

Tear Gas in Vietnam and the Return of Poison Gas

"In Vietnam, we have used 15,000,000 pounds of tear gas, enough to cover all Vietnam more than once with a field effective concentration. . . . My own judgment is that the advantage of using this gas is not nearly equal to the hazard of breaking down the traditional, psychological expectation that gas will not be used."
Matthew Meselson, professor of biology at Harvard University, gave this testimony before the Defense Subcommittee of the Senate Appropriations Committee in May 1970.

Last year, President Nixon took the wise initiative of renouncing the possession and use of germ weapons. The reasons were simple.

We have no need for germ weapons; no one could figure out a scenario in which it would make any sense for us to use such a weapon; but in the hands of others such weapons would be a great threat against our cities and civilians and their development would open up a new dimension of cheap warfare that could only harm us.

On those grounds, as well as on others, the President took the historic initiative of renouncing all possession and use of germ weapons. He also announced his decision to send to the Senate for its advice and consent to ratification the Geneva Protocol of 1925, a treaty now ratified by 84 other nations but not by the United States, even though we, ourselves, were instrumental in its drafting. That treaty is essentially a no-first-use treaty. It prohibits the first use of chemical and biological weapons. It is a kind of benchmark or guideline so that nations can understand where they might coordinate their expectations during conflict and the rule is very simply stated: no gas, no germs.

However, a problem has arisen

and the problem is that many nations feel that some of the weapons we are using in Vietnam are prohibited by the Geneva Protocol.

In December 1969 at the General Assembly of the United Nations, there was a vote on a resolution introduced by Mexico, Sweden, Pakistan, India and a number of other neutral nations. The resolution asserted that all chemical weapons whether used against plants, animals or men, are prohibited by the Geneva Protocol. The vote was 80 to 3. The three were Portugal, Australia and the United States. We had never been so isolated on any issue.

We exerted ourselves very greatly in capitals throughout the world to persuade our friends and allies not to vote in favor of that resolution. This great pressure succeeded in obtaining 36 abstentions.

This creates a problem. The problem is this. Should the United States, in order to achieve a uniform understanding of which chemicals are prohibited, give up the use of herbicides and tear gas in Vietnam and in the future? There are benefits in doing that. Or should we retain the option to use those weapons in Vietnam and in future wars? There are benefits in doing that.

I would like to talk about the se-

curity implications to the United States of our decision in this matter. Today, the funding generated by such weapons is small compared to the overall military budget. On tear gas in Vietnam at \$4 per pound, approximately, using 15 million pounds in the last few years, we have spent approximately \$50 million or \$60 million for the gas; I suppose another equal amount for weapons. That is \$100 million. That is a lot of money but it is a small fraction of the defense budget.

However, these small beginnings have big implications.

For 45 years after World War I, our forces did not use gas in combat in any form, shape or manner. Then in Vietnam a break with that tradition was allowed to occur and it has escalated very greatly since then.

Tear Gas

I would like to speak directly to you about the issues raised by our use in particular of what has been called tear gas or riot control gas or harassing gas or irritant gas; it is all the same. The code designation is "CS."

It is an effective temporary incapacitant against men without gas masks. In the amounts in which we use it, it may also kill but that is not its primary intended purpose. Its primary intended purpose is to incapacitate the enemy. Having incapacitated an enemy, one can bring to bear other weapons.

CS is used in Vietnam mainly for ordinary military purposes. In attack against occupied enemy positions, it is used in close conjunction with artillery and air fire in order to increase enemy casualties by flush-

ing the enemy from bunkers and other field fortifications.

Questions and Answers

SEN. ALLEN J. ELLENDER (D — La.). Does it kill?

MESELSON. Occasionally, Senator, I believe it kills. Although there are no verified reports, so far as I know, there has been no effort to verify the reports, but one can calculate from the concentration which the Army believes to be lethal whether or not that concentration or that exposure would be achieved under field conditions. It is very easy to calculate that quite often that would be the case.

However, its main purpose in itself is not to kill.

SEN. MILTON R. YOUNG (R — N.D.). I watched the television coverage of the demonstration here

in Washington recently. I particularly watched the students trying to upset some buses. The police used some tear gas and they moved away quickly. I thought this was a rather harmless way of dealing with the situation.

Police vs. Military Use

MESELSON. Yes, sir. That is the police use of tear gas. This is absolutely different from the military use of tear gas.

[In his written statement, Professor Meselson added:]

The Geneva Protocol explicitly prohibits the use of chemical agents in war. The Protocol is in no way directed against the use of such agents by police. This distinction has been understood and practiced by many nations since the Protocol came into being. During World War II, United States military police were

well supplied with tear gas grenades and used them on GIs and on allied civilians in certain circumstances to quell disturbances. However, these munitions were not employed in combat against the enemy. There are many similar examples. Even Sweden, a nation that is very energetically promoting international action against the use of tear gas in war, uses CS for maintaining domestic order.

Indeed, the main threat to the freedom of domestic police to use tear gas in the democratic countries probably comes from the risk that it will be misused and cause serious injury or death and that its massive and undisciplined use will lead to reaction against it. These consequences can be made more, not less, likely by habituation to the large-scale use of CS in war and by the gradual transition of its image from



a police aid to a war weapon.

YOUNG. Do you think it is all right for the police to use tear gas but not the military?

MESELSON. Let me re-emphasize that I am discussing the military benefits of using this weapon. I am discussing military effectiveness and how it is used.

One benefit that was initially anticipated was to make war more humane. This has not proved to be the case.

Expectation Exceeded

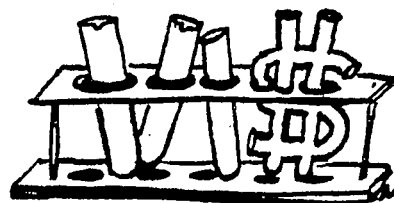
Initially, Secretary of State Dean Rusk said that the expectation would be that it would be used only in riot control and similar situations and not in ordinary military operations. That has not been the case.

The amount we have used, over 15 million pounds, is enough to cover all of Vietnam more than once with a field effective concentration. The weapons we have used have escalated from ordinary hand grenades to very large munitions.

The way it has been used has been to maximize casualties to the enemy and to minimize them to ourselves. Now, those are legitimate military objectives. But we should not allow ourselves to be confused that CS makes war more humane. The reason it was thought at first it might be was that there were a few situations in which civilians and Viet Cong were intermingled and in a very few of those CS was used and enabled the separation of combatants from noncombatants without injury to the latter.

However, it turns out, as extensive field studies in Vietnam have shown, that this is an exceedingly rare occurrence. Many field commanders do not recall ever seeing or hearing of such an occurrence. The reason for this is that when civilians expect a fire fight to break out they leave, they go away if they can. If they can't, they go down into their underground shelters underneath their huts which many civilians in Vietnam have. CS drives them out. It drives them out into the field of fire and they do not know how to take care of themselves in a fire fight and they are killed.

For that reason today in Vietnam



CS is not used for intermingled situations. It is used to attack the enemy. It is used to repel enemy troops when they attack us.

ELLENDER. I guess it is used to flush them out so that they can be attacked or captured?

MESELSON. That is exactly right.

New Dimension

The use of gas can raise the level of violence in wars of all kinds, in so-called low-level wars, guerrilla wars, in larger wars, and in strategic wars. However, the effect of using gas would be to particularly enhance not the destructive power of the United States but the destructive power of those whom we wage war against and the destructive power of smaller and dissident military groups.

Why do I say this?

To date, the United States fights wars with money. We use fantastic amounts of munitions.

In 1968, we were using 6,500 tons of ammunition in Vietnam every day. That is enough to fill 500 railway cars every day. This costs a fantastic amount of money.

Each one of those weapons by itself does not have a very large area of destructiveness, a single shell, a single bomb.

Because of our vast wealth, we can supply munitions in an enormous quantity. Taken together, the destructive capability is very great. The kill area of a single weapon, an artillery shell or a mortar cartridge would be increased by a factor of up to 100 if it were loaded not with high explosive but with poison gas.

Poison gas can be made by a large number of countries. It can be supplied to small countries by their big power allies. We cannot expect ourselves to design the rules of war and expect all of our enemies to follow those rules. Once we start using gas for the first time in 45 years we set in motion a process which I would

call the proliferation of chemical warfare readiness.

When military planners of other nations see the world's most modern army, the U. S. Army, fighting a war wearing gas masks, using vast quantities and using a whole panoply of newly developed gas munitions, they will ask themselves, should we not buy some gas masks, upgrade chemical training?

Having done that, the marginal cost of buying some gas is reduced. Men are promoted in chemical corps around the world; majors become colonels; colonels become generals. Careers begin to depend on gas in the military establishments of many nations. This puts gas weapons on the shelf. This creates investment in that kind of warfare. Where will it lead us?

Dread Possibilities

Today, occasionally the Viet Cong shoot a 120-millimeter rocket into Saigon. This is harassing. That same rocket with a warhead of approximately 15 pounds of high explosive could be filled with 10 pounds of nerve gas and a 5 pound high-explosive burster. Its kill area would then be up to 100 times what the weapon can do today.

Dissidents generally know where their opposition forces are. Government forces less often know where dissidents are.

What I am saying is that poison gas begins to offer counter-city capability to small groups of fighting men. I think we would be foolish to enter into that kind of warfare. We risk ushering in a new era in war, opening up a new dimension, a dimension which has been kept closed for 45 years.

My own judgment is that the advantage of using this gas is not nearly equal to the hazard of breaking down that traditional psychological expectation that gas will not be used.

Disarmament and Arms Limitation: Pugwash Assessment

This statement on progress in disarmament and arms limitation agreements among the nations of the world was drawn at the 20th Pugwash Conference on Science and World Affairs at Fontana, Wisconsin, in September 1970. The conference was attended by 109 scientists and scholars from 31 countries.

With grave concern Working Group II has to record that the year which has elapsed since our Conference at Sochi (USSR), despite some positive events (the beginning of the Soviet-American strategic arms limitation talks and the coming into force of the nonproliferation treaty), has brought no significant decrease in the threats inherent in the arms race. In the view of some, hopes of controlling the arms race to any truly significant extent, by means of partial measures, are receding rather than becoming brighter.

In this situation the Group is convinced that it would be the missing of an historic opportunity if the Resolution of the U.N. General Assembly adopted on December 16, 1969 (A/RES/2602E, xxiv), declaring the Decade of the 1970s as a Disarmament Decade, were allowed to remain yet another cry in the desert. The Group can see no lack of realism in the General Assembly's request to the Conference of the Committee on Disarmament (CCD) that, while continuing intensive negotiations with a view to reaching the widest possible agreement on collateral measures, it should work out, at the same time, "a comprehensive program dealing with all aspects of the problem of the arms race and general and complete disarmament." The easing of tensions in Europe, the achievement of near-parity in the "strategic" capabilities of the principal nuclear powers, the vast potentials of satellite reconnaissance as an instrument of verifica-

tion, these are some, but by no means the only factors, which would tend to make the resumption of negotiations on complete and general disarmament a meaningful endeavor.

In the unanimous view of this Group, the starting point of this great enterprise should be a critical review by the American and Soviet governments, in the perspective of those changes and developments which have supervened during the past eight years, of the plans they had respectively put forward in 1962 in the shape of the Revised Soviet Draft Treaty in General and Complete Disarmament (September 24, 1962) and the United States Outline of Basic Provisions of a Treaty on General and Complete Disarmament in a Peaceful World (April 18, 1962, as amended on August 6, 1962 and August 8, 1962).

Practically all that is stated and argued in the next following sections of this report tends to show that any attempt to buy national security by further military build-up is self-defeating. The Group is anxious that it should be fully realized by governments and public opinion all over the world that the superficial quiescence of major conflicts is deceptive and that complacency at the present time is pregnant with massive dangers. It is the duty of Pugwash to bring these dangers to the urgent attention of all those who are actively concerned with problems of arms control, disarmament and international security.

DETERRENCE CONCEPT

The strategic arms limitation talks and the approaches of the major nuclear powers to strategic policy appear to be based largely on the idea of maintaining a capability to inflict unacceptable damage on each other in the event of nuclear war, i.e., on "deterrence."

The concept of deterrence was extensively discussed and the follow-

ing criticisms were voiced. First, there is the fact that requirements for deterrence have been used as a rationale for a continuing growth in nuclear weapons stockpiles. Second, the idea of one of the major powers deterring a deliberate calculated nuclear attack by the other seems of limited utility because the most real threat of nuclear war is not in such an attack but rather in accidents, miscalculation or in an uncontrolled escalation of an international crisis. For these and other reasons, the final objective of arms control and disarmament negotiations must be general and complete disarmament. Prevention of further growth in "strategic" armaments and even substantial reductions must be regarded as at best interim measures.

Despite these reservations, realistically, efforts at arms control and disarmament will, in the present situation, probably continue to be related to the concept of nuclear deterrence. In that context, present stockpiles of nuclear weapons and delivery systems seem grossly excessive. This seems particularly so when it is recognized that many nuclear weapons and delivery systems which are often characterized as "tactical" could in fact be used to destroy not just military objectives but the population, industry and fabric of society in many countries; and when it is recognized that the damage-inflicting capabilities of nuclear weapons are generally and notoriously under-estimated primarily because only immediate fatalities and direct effects are considered. Actually, each of the major components of "strategic" force, such as the ICBMs or the missile launching submarine forces along would have a more-than-adequate capability for deterrence.

Despite the enormous "overkill" inherent in present "strategic" forces, we are now threatened with a further multiplication in numbers of "strategic" nuclear warheads, principally because of the development of MIRVs (multiple independently targeted reentry vehicles). When coupled with improvements in missile accuracy, which seem entirely feasible and very probable, there is basis for serious concern.