How the Ducks Line Up

Strategic planners must think about the unpleasant details of nuclear war, weapons, and targets. When you do that, the popular wisdom of the protest rally falls apart.

BY JOHN T. CORRELL
EDITOR IN CHIEF

Most people find nuclear war too frightening to think about. As a result, their opinions tend to be strongly held, but not based on any deep analysis of scary facts.

On the other hand, Gen. Russell E. Dougherty, USAF (Ret.), has been forced by duty to spend a substantial part of his life thinking about nuclear war. Like other strategic leaders responsible for credible deterrence of war, he has been denied the luxury of shying away from the unpleasant details of thermonuclear conflict.

And, as he once told a reporter, things sometimes look different to you when you study them for years instead of minutes. A strong advocate of improved US weapons that will be effective against hardened Soviet silos, for example, General Dougherty is often confronted with the standard "overkill" wisdom of the antinuclear rallies.

"Pseudoanalysts can do strange things with numbers and produce pat statements about military capabilities that may seem to make sense—until you think about them," he says. "Consider the capability of number-six shot in a twelve-gauge shell, which you would use if you were hunting ducks. Each shell contains about 300 pellets. You could conclude that's 300 times overkill for a single duck, or maybe enough to kill 300 ducks with one shell. That's the analysts' approach, but it's not the way the ducks line up. And to apply the analogy to military capabilities, that's not the way the targets line up, either."

General Dougherty is a former CINCSAC and former chief of US staff at SHAPE. More recently, he has been vice chairman of the Defense Science Board task force on ICBM modernization and, up to his retirement on June 1, Executive Di-
rector of the Air Force Association. He has just written a chapter for a new book on command and control of nuclear operations and says he plans to keep on thinking about nuclear war and ways to prevent it.

He believes, though, that—even in the nuclear age—some things are worse than war. "The easiest way for the United States to avoid war would be to disarm unilaterally and him any decisive advantage while avoiding self-destruction.

"I don't think the American body politic is interested in doing what's required to ensure victory in full-scale nuclear war," General Dougherty says. "It's interested in not having a nuclear war. The thoughtful part of it is also interested in not being denied the exercise of their sovereignty." But he regards strategies for nuclear victory as ill-founded.

"The people won't pay for it, they won't espouse it, they won't believe it, and they won't do it," he says. "That would leave us with a hollow statement of purpose without the forces to make it feasible."

The most sobering aspect of deterrence is that it cannot be a bluff. The nation must be willing to use nuclear force if all other actions fail. That, in turn, obliges strategic planners to think long and hard about nuclear warfare, no matter how frightening the subject may be.

On the whole, those planners see more uncertainty about nuclear conflict than do either the Doomsday alarmists or the bold advocates of victory. The range of events that might happen is wide, and the responsible planner must take into account all of the possibilities.

"I've played a lot of war games, blue with a full range of weapons timed to arrive on target simultaneously or in a continuing pattern. It's psychologically the least likely and also the most difficult from the nuclear planner's point of view because of all the difficulties in making it come off right.

"But having said it's the least likely, that it's insane, you can't rule it out. You must prepare for it. Only people without responsibility can ignore unlikely possibilities. You have to plan for all circumstances."

Another scenario the planner can neither assume nor dismiss is "inevitable escalation." That scenario, perversely, is set up by decades of economizing on military preparedness. Nuclear forces cost far less than conventional forces and, in strict terms of military utility, can be a substitute for them in many instances—if one is willing to accept the inescapable corollary:
the lowering of the nuclear threshold in conflict.

"The worst situation we can get into," says General Dougherty, "is to become so reliant on nuclear weapons and so ill-prepared with conventional forces that we're forced very early in conventional conflict to use nuclear weapons. We have total uncertainty with respect to the effect of their first use."

"A lot of people think that first use is going to be automatically escalate and that weapons will go immediately to the highest order and greatest quantity of use. I don't know. It's wrong, I think, to say they won't immediately escalate, but it's equally wrong to say that they will automatically. And it's sinfully wrong for the nuclear planner not to plan on trying to keep nuclear use at the lowest possible level. If the planner falls into the trap of automatic escalation, then he'll have only one plan. It'll be the cheapest plan, but it will be Armageddon and a self-fulfilling prophecy."

It is impossible to say absolutely how much military force and what kind is sufficient to ensure deterrence. That depends on the capability and mind-set of the adversary to be deterred as well as on the robustness of targets and enemy defenses. All of these factors change over time and are major elements in the decision matrix used by the Joint Strategic Target Planning Staff to arrive at the most effective "laydown" of forces. In that context, popular overkill theories based on the attacking force in aggregate become irrelevant.

"You can't take the kill potential of a weapon and spread it evenly to avoid overkill at the point of impact," General Dougherty says. "You can't apply the excess power to targets 100 miles or 1,000 miles away. Nor can you scale a weapon and a target so precisely that you can avoid overkill at point zero. Too often, these calculations you hear advanced turn on amassing kill potential rather than on applying it to where the ducks are."

**Weapons and Targets**

Even at impact point, the adequacy of a weapon to achieve the desired effect is calculated as a probability. Other considerations are that some weapons will not reach targets—perhaps having been lost in an initial counterforce attack—and that not every weapon is effective against every target.

"We've got a lot of weapons in our arsenal that were capable against the softer targets of another day—targets that were above ground and easily subject to attack," General Dougherty says. "These weapons, even if they have tremendous kill potential, may be ineffective against some of the most important targets of today because those targets have been hardened and hardened and hardened."

The need to counter Soviet ICBMs in superhardened silos is a prime reason why many defense leaders, General Dougherty among them, still press for deployment of a full complement of Peacekeeper (MX) missiles. In so doing, they often hear the "empty silo" argument. In that scenario, the Soviet Union begins the war by a massive attack with its ICBMs. What possible purpose could be served by a counterattack on the silos from which those Soviet ICBMs came? "If you can tell me which silos are empty, you bet I wouldn't put a weapon on them," General Dougherty says. "The problem is you don't know. The Soviets have three or four times the potential of an initial strike. You can't be confident that the remaining three-fourths of their arsenal is in this or that or the other silo. Also, they have reload capability. Their 'cold launch' method doesn't destroy the silo."

As the percentage of Soviet missiles in superhard sanctuaries increases, so the military applications for older US weapons diminish. With these, General Dougherty says, "all you can hope to do is disrupt the above-ground environment of a site or a weapon or a command and control center. You might be able to render it temporarily unusable. That's not without some utility, but you can't destroy the target."

There may be some benefit in exploring new concepts for employment of soft-target weapons. "There are a lot of soft targets that we've got to learn how to apply weapons to," General Dougherty says. "The classic one is the Red Army. That's a problem of location. You've got to know where and how to hit. And over the years, we've usually done our targeting against precisely located targets."

General Dougherty emphasizes that we must always design and scale forces to be able to put at risk the military forces of a potential enemy. This countermilitary capability, he says, "is the legitimate role for the employment of our forces, and we must resist pressures that misdirect our force design and employment strategies away from basic counterforce tasks."

A different concern about the US ICBM force is its vulnerability to advanced, highly accurate Soviet missiles. "That vulnerability need not be," General Dougherty says. "It's strictly within our power to correct. All you have to do to challenge today's ICBM is make the target move. Without a special kind of vectoring warhead, you can't hit it. The Soviets are making their ICBMs move, and we're finding it very, very difficult to bring them under attack."

Technology poses no insurmountable barrier to ICBM mobility. Cost is a significant factor, since mobile basing is far more expensive than fixed sites. But the real constraint is the kind of deployment the American public will accept.

"We've established some artificial circumstances," General Dougherty says. "We've said that we don't want to see them on Interstate highways. They're certainly transportable on Interstates and probably approach invulnerability there. They're not inherently dangerous. They can be protected in many ways. Look at the industrial parks and interstate exchanges all over this country—thousands of acres under roof, providing static deployment sites for a mobile missile that can move out."

Recognizing the reluctance of the public to become involved in its own security and an unwillingness to be seriously inconvenienced for defense, General Dougherty concludes that "our nation probably won't put up with much in the way of mobility—until it feels the impulse of fear."

**Missiles and Bombers**

Land-based missiles, he says have a special deterrent effect.
They do not tempt an enemy to think he might destroy them without dire consequences. "They have a very strong credibility about them by being based in the sovereign territory of the nation, so that an attempt to attack them is almost certain to provoke an instantaneous and consequential response. Equally capable ICBMs on airborne aircraft or ships at sea do not have quite the same degree of reflected credibility."

General Dougherty sees the Strategic Defense Initiative (SDI) as a valuable complement to traditional deterrent forces, but warns that SDI offers "only a partial, albeit useful, defense against the most threatening of today's weapons, the ICBM and maybe the midrange ballistic missile. The idea that we're going to be able to develop a defense that makes us invulnerable to nuclear war or the ravages of war is a pipe dream."

As for the manned bomber, some theoreticians pronounced it dead twenty years ago, but it's still flying in a variety of nuclear and non-nuclear missions. General Dougherty (who was once accused of advocating a strategic fleet so versatile that it could "deliver hay to the yaks in Katmandu") remains a firm proponent of long-range combat aircraft. "We're often reminded that three-fourths of the earth's surface is covered by water," he says, "but let's not forget that a hundred percent of it is covered by air."

That global access of aircraft, along with qualities of reusability and versatility, makes the bomber an asset of continuing importance across the spectrum of conflict.

"The bomber can be used in areas where the missile can't," General Dougherty says. "It's not a direct competitor to the missile. That, I think, was the mistake that President Carter made in 1977 when he evaluated the cruise missile and the bomber in the same scenario at the same point in the spectrum of warfare and came to the conclusion that they were competitive. The bomber is a carrier of things. It's not a weapon itself."

The manned bomber takes hours to reach its targets, and in a rapid war of all-out exchange, everything could be over by the time it got there. "If your construct of the war is that it's going to be one gasp and that's all, then maybe the bomber will be irrelevant in that particular scenario," General Dougherty says. "On the other hand, if it follows the historic pattern of war, the bomber may be the most usable weapon."

Nor can the bomber be counted out of all scenarios in the high spectrum of conflict. "It will come as a surprise to the editorial writers, but even in the aftermath of a large-scale nuclear attack, there's going to be a lot of the enemy still left and a lot of things that have to be done," he says.

Deterrence as a Defensive Strategy

Deterrence, according to General Dougherty, is an ancient concept. "It was the way that imperial nations controlled their remote colonies, but their deterrent threat was not a defensive one to forestall attack," he says. "It was a threat to enforce an action. You will pay this tax. You will divide up these fields. You will grow this. You will do that. If you don't, I'll knock your city off! And they did. After they knocked a few cities off, the word got around, and they were able to control without knocking cities off. It was a coercive, offensive strategy."

The modern innovation by the United States has been to make deterrence a defensive strategy, aimed at preventing attack rather than at extracting tribute or obedience, he says. For the past forty years, the strategy has worked, just as offensive deterrence worked for the empires of the past.

General Dougherty believes that the principle of deterrence is best stated in a formula he first heard from Col. "Abe" Lincoln of West Point. "As he used to put it, capability times will equals deterrence," General Dougherty says. "He emphasized that this is a proposition in multiplication, not in addition, for if either of the essential factors is zero, then the product—deterrence—is also zero."

For the capability part of the equation, General Dougherty says the deterrent force must be strong enough and relevant enough to be credible, even under conditions of stress. Sufficiency of deterrent power cannot be computed precisely, and it is dangerous to underestimate the requirement or attempt to be too clever and precise.

In a 1983 interview with Sea Power Magazine, General Dougherty explained: "Deterrence has to work when the other person is mad and provoked—not insane, but provoked and bent on your destruction. Not on a given Tuesday when the sun is shining, and everyone is talking reductions and limitations, and they're playing golf together in Geneva, when cultural exchanges are going on and people are buying wheat. Deterrence has got to work for us at a time when tensions are up and nerves are frayed to the ragged edge. A lot of people think deterrence is something you can measure, and then they order the minimum serving."

Capability alone is not enough, though. To illustrate the importance of will, General Dougherty recalls the fall of France in 1940.

"We think of Nazi Germany as a military colossus that took over Europe," he says. "But France did not fall to Germany in battle. France and its armed forces were equal to the Germans in almost every measure except will. Germany gave a brutal demonstration of its willingness to use force, and the French surrendered."

"That can happen to a modern nation in modern times. It can happen to us."