-defense, whereby a policeman or private citizen will not be liable upon proof that the plaintiff was, or reasonably appeared to be, threatening him with harm.\textsuperscript{74} Plaintiff, however, can defeat the privilege by establishing that the force used by defendant was excessive\textsuperscript{75}—that it was "in excess of that which the actor correctly or reasonably believed to be necessary for his protection."\textsuperscript{76} A corollary to this principle is that the privilege to intentionally inflict

\textsuperscript{69}The compensation function of tort law will be tested also, but the MACE cases will add nothing to the general question whether tort suits for money damages are an adequate and effective means of compensating injured individuals. Of perhaps greater consequence will be the prophylactic impact of these cases upon the use, manufacture, and sale of sprays.

\textsuperscript{70}W. Prosser, \textit{Torts} § 9 (3d ed. 1964) [hereinafter cited as \textit{W. Prosser}]; \textit{Restatement (Second) of Torts} § 18 (1965) [hereinafter cited as \textit{Restatement}]. "[A]ll that is necessary is that the actor intended to cause the other, directly or indirectly, to come into contact with a foreign substance in a manner the other will reasonably regard as offensive." \textit{Id.}, comment \textit{c} at 31.

\textsuperscript{71}W. Prosser § 10. Although no discharge takes place, a chemical spray may be used to threaten harm. Such conduct, absent a legal privilege, could amount to an actionable assault. \textit{Id.}

\textsuperscript{72}\textit{Restatement} § 16(1).

\textsuperscript{73}\textit{Id.} § 16, comment \textit{d}.

\textsuperscript{74}\textit{Id.} § 63; W. Prosser § 19.

\textsuperscript{75}Wall v. Zeeb, 153 N.W.2d 779 (N.D. 1967) (use of tear gas gun to effect arrest).

\textsuperscript{76}\textit{Restatement} § 70(1). Defendant’s good faith may be relevant on the issue of excessive force. In an action against a police officer for injuries sustained when at close range he fired his tear gas gun at plaintiff and caused him to lose an eye, the court held it was reversible error to omit reference to possible good faith on the issue of excessive force. Village of Barboursville \textit{ex rel. Bates v. Taylor}, 115 W. Va. 4, 174 S.E. 485 (1934).
serious bodily harm is limited to situations in which the defendant is or reasonably appears threatened with the same degree of harm.\textsuperscript{77} Thus, if plaintiff does not confront defendant with such a threat, real or apparent, and defendant protects himself with a chemical spray, causing serious bodily harm to plaintiff,\textsuperscript{78} the latter should be able to recover upon proof that the user knew, or a reasonable person in his place would have known, of the dangerous propensities of the weapon.\textsuperscript{79} A policeman or a private citizen may also be privileged to use force to effectuate an arrest\textsuperscript{80} or to prevent the commission of a crime.\textsuperscript{81} Again, a showing of excessive force will defeat the privilege.\textsuperscript{82}

Where state or local officials, including police officers, intentionally misuse chemical weapons, injured victims may utilize an additional or alternative remedy under the civil remedy section of the Civil Rights Act,\textsuperscript{83} which enables them to sue in federal court for damages resulting from abridgments, by officials acting under color of state law, of rights, privileges, or immunities secured by the Constitution or by federal law.\textsuperscript{84}

\textsuperscript{77}\textsuperscript{77} W. PROSSER § 19, at 112; \textit{Restatement} § 65.

\textsuperscript{78}The \textit{Restatement} defines "serious bodily harm" to include the "permanent or protracted loss of the function of any important member or organ." \textit{Restatement} § 63, comment b.

\textsuperscript{79}"The reasonable character of the means which the actor uses is determined by what a reasonable man, under the circumstances which the actor knows or has reason to know exist at the time, would regard as permissible in view of the danger threatening him." \textit{Id.} § 63, comment j, at 103.

If the defendant did not know, and had no reason to know, that the weapon might cause a permanent injury, plaintiff might still be able to recover against the manufacturer and/or distributor of the spray. See text accompanying notes 105-24 infra.

\textsuperscript{80}\textit{Restatement} § 118.

\textsuperscript{81}There is no common law privilege to use force to prevent a minor misdemeanor. \textit{Id.} § 140. There may be a privilege, however, to use force not likely or intended to cause serious bodily harm to prevent an affray or similar breach of the peace. \textit{Id.} § 141. The same is true of riots, except that the actor may use force likely or intended to cause serious bodily harm if the riot itself threatens serious bodily harm. \textit{Id.} § 142. The use of force likely or intended to cause serious bodily harm also may be privileged when the actor is attempting to prevent a felony. \textit{Id.} § 143.

\textsuperscript{82}The test of the amount of force that may be used in effecting an arrest or recapture is what the "actor reasonably believes necessary." \textit{Id.} § 132. See generally Greenstone, \textit{Liability of Police Officers for Misuse of Their Weapons}, 16 \textit{CLEV.-MAR. L. REV.} 396, 400-05 (1967).

In \textit{Chaudoin v. Fuller}, a deputy sheriff, in the course of arresting plaintiff for disturbing the peace, fired a tear gas gun into his face from a distance of three feet. The court held this to be an unreasonable, unnecessary, and excessive use of force under the circumstances. 67 Ariz. 144, 192 P.2d 243 (1948).


Negligence. A person unintentionally injured as a direct or indirect result of the use of chemical irritants may be able to recover for negligence, if he can prove that the defendant handled the weapon carelessly and that such substandard conduct was the legal cause of the harm sustained.\textsuperscript{66} Several decisions involving tear gas guns shed light on the way courts might deal with the issues of standard of care and extent of liability in spray cases.

In \textit{Haslem v. Jackson},\textsuperscript{86} plaintiff, a housemaid, was injured when a tear gas gun designed to look like a fountain pen discharged as she tried to tighten the cap. In an action against her employer, the owner of the pen, the court held that since the gun was a “dangerous instrumentality,” defendant was under a duty to exercise a high degree of care in possessing it, and that leaving it on a breakfast table amounted to negligence as a matter of law.\textsuperscript{67}

In \textit{Wall v. Zeeb},\textsuperscript{88} however, it was held that the accidental discharge of a tear gas gun while in the hands of a policeman does not create in itself a presumption of negligence. The court added that such a presumption, if available at all, applies only to cases involving firearms and that the tear gas gun in question was not a “firearm” because it could fire only tear gas cartridges, and not live bullets.\textsuperscript{68} This limitation on the term “firearm” seems to place nomenclature above reason and allows the result to turn on a rather unrealistic classification.

Other decisions have not been so restrictive. In \textit{Paul v. Holcomb},\textsuperscript{90} the court saw no need to make a specific ruling on whether a tear gas shell was a “dangerous instrumentality,” since the standard of care is almost invariably that of a reasonably prudent man under the particular circumstances.\textsuperscript{91} Furthermore, the court found no error in the trial judge’s instruction allowing the jury to impose a duty of


\textsuperscript{67}Ohio App. 433, 40 N.E.2d 692 (1941).

\textsuperscript{68}Id. at 436-37, 40 N.E.2d at 693-94.

\textsuperscript{69}Id. at 24, 442 P.2d at 561.


\textsuperscript{8}Cf. note 163 infra and accompanying text.
exercising extreme caution if they found the shell to be a "dangerous instrumentality."

To date, only one reported case has dealt in depth with the substantive issue of the standard of care in the operational use of tear gas by the police. In *Titcomb v. State*, the state of New York was held liable for the negligence of state troopers who discharged a CN tear gas grenade into a room in which decedent had barricaded himself. Although the troopers eventually carried him from the room, he died from lack of oxygen shortly thereafter. The court found the State negligent in not giving the troopers adequate instructions about the dangers of discharging CN grenades in enclosed spaces; it also found the troopers negligent in using gas without having masks with them, thus delaying the victim's rescue for critical minutes.

The use of sprays by the police may create a further duty of care when the individual officer is privileged to resort to force. It now seems clear that victims of MACE require immediate treatment in order to avoid the risk of serious injury from chemical irritants. The failure to provide such treatment, if it results in harm to the victim, might amount to actionable negligence. The duty to render first aid would fall upon the officer using the spray or, if an arrest is made, upon the officers in charge of the victim. To recover damages, the victim would have to establish that the police officers knew or should have known of the need for medical attention.

Federal Laboratories, the manufacturer of a CN aerosol, has provided "wash-up cards" for issuance to spray victims by police. Whether the distribution of these cards obviates the duty to provide medical treatment will depend upon the seriousness of the potential injuries spray victims might incur. If a court should find that a risk of permanent injury is involved, the cards probably would not shield the police from liability. Furthermore, since a principal function of such chemical weapons is to temporarily impair the recipient's vision,
the cards would seem to be of limited value to individuals sprayed in
the face.

In addition to liability on the part of the law officer committing
the tort, if the plaintiff can establish that the misuse of the spray was
within the scope of the tortfeasor's employment, he may be able to
hold the governmental unit employing him vicariously liable.97
Liability will depend upon how the courts in the particular jurisdiction
deal with the doctrine of sovereign immunity.98 Most jurisdictions,
while recognizing immunity with respect to municipalities, soften its
impact by distinguishing between proprietary and governmental
functions, imposing liability upon municipalities for torts committed
in the exercise of the former, but not the latter.99 The general rule has
been that police torts fall within the latter, immune category,100
although several jurisdictions have abolished the proprietary-
governmental distinction and hold municipalities vicariously liable for
the torts of individual policemen.101

Police department officials, however, may themselves be liable for
negligence when misuse of sprays results from inadequate training of
the officers who employ them, or when an officer who handles his
weapon in an intentionally brutal manner was hired or retained after
officials had notice, or should have had notice, of his unsuitably
sadistic nature.102

Another theory of negligence that might be asserted against
executive governmental officials would be based upon an allegation of
negligence in the adoption of the sprays, because the chemical irritants
are unreasonably dangerous and create an unreasonable risk of harm
to anyone sprayed. A defense against such a claim, however, might be
that the officials performed the acts in the exercise of a discretionary
function and are therefore immune from liability.103 Whether the

are not, however, vicariously liable for the torts of their men. See Note, The Tort Liability of
98See generally W. Prosser, supra note 70, § 125.
100See id. § 11.11; 18 E. McQuillen, Municipal Corporations § 53.51 (3d ed. rev.
1963); Mathes & Jones, Toward a "Scope of Official Duty" Immunity for Police Officers in
Damage Actions, 53 Geo. L.J. 889 (1965). Cases involving tear gas have followed the general
rule. Hagedorn v. Schrum, 226 Iowa 128, 283 N.W. 876 (1939); Luvaul v. City of Eagle Pass,
101See Shapo, Municipal Liability for Police Torts: An Analysis of a Strand of American
102See Groenstone, supra note 82, at 410-11.
103See id. at 408-10; 5A Personal Injury, supra note 85, at 201; Jaffe, Suits Against
Governments and Officers—Damage Actions, 71 Harv. L. Rev. 209, 218-25 (1963); Note, The
Tort Liability of Public Officers, supra note 97, at 508-10.
municipality could be held liable would depend again upon the particular jurisdiction's interpretation of the scope of sovereign immunity.104

LIABILITY OF THE MANUFACTURER

The manufacturers of chemical sprays may be liable under several different theories. When the user is injured by the spray itself because of a leaking canister, accidental discharge, or blowback of the chemical droplets, he should be able to recover under one or more of several theories: negligent construction105 or design106 of the weapon, failure to warn of the hazard which produced the injury,107 breach of implied108 or express warranty,109 and strict tort liability.110

The various negligence theories offer no conceptual difficulties. Negligent construction suggests that a particular weapon contained a faulty delivery mechanism, a flaw in the composition of the liquid, or some such deviation from the manufacturer's own specifications. Negligent design suggests that the delivery mechanism, composition of the liquid, or other such feature, though meeting the manufacturer's specifications, nevertheless created an unreasonable risk of harm. The adequacy of a warning or of instructions for use will depend upon what the manufacturer knew, or should have known, about his product and the potential dangers it posed.111 Federal labeling requirements, if applicable, will be relevant in determining the adequacy of the warning on the label.112

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104See notes 99-100 supra and accompanying text.

105See generally 1 L. FRIEMER & M. FRIEDMAN, PRODUCTS LIABILITY § 6 (1968) [hereinafter cited as L. FRIEMER & M. FRIEDMAN].

106See generally id. § 7; Noel, Manufacturer's Negligence of Design or Directions for Use of a Product, 71 YALE L.J. 816 (1962).

107See generally id. § 8; Noel, supra note 106.

108See 2 L. FRIEMER & M. FRIEDMAN § 16.04[2].

109See id. § 16.04[4].

110See id. § 16A; Prosser, The Fall of the Citadel, 50 MINN. L. REV. 791 (1966).

111In Scurfield v. Federal Laboratories, Inc., the defendant-manufacturer was held to have discharged his duty to warn by informing the purchaser of a tear gas gun of its nature and purpose. Thus, even though defendant's salesman had stated to the purchaser that the weapon could not cause serious harm, defendant was not liable to a visitor of the purchaser who thought the weapon was a fountain pen, picked it up, and discharged it in his own face. 335 Pa. 145, 6 A.2d 559 (1939).

112See text accompanying notes 150-51 infra. Failure to comply with an applicable federal standard would be evidence of negligence, or perhaps even negligence per se. See Morris, The Role of Administrative Safety Measures in Negligence Actions, 28 TEXAS L. REV. 143 (1949); Comment, Products Liability Based upon the Violation of Statutory Standards, 64 MICH. L. REV. 1388 (1966).

When the manufacturer has complied with safety standards, such compliance constitutes evidence of due care; however, plaintiff should be allowed to introduce evidence to show that
Recovery by the User. If the user sustains harm because the weapon failed to function properly at a critical moment, thus enabling an assailant to inflict injury, he may be able to recover under the theories mentioned above, provided he can prove that the malfunctioning of the weapon was the proximate cause of the injuries suffered. If a person is injured as a result of his own possession or use of a spray which he bought at a public sale, and he seeks to recover from the manufacturer on a duty-to-warn theory, the manufacturer's compliance, or lack thereof, with applicable federal labeling requirements will be relevant on the issue of negligence.

Recovery by the Victim. When plaintiff is the spray victim, either the user's intended target or an innocent bystander, the liability of the manufacturer will depend upon a combination of the following factors: (1) the manufacturer's conduct and/or the qualitative nature of his product; (2) the seriousness of the plaintiff's injuries; and (3) the conduct of the user—whether he acted in a substandard manner, whether he intended to spray the victim, and, in the latter case, whether he was privileged to do so.

The injured spray victim who wishes to assert the theories of warranty or strict liability must face the initial difficulty of establishing that these theories are available to him. The 1951 version of section 2-318 of the Uniform Commercial Code limited the seller's warranty to "any natural person who is in the family or household of his buyer or who is a guest in his home." This section has now been amended to offer three alternative paragraphs, two of which would extend coverage to anyone "who may be reasonably expected to use, consume, or be affected by the goods." The spray victim, both the intended target and the innocent bystander, clearly would be able to assert a claim for breach of warranty under either of these two alternatives.

defendant should have taken additional precautions. Hubbard-Hall Chem. Co. v. Silverman, 340 F.2d 402 (1st Cir. 1965). See W. Prosser, supra note 70, at 205; Morris, supra, at 157-66.

113Uniform Commercial Code § 2-318. The drafters, however, made it clear that their position was neutral with respect to further extensions of the seller's warranties. Id., Comment 3. Nevertheless, decisions have allowed injured bystanders to recover from the manufacturer under the implied warranty theory. See, e.g., Piercefield v. Remington Arms Co., 375 Mich. 85, 133 N.W.2d 129 (1965); Connolly v. Hagi, 24 Conn. Supp. 198, 188 A.2d 884 (Hartford County Super. Ct. 1963).

114Uniform Commercial Code § 2-318, Alternatives A, B, C.

115Id. § 2-318, Alternatives B, C (emphasis added). Alternative A continues to limit recovery to the family, household, and guests of the buyer. See J. Honnold, Law of Sales and Sales Financing, 150-52 (3d ed. 1968).
Section 402A of the Restatement (Second) of Torts allows the "user or consumer" of a product to assert a claim for strict tort liability, but takes no position on whether protection should be extended to persons other than users or consumers. A recent decision by the California Supreme Court may mark the beginning of a trend to permit bystanders to take advantage of the strict liability theory. A fortiori, the intended victim also should be allowed to use the theory, since his relation to the product and its use is more intimate than that of a mere bystander. The suggested amendments to the Uniform Commercial Code provide further support for the argument that the target ought to be able to assert the theory of strict liability. Finally, it may be urged that the target is in fact a consumer, albeit an involuntary one, since the intended use of the product entails the inhalation of gases given off by the spray. The fact that the spray was designed to produce noxious results should make no difference if the injury sustained by the target exceeded the type and scope of harm the weapon was supposed to inflict.

If the spray victim is able to utilize either the warranty or strict liability theory, he must still establish that the product was defective. The test under both theories probably would be whether the product is unreasonably dangerous. There are several ways in which a plaintiff may argue that a chemical spray should be so classified. He may point to a construction or design defect in the weapon; he may claim that the known dangers created by the spray are beyond the limits that should be tolerated for law enforcement or self-defense purposes; or he may allege that a failure to give proper operating instructions and a sufficient warning of the hazards attendant the weapon's use render it unreasonably dangerous, and hence defective. As a practical matter, in most instances proof

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110 Restatement, supra note 70, § 402A.
111 Id., Caveat & comment o.
113 See notes 114-115 supra and accompanying text.
114 The accidental discharge of a tear gas gun has been held not sufficient in itself to prove the existence of a defect. Gaw v. Lake Erie Chem. Co., 293 Ill. App. 123, 11 N.E.2d 982 (1937).
116 See Restatement § 402A, comment i. Any decision on the merits of this issue would involve interesting policy considerations on police weaponry and the domestic arms race.
117 Id. § 402A, comment j.
of unreasonable danger under any theory would also amount to proof of negligence.

Relationship of Injury and Recovery. The possible injuries which a chemical spray may inflict fall into three categories: transitorily disabling, prolonged, such as second-degree burns which eventually heal or impaired vision which eventually clears, and permanent. Any of these injuries would be sufficient to satisfy the required element of damage; however, if the intended target of the user sustains nothing more than transitorily disabling effects from a spray, the manufacturer should not be held liable, since the sprays are intended and designed to cause such harm. Furthermore, it may be that a court would require proof of permanent injuries before it ruled, as a matter of law, that a spray was defective because of its ultrahazardous nature.

Conduct of the User. If the user acted with due care, but sprayed an onlooker, even under circumstances which would constitute an unavoidable accident, the victim nevertheless should be able to recover from the manufacturer upon satisfaction of the elements required by the aforementioned theories. When the user carelessly sprays a bystander and the injuries sustained derive from negligent or defective construction or design of the spray, the bystander should still be able to recover from the manufacturer under a theory of negligence, implied warranty, or strict liability. The user's intervening negligence or faulty marksmanship should not constitute misuse of the product such as to absolve the manufacturer of liability; such negligence is reasonably foreseeable, and should not insulate the manufacturer. If, however, the user's negligence is attributable to his failure to follow

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125 See W. PROSSER § 30 (negligence); RESTATEMENT § 402A (strict tort liability); UNIFORM COMMERCIAL CODE § 2-314, comment 13 (warranty).
126 See note 25 supra. If the spray does what it is supposed to do, it is difficult to conceive how there can be any defect in the product or negligence on the part of the manufacturer. A bystander, however, who suffers such harm because a defect in the discharge mechanism caused a burst of liquid to go awry might well be able to recover against the manufacturer.
127 See note 123 supra.
128 See text accompanying notes 105-110 supra.
129 In cases asserting a theory of negligence, the manufacturer will be liable for harm sustained during the "normal use" of his product and will not be liable if injuries result "only because it is mishandled in a way which he has no reason to expect, or is used in some unusual and unforeseeable manner." RESTATEMENT § 395, comment j at 330. Comments g and h of § 402A limit strict tort liability to cases of "normal handling."
130 Cf. Warner v. Santa Catalina Island Co., 44 Cal. 2d 310, 282 P.2d 12 (1955). Plaintiff was injured by the ricochet of a defective cartridge fired in a shooting gallery. The court held that continued use of defective shells by the gallery operator, despite knowledge of the defect, should have been foreseeable by the manufacturer.
instructions in the handling of the weapon, the manufacturer at least cannot be at fault for failure to warn. As a practical matter, under these facts plaintiff would seem assured of recovery from either the manufacturer or the user, for it is clear that either the manufacturer failed to give proper warnings or instructions, or, if they were given, the user failed to heed them.

When the plaintiff is the intended target and suffers more than transitorily disabling harm as a result of a construction or design defect in the spray or inadequate warnings and instructions in its use, he should clearly be able to recover from the manufacturer in situations in which the injuries are of a more serious nature than the user intended or would have been privileged to inflict. Whether or not the user had a privilege to use force should be irrelevant to the manufacturer's liability, since any firing of the weapon should have been foreseen as normal use. If the user had no privilege he would be liable jointly with the manufacturer. If the user knows that a spray can cause more than transitorily disabling injuries if fired in a certain manner, and he still discharges the weapon in that manner, the victim's injuries cannot be attributed to any failure to warn on the part of the manufacturer. A finding that such a user of a spray lost his privilege by employing excessive force would seem to carry with it a finding that he knew what he was doing; hence the manufacturer could not be charged with a failure to warn.

LIABILITY OF THE RETAILER AND WHOLESALER

The retailer of a spray sold to the public or to the police also might be liable, based on a negligent failure to warn of the spray's known dangers, breach of implied warranty of merchantability, or

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131 An interesting problem might arise in the unlikely event that the user intended to cause transitorily disabling harm, but under the circumstances would have been privileged to inflict serious bodily injury and in fact did inflict such injury because of a defect in the construction or design of the weapon or in the instructions for its use. If the user would have nonetheless fired the weapon with knowledge of the defect and if the victim intentionally created the situation which gave rise to the privilege, then it is highly improbable that a court would allow the victim to recover against the manufacturer. If, however, he could prove that the user, although privileged to discharge the spray with knowledge of the defect, would not have done so, a court might be persuaded to hold the manufacturer liable. The victim's case would be even stronger if the privilege arose from the user's reasonable but mistaken belief that he was threatened with serious bodily harm.

The assumption here is that a court would place upon the manufacturer no higher duty than that of warning about the possibility of injury from certain uses or misuses of the weapon. Any higher duty suggests that the weapon as manufactured is defective because of its ultrahazardous nature. See text accompanying note 121 supra.

132 See 2 L. FRUMER & M. FRIEDMAN, supra note 103, § 18.02.

133 See 2 id., § 19.03[3]; UNIFORM COMMERCIAL CODE § 2-314.
strict liability. Furthermore, a retailer may be liable for negligence in selling a spray to a person he knows or should know may create an unreasonable risk of harm in his handling of the weapon. The purchaser of the spray might also have the additional remedies of breach of express warranty or breach of implied warranty of fitness for a particular purpose. A wholesaler who sells sprays to salesmen for resale to the general public likewise might be liable under any of these theories, except possibly breach of implied warranty of fitness for a particular purpose. Attempts by the manufacturer or seller to avoid liability by means of disclaimers printed on the canister or on separate documents will doubtless be treated with the same disfavor courts have generally evidenced toward disclaimers on consumer products.

**REGULATION OF CHEMICAL SPRAYS**

Any examination of the use of tort law as a means of achieving societal control over chemical sprays should also touch briefly upon the potential of other aspects of the legal process. Police misuse of sprays may be criminal as well as tortious, although resort to criminal prosecution has not proved an effective method of controlling police activity. The same generally has been true of resort to administrative procedures designed to handle civilian grievances against the police.

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134 See 2 L. Fruimer & M. Friedman § 16A; Restatement § 402A.
135 Cf. 2 L. Fruimer & M. Friedman §§ 18.04A, .05; 3 R. Hursh, American Law of Products Liability §§ 26:18, :22 (1961). The manufacturer of PREVENTOR I requires the purchaser to sign a pledge that he will use the chemical spray only for defensive purposes. N.Y. Times, May 6, 1969, at 82, col. 1.
136 See 2 L. Fruimer & M. Friedman § 19.04; Uniform Commercial Code § 2-313.
137 See 2 L. Fruimer & M. Friedman § 19.03[4]; Uniform Commercial Code § 2-315.
138 See 2 L. Fruimer & M. Friedman § 20.
139 This warranty would seem to arise only out of dealings between the seller and the purchaser. See authorities cited note 137 supra.
140 See 2 L. Fruimer & M. Friedman § 19.07.
142 See Ginger & Bell, supra note 84, § 6, at 555; Note, The Administration of Complaints by Civilians Against the Police, 77 Harv. L. Rev. 499 (1964).

A recent example of the questionable efficacy of such procedures is a San Francisco police report clearing a member of the city's Tactical Squad. He had sprayed a 23 year-old girl who was handcuffed and allegedly trying to get out of the patrol wagon where her mother and sister were also being held. San Francisco Chronicle, Apr. 1, 1969, at 1, col. 1. The women, respected members of the black community, had been arrested at the scene of a traffic accident for failing to obey police orders. The report did call the use of MACE "questionable," and the officer in
INJUNCTIVE RELIEF

There are other possible approaches to the problem, however, one of which is a class action to enjoin police departments from issuing or using sprays, at least in the absence of full instructions about their dangerous propensities. Two such suits have already been filed under section 1983 of the Civil Rights Act, resulting in a consent decree whereby police officials have agreed: (1) to restrict the use of MACE to situations in which a blackjack or nightstick would be justified; (2) to refrain from using MACE on crowds "unless there is a clear and present danger of a riot or an affray," in which case only after giving adequate warning; and (3) to insure that spray victims receive proper first aid as soon as possible.

An injunction also may be appropriate relief against repeated misuse of sprays by police. Although such relief has not been granted to date in a spray case, it has been allowed in other instances of police abuse of authority. In Lankford v. Gelston, an injunction was issued forbidding illegal searches. More recently, in the aftermath of the question was transferred from the Tactical Squad, yet it is not surprising that the San Francisco NAACP branded the report as a "cover-up and whitewash."  

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143 See Ginger & Bell, supra note 84, at §§ 9, 43; Comment, The Federal Injunction as a Remedy for Unconstitutional Police Conduct, 78 YALE L.J. 143 (1968).

144 See note 84 supra.

145 Bethea v. Monaghan, Civil No. 68-2529 (E.D. Pa., Mar. 12, 1969). Information about the consent decree was obtained in a telephone interview with Daniel Shertzer of Lancaster, Pa., counsel for plaintiffs. The other class suits are still in the pleading stages. One seeks relief against the uncontrolled, uninformed, and indiscriminate use of sprays, alleging that such use violates rights secured by the fifth, eighth, and fourteenth amendments. Lanier v. District of Columbia, No. 2318-68 (D.D.C., Sept. 13, 1968). The other asks for broad relief against a wide range of alleged police misconduct, citing police misuse of MACE as but one example of illegal activity utilized to deprive New Haven blacks of their constitutional rights of free speech, assembly, association, petition, movement and privacy, and freedom from unreasonable searches and seizures. Harris v. Lee, No. 12459 (D. Conn., filed Mar. 12, 1968).

A similar suit, filed by prisoners in the Virginia State Penitentiary, resulted in a temporary order restraining prison officials from "the use of tear gas or deleterious chemicals against any individual inmate except in the most extraordinary circumstances and after approval in writing of the superintendent ...." Mason v. Peyton, No. 5611-R (E.D. Va. Aug. 13, 1968).

186 364 F.2d 197 (4th Cir. 1966), noted in 1967 WASH. U.L.Q. 104. Plaintiffs' homes had been searched by the Baltimore police without warrants. Similar searches had been conducted in a black neighborhood over a 19 day period, pursuant to a plan designed to apprehend Negro suspects in a robbery in which several policemen were shot. Although the searches were confined to the 19 day period and the police commissioner had since issued an order forbidding them, the Fourth Circuit issued an injunction under § 1983. The court emphasized the morale-boosting function of such an injunction, which would be an effective gesture demonstrating the law's concern for ghetto injustices. Noting that money damages would be inadequate and not an effective deterrent to police misconduct, the court found that the police had suspended the searches not because they were illegal, but because they were ineffective, and therefore the issue raised was not moot. 364 F.2d at 202-03.
1968 Democratic National Convention, an injunction was found appropriate to prohibit police from interfering with news photographers.147

LEGISLATIVE CONTROL

Federal legislation at present does not provide adequate safeguards for the production, sale, or use of chemical sprays. Moreover, administrative action has been laggard. Although the Justice Department, the Surgeon General, and the Food and Drug Administration (FDA) have all taken tentative steps toward examining the effects of MACE as a police weapon, they have hesitated because of jurisdictional uncertainties.148 In addition, the Surgeon General and the FDA have displayed a considerable lack of coordination in dealing with the available data on the dangers of MACE.149 Nevertheless, some regulatory power exists, which potentially could serve as a basis to control chemical sprays.

The Federal Hazardous Substances Act places certain labeling requirements on products intended for household use. Furthermore, if a product is deemed so dangerous that "protection of the public health and safety can be adequately served only by keeping such substance...out of the channels of interstate commerce," it may even be banned.150 Since one of the advertised purposes of the sprays is defense of the home,151 these weapons clearly fall within the ambit of the Act.

A basic weakness of the Act, however, is that the Government

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148See statement by Dr. James L. Goddard before the Subcomm. on Executive Reorganization of the Senate Comm. on Gov't Operations, Apr. 17, 1969.

149To illustrate, on April 9, 1968, the Army notified the Surgeon General that MACE had failed to meet its safety requirements and furnished the data upon which this decision was based. See Letter of Brig. Gen. Donald D. Blackburn, supra note 43. The Surgeon General, however, made no mention of this in his warning letter of May 2, 1968. Letter from the Surgeon General, supra note 35. Dr. Herbert L. Ley, Jr., the Commissioner of the FDA, later asserted that he did not learn of the Army's conclusion that MACE was unsafe until April 23, 1969, although he stated that he was aware of the Army's tests. See Office of Senator Frank E. Moss, News Release, June 2, 1969.


151See, e.g., Salesman's Opportunity, Apr. 1969, at 23 (ad for ON GUARD); Specialty Salesman, Sept. 1968, at 29 (ad for PROTECTOR).
must prove that a product is mislabeled or ultrahazardous. This means that enforcement will depend upon the initiative of the FDA, the federal agency which administers the Act. To date, the FDA has recommended the type of labeling which should be placed on the sprays and has made two seizures of spray weapons. Yet the claim by Smith & Wesson's president, William G. Gunn, that another spray composed of a mustard gas derivative has been on sale to the public suggests that the FDA may not be doing enough. One solution would be legislation requiring pre-marketing clearance by the FDA before an aerosol chemical weapon may be sold to the public.

The Federal Trade Commission (FTC) also could be a source of regulation, since it has authority to take action against deceptive practices in interstate commerce. The FTC therefore has the power to investigate spray advertising in order to ascertain whether any of the claims made are so misleading as to justify the issuance of cease and desist orders. The Department of Agriculture likewise has relevant regulatory powers. The Insecticide, Fungicide and Rodenticide Act requires the seller of substances used to repel animals to register with the Department and enables the Department to regulate the sale of such substances. This authority could be utilized to control the few spray weapons which are advertised as dog repellants.

The Post Office Department also has power to act, since it can ban the mailing of "chemical . . . devices . . . which may ignite or explode . . . and all other . . . material which may kill or injure another, or injure the mails or other property . . . ." The Department has exercised this authority by barring CN sprays from shipment through the mails. Distributors, however, have easily sidestepped this restriction by employing other methods of shipment.

Finally, several jurisdictions have statutes making it a crime for

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1 Consumer Hearings, supra note 18 (statement of Dr. Herbert L. Ley, Jr.).
2 Consumer Hearings (statement of William G. Gunn).
3 Such a requirement would be analogous to the burden placed upon the manufacturers of new drugs. See 21 U.S.C. § 355(a) (1964).
5 For an expression of the FTC's intent to examine spray advertising, see Consumer Hearings (statement of Paul Rand Dixon).
9 A published advertisement for BODY GUARD states: "Sending tear gas thru the Mail is illegal—we ship this . . . via Express." See, e.g., Specialty Salesman, Sept. 1968, at 66.
private citizens to possess, carry, or sell tear gas weapons, and/or requiring licenses for such activities. Moreover, a number of states have enacted legislation regulating the possession of deadly or concealed weapons. Some court decisions, however, have distinguished between tear gas guns which can also fire live ammunition and tear gas weapons which discharge only a gas or spray, finding the latter outside the statutes. No state to date has enacted legislation dealing directly with aerosol sprays.

REALITY OF RELIEF

The foregoing discussion of tort law and chemical sprays has examined the factual bases for personal injury litigation, the applicable tort theories, and various other legal approaches to the problem. There remains for consideration the practical factors which may affect both the outcome of damage suits and their impact upon the production, sale, and use of these weapons.

A recent article on the control of police behavior argues that "a civil action against a police officer is perhaps least satisfactory, both as a means of seeking redress and as a means for positively influencing police conduct." To what degree does this observation...

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164 For an account of an unsuccessful attempt to pass such legislation in Indiana, see the Indianapolis Star, Feb. 16, 1969, at 1, col. 4.

bear on MACE cases? Spray victims of course will face the usual obstacles that confront any attempted recovery against police officers. Because such suits amount to an attack on the law enforcement establishment, they will be defended vigorously. 166 "Juries are not likely to have compassion for a plaintiff, however abused, if he is guilty of a crime or disreputable." 167 Judges may reflect the same attitudes. Furthermore, spray cases involving demonstrators may have political overtones, thus perhaps prejudicing the resolution of questions such as whether excessive force was applied or whether the use of the spray created an unreasonable risk of harm. If plaintiff manifests political views that are repugnant to the court or the jury, the police officer's privilege to use force likely will be construed liberally. Popular attitudes favoring the police violence at the 1968 Democratic Convention in Chicago suggest support for this proposition. 168

A related consideration is that valid claims often may not be asserted. Although spray injuries include pain, discomfort, burns, and impairment of vision, few involve permanent harm. In most cases, therefore, special damages may be rather modest. Furthermore, a law suit, particularly one based on products liability, would not be easy and might prove expensive. Consequently, the likely litigation costs, when weighed against the possibility and amount of a favorable verdict, may discourage victims from asserting claims and attorneys from accepting such cases. This could be a critical problem in spray incidents which occur at a considerable distance from the manufacturer and from doctors or scientists who might be willing to testify for the plaintiff. 169 One possible solution to the problem is for attorneys with claims against one particular manufacturer to pool

166 Id.
167 Id. One of the pending cases involves an Indian who was drunk at the time he was sprayed. Miguel v. Hinderliter, No. C217921 (Ariz. Super. Ct., filed Nov. 22, 1968). The plaintiff in one potential MACE case has been described as "a somewhat unattractive person, ... serving a jail term in another county." Letter from his attorney, Apr. 29, 1969, on file with author. Another potential spray plaintiff has been described as "a contentious individual ... [who] may well have a psychological deficit stemming from the time of his birth." Letter from his attorney, Dec. 4, 1968, on file with author.
168 Gallup, Majority Back Chicago Police, LAW OFFICER, Fall, 1968, at 23; cf. OPHTHALMIC OBSERVER, Feb. 1969, at 3 (487 of 604 ophthalmologists polled favored use of MACE by police); N.Y. Times, Dec. 1, 1968, at 40, col. 1 (students and faculty at Duquesne University voted 1,113 to 192 in favor of keeping MACE on campus).
169 This factor was cited by a Georgia attorney as the principal obstacle to the filing of a number of claims by Negroes who had been sprayed by police. Letter to author, from John D. Mattox, Dec. 14, 1968.
their talents and information. As yet no such cooperative effort has been attempted.

In addition to the problem of expense, ghetto dwellers or individuals not within the mainstream of society may have such a distrust of the legal process that they are unwilling to submit themselves to the demands of trial preparation and actual litigation. This attitude may extend even to the middle class, in which a reluctance to "get involved" may inhibit recourse to the courts. Another deterrent is the possibility that the institution of a damage suit might provoke the filing of criminal charges against the plaintiff, if such charges had not already been brought.

Besides the fact that damage suits against policemen are difficult to win, and that individuals with valid claims do not bring them, a further drawback is the unlikelihood that a verdict for plaintiff will achieve any positive results. As Judge Sobeloff, in holding that the plaintiffs in Lankford had no adequate remedy at law, explained:

There can be little doubt that actions for money damages would not suffice to repair the injury suffered by the victims of the police searches. Neither the personal assets of policemen nor the nominal bonds they furnish afford genuine hope of redress. . . . Moreover, the lesson of experience is that the remote possibility of money damages serves as no deterrent to future police invasions.

This observation would seem equally applicable to the misuse of chemical sprays.

Furthermore, the extent to which tort recoveries can affect the manufacturers and distributors of sprays is uncertain. The chemical weapons business is quite profitable.

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171 Attorneys in Washington, D.C., have told the author of two promising spray cases which were never pursued for these reasons. A potential spray plaintiff on the west coast has been described as having "little more patience with the processes of law in a personal injury case than he does with the activity of the local police departments." Letter from his attorney, Dec. 4, 1968, on file with author. One of the pending spray cases may have to be dropped because of lack of cooperation by plaintiff. Telephone interview with attorney for plaintiff, Apr. 1969.

"The poor man thinks of the policeman as someone who pushes him around, and the lawyer is always the man who takes something away from him." Address by Mr. Justice Thurgood Marshall, 18th Annual Conference of Judges and Lawyers of the 7th Federal Circuit Court District, May 9, 1969, in CRIME CONTROL DIGEST, May 22, 1969, at 11.

172 Attorneys in San Francisco cited these reasons to the author to explain why a minister and a Negro middle class family did not bring lawsuits to vindicate seemingly valid claims against the police for the misuse of MACE.


174 See Wall Street Journal, supra note 18.
sellers carry product liability insurance,\textsuperscript{175} they may be able to pass the costs of damage suits to the consumer by adjusting the price of the product to reflect any increase in their insurance premiums.

Does the conclusion therefore follow that tort law has no role to play in the effort to achieve meaningful control over the possession, sale, and use of chemical sprays? Several positive factors suggest that it may be premature to dismiss its potential. First, it is by no means certain that spray victims have little hope of recovery. Plaintiffs in some of the spray cases already filed are far from disreputable.\textsuperscript{176} Also, the presence of the manufacturer as a defendant along with the police or the municipality can put the plaintiff in the advantageous position of pleading his case in such a way that one defendant or the other must be liable.\textsuperscript{177}

The impact which the filing of one damage suit in the District of Columbia has already had is noteworthy. After a claim was brought against several policemen and the District, the D.C. Department of Public Health was requested to conduct research on the spray weapon involved.\textsuperscript{178} Though finding no evidence of any risk of eye injury, the study revealed that the inhalation of large quantities of vapors from the spray could cause lung and kidney damage.\textsuperscript{179} Unfortunately, the Department has seen fit to suppress the study.

The threat of potential damage suits also had an interesting impact in San Francisco, where the City and County Charter forbids the elected Board of Supervisors to interfere in administrative affairs,\textsuperscript{180} which include police matters. Members of the Board discussed the possibility that damage suits against the City and County arising from police misuse of sprays might deplete the public treasury. Citing this as justification they passed a resolution calling upon the police department to suspend the use of sprays until the

\textsuperscript{175} In an interesting case it was held that the premises-liability insurance of a seller of tear gas devices did not extend to the defense and settlement of a claim arising from the illegal sale of such a device to a minor. Hagen Supply Corp. v. Iowa Nat'l Mut. Ins. Co., 331 F.2d 199 (8th Cir. 1964).
\textsuperscript{176} Jennings v. City of Winter Park, Civil No. 68-4047 (Fla. Cir. Ct., filed Sept. 6, 1968) (plaintiff is a 68 year-old attorney and past president of a county bar association); Vaughn v. City of Estacade, No. 342266, (Ore. Cir. Ct., filed Oct. 2, 1968) (plaintiff was an infant less than a year old when sprayed).
\textsuperscript{177} See p. 1258 supra.
\textsuperscript{179} Washington Post, supra note 178.
\textsuperscript{180}City & County of San Francisco, Charter, § 22 (1932).
Board of Health could study the weapons and assess the dangers they posed.\textsuperscript{181}

Moreover, publicity emanating from tort litigation may bestir police departments to reevaluate their policy on sprays. The wide press coverage given the Surgeon General's letter resulted in the suspension of the use of sprays by a number of departments throughout the country\textsuperscript{182}—a reaction which reflects the role of public relations in law enforcement and suggests what the stimulus of adverse publicity can do. Further focus on the dangers of sprays by the mass media can drive home at least the necessity of careful and controlled use of the weapons and the need for prompt treatment of victims.

Another positive aspect of damage suits is that they may provide significant data on the issue of whether and to what extent the sprays can cause permanent damage. Indeed, in a sense one may look upon the spray victim-plaintiffs as subjects of a nationwide experiment in the use of chemical aerosols in law enforcement.

**Conclusion**

The hazards created by the public sale of chemical sprays may be said to constitute a consumer protection problem and hence raise issues which are politically popular and "safe" for legislators and administrators. Existing state and federal laws provide a basis for the exercise of some degree of regulation over these weapons. Additional federal legislation may be forthcoming.\textsuperscript{183} The use of sprays by the police presents a considerably more difficult problem. There are no laws regulating the manufacture or use of police sprays, and the present delicacy of the "law-and-order" issue militates against the passage of such legislation.

This leaves the courts as a final barrier to the unfettered production and use of chemical sprays for law enforcement. The judicial process has the capability to provide a forum both for the dispassionate resolution of the factual issues which underlie the MACE controversy and for the imposition of rational public restraints upon the manufacture and use of these weapons. The substantive rules to be applied in damage actions and suits for equitable relief provide an adequate means of achieving these results.

\textsuperscript{181}Interview with Terry A. Francois, Esq., Member, Board of Supervisors, City and County of San Francisco, Cal., in San Francisco, Apr. 9, 1969.


\textsuperscript{183}See Office of Senator Frank E. Moss, \textit{supra} note 149.
How judges and jurors will apply these rules is the crucial question. Whether the courts will accept the challenge and the extent to which the judicial process can regulate the utilization of chemical warfare technology by domestic law enforcement agencies will reflect to a significant degree the law's role and relevance in dealing with the pressures which are presently straining at the seams of the American social fabric.