

A ROUNDTABLE: Binary Chemical Weapons

Would War With Gas Mean Holocaust?

SHOULD the United States produce new binary chemical weapons? The question is scheduled for debate in the Senate this week when Senator Mark O. Hatfield, Republican of Oregon, holds hearings in the Appropriations Committee and amendments to the Pentagon's authorization bill are offered on the floor. The Administration would like a go-ahead, and has asked for \$32 million to develop the new munitions, which consist of two nonlethal components that are packaged separately and combine to form a toxic agent only after a shell or bomb is in flight. The amount is relatively small as military budget/ go. But the question itself is highly charged. *The Week in Review* asked Maj. Gen. Niles J. Fulwyler, director of the Nuclear and Chemical Directorate, Department of the Army, and Matthew Meselson, professor of biochemistry at Harvard University, to talk about the pros and cons. Excerpts of their discussion with Richard Halloran, a correspondent in *The Times's* Washington bureau, and Caroline Rand Herron, an editor of *The Review*, follow.

Question. Do we need more, better or any chemical munitions, and why now?

Mr. Meselson. General Fulwyler and I agree we have to assume the Soviet Union poses a major chemical threat. Where we begin to disagree is in the response. In my opinion, the response which the Army has recommended and which the President has endorsed is dangerous and wrong.



Gen. Niles J. Fulwyler

This follows from a unique characteristic of chemical weapons. The military advantage against a sophisticated opponent is simply to force the other side into their protective equipment (and) decrease tempo. This has two important consequences. The munitions requirement is very small.

The other thing, though, about chemicals is that they selectively exterminate civilians. A civilian goes down into his cellar, the

way civilians do to avoid high explosive fire — he's going down into his gas chamber. Quite aside from the moral implications of that, that means that if you're thinking about alliance warfare on somebody else's real estate, mainly Europe, those people aren't going to let their soldiers use chemical weapons in their defense.

General Fulwyler. Unfortunately, civilians have been subjected to the violence of war in every war we've ever had. Now that is not good, but it has occurred.

Mr. Meselson. We need to look at these things more quantitatively. You can calculate the ratio of military deaths to civilian deaths under various kinds of scenarios. With chemicals, you might end up killing 20 civilians for every soldier; with high explosives, far, far less. Even in tactical war in Europe, the ratio would be less.

General Fulwyler. The first reason that we want the retaliatory capability is, of course, to deter use. But, secondly, if the adversary uses chemical and forces us into protective clothing, if we do not have the capability to force him into protective clothing, then we're fighting with one or one and a half arms tied behind our backs.

Mr. Meselson. We already have many more than enough artillery shells (containing chemical weapons) to accomplish the objective which General Fulwyler and I have been discussing. They are not deteriorating, contrary to a myth that is prevalent; they are not obsolescing, contrary to a second myth.

General Fulwyler. Perhaps the agent deterioration itself is not all that great — except it does occur. (But) we have containerized today over a thousand different types of artillery munition that have been leaking.

There's another type of deterioration. The M-55 rocket, we don't have a delivery system for; the rocket launcher is no longer in inventory. We have a sizable part of our stockpile in the 105-millimeter howitzer, which is rapidly being phased out of the Army inventory.

Q. Are binaries the most efficient addition, in terms of storage, transport, battlefield use?

General Fulwyler. We believe so, particularly on production, storage and transport. We never join the second chemical precursor until in the operational site, which means that that round, for all practical purposes, is safe up until the time it is finally loaded. And those various compounds themselves are relatively non-toxic. The difor that will be used in the 155, as an example, is not as toxic as tear gas. And we believe, based on over 2,500 test firings of the 155, that the binary concept will be just as effective as the current unitary rounds.

Mr. Meselson. There has never been a single test firing in the present configuration. You can't test one thing by testing another.

General Fulwyler. Well, the configuration wasn't that much different. (And) we do not need live testing because we can do all the necessary testing in a laboratory environment with modern technology.

Mr. Meselson. General, you know that we want to resume testing. I'm all for it, I think we should. To issue untested munitions to the troops is wrong.

But let me talk about the need for them, not whether they're any good. You are participating in the perpetuation of a harmful confusion. Do you know that all of our nerve gas (in) artillery ammunition is today classified Code A? Code A means, and I quote, that 'fully meet all military characteristics, issuable without limit or restriction.' The only way you could generate a bigger requirement would be to assume a long war in which all our allies are also using nerve agent at a high rate.

The Deterioration Factor

General Fulwyler. You do not have access to —

Mr. Meselson. Yes, I do. I've written a classified report on the stockpile (in January 1981). And it's gone up, not down, since then.

General Fulwyler. Still, I have concern about you making statements concerning the status of our stockpile, when I believe, Professor, you do not have timely information.

Mr. Meselson. Can you refer me — because names of documents are always unclassified as names — to a single existing document saying that the stockpile of munitions are deteriorating at such a rate that in a few years we won't have any?

General Fulwyler. I don't know if there's a study or not, but the information that I have would lead me to say unless we do something, by the end of this century we will have unilaterally disarmed.

Q. Mr. Meselson, what would be your formula for acquiring sufficient deterrent?

Mr. Meselson. There are two parts to that. The first is protection in defense. We have a good protective suit, and a better one is coming along. We have a mask which is somewhat maligned; whether a better one is coming along I don't know.

But where we fail is troop training, except for certain specialty units like the 82nd Airborne. I talked to a colonel from the 82nd Airborne; he says that his men relish the chemical suits. But most soldiers are not practiced in the equipment to the extent they should be.

As far as our deterrent stockpile is concerned, if we press ahead with what I consider to be these useless weapons, which are complicated, almost four times bulkier to ship, 10 percent heavier to ship —

General Fulwyler. That's wrong! We can (ship) almost twice as many of the binary rounds as we can a unitary round.

Mr. Meselson. General, the numbers you're talking about refer to not having the fuse or the cannister (and packing materials).

General Fulwyler. That's correct, you're not shipping both at the same time. In the interests of safety, we would not plan to ship them on the same aircraft.

Mr. Meselson. Then there's not twice as many.

But my point is that if we overemphasize chemical weapons, which we are on the verge of doing, then two very bad things could happen.

First, there is already on the agenda of the German Social Democratic Party a resolution to withdraw the stocks there. They're the only stocks which are ready to use. This resolution is provoked by apprehension that we are going to overemphasize chemical weapons. The other great danger in overemphasizing the chemical weapons is that if they are ever used against us, our second strike by definition has got to be a lot less effective. Because anyone who would use them first against us is going to prewarn all their forces to protect themselves. Whereas the first strike on us has a chance of catching us by surprise.

Therefore, to the extent that we advertise that we're going to make very much more than we already have on hand, which is a lot, we risk propagating the view that we are unlikely to use our nuclear weapons ever. This undermines the deterrent to war itself.

General Fulwyler. Professor, I think you're really stretching the rationale on that one.

Let me hit just a couple of things.

We have done some tests last year with soldiers with the protective clothing on, for instance, in tanks, and the time by which we had to get them out of the suit or risk a health hazard to them was about 40 minutes.

About the overemphasis on chemical — well, on the defensive side we're paying the price for an underemphasis for a number of years. We can and must make improvements. Over and above that, though, I still maintain that the best way to deter the Soviets' use of chemical agent is for us to have a credible retaliatory capability. That means one in being, one that constitutes a threat and one that he knows that we can hold him at risk at. And the current stockpile does not offer that.

Mr. Meselson. Even if the wearing of this equipment, which I believe has had its burden exaggerated, is a burden, that just means



Matthew Meselson

that the objective of having these munitions is to force the other side into such equipment. We have at present far more than enough to do that.

The intent to produce another type which is not needed and which has not been tested in live form in the field is likely to do more to enrage our allies — we're not doing us a particle of military good. Besides that, binary is complicated to assemble in the field.

General Fulwyler. That is not true, Professor! It's a very simple weapon to assemble in the field. Two to three minutes at the most.

Mr. Meselson. I agree that it can be assembled in the field, the piece time rate is probably an underestimate — but no commander prefers to have to do that.

Q. To close, let's talk about something that takes more than three minutes or 20 years, apparently, and that's the chemical warfare treaty, and the now apparently abandoned push for a total ban. How does our current posture help or hurt that endeavor?

General Fulwyler. Well, of course that's one of our points, too. We believe that what we're doing with the binary program is probably going to give us the best leverage at the negotiation table.

Incentives to Negotiation

We have been sitting at the table with the Russians since 1977, and during that time we have seen little or no progress at all. And at the same time, we believe that the Soviets have gone forward and continued to improve their posture. There has been no incentive for them to make any meaningful proposals or agreements.

Mr. Meselson. I can't evaluate that, because that is a psychological question. But I can say something about the negotiations. It depends on how you look at the record (as to) whether it represented progress. And I wouldn't dogmatically assert one or the other. We have agreed with the Soviets — and we announced in July three years ago in a joint communiqué with them — we agreed on the principle of on-site international challenge inspection. But that's not good enough for us.

We're the ones who cut off these talks. We should resume them. Whether or not we could get agreement on the kind of verification that's needed, I don't presume to know. We should just keep trying.

Quite aside from the fact that millions of Europeans are at risk of dying in any large-scale chemical war in Europe, the military implications of that have gone unappreciated. You cannot fight an alliance war with allies who won't use the weapon. It's dreaming to think that they will allow their troops to use it.

The Retaliation Boomerang

General Fulwyler. We got to live with the facts of the day, and the facts are that the Soviets are the best equipped nation in the world to wage chemical warfare. If the conflict is forced upon them, I would be willing to wager that anyone, including our allies, will be more than happy to accept that as part of the deterrent, if not to have it as a retaliatory capability if it is used on them.

Mr. Meselson. I strongly disagree. If we could imagine the war happening in New Jersey —

General Fulwyler. Do you think our allies would prefer for us to cross the nuclear threshold first as a counter to the Soviet use of chemical weapons?

Mr. Meselson. At the point where the Europeans see millions of their civilians dying that they would advocate that we not defend them anymore — which we hope they wouldn't do. That's exactly what chemicals might achieve, because it puts them in a position where the continuation of that war would involve a catastrophe of strategic proportions for them due to chemical losses.

General Fulwyler. If we cross the nuclear threshold, that is going to be a catastrophe of greater immensity.

Mr. Meselson. Yes, but I think that chemicals can bring that on.