Reagan Proposes Huge Nuclear Buildup

But his explanation for construction of the MX and a new bomber contains some inconsistencies

In what the Pentagon describes as "one of the most important decisions any president has ever made," Ronald Reagan concluded recently that $180.3 billion must be spent over the next 6 years on a massive campaign of nuclear weapons–building. The intention, as he explains it, is to "strengthen and modernize the strategic triad of land-based missiles, sea-based missiles, and bombers," in order to encourage accommodation and prudent behavior on the part of the Soviet Union.

The United States will deploy several thousand new nuclear warheads under the plan, to be distributed among the competing military services. The Air Force will be the prime beneficiary. Beginning next year, B-52 bombers will be modified to carry nuclear-tipped cruise missiles, to be followed by additional cruise missile deployment on submarines in 1984. In 1986, a group of 36 MX intercontinental missiles will be placed in existing missile silos scattered throughout six western states. Each MX carries seven more warheads than the Titan or Minuteman missile it will replace.

The plan puts off, for 3 years, a difficult decision on the means of deployment for an additional 64 MX missiles, although it narrows the alternatives somewhat. The Administration says that, depending on the outcome of research now under way, the missiles will be buried in mountains, placed on constantly roving turboprop planes, or placed in missile silos that are defended by an antiballistic missile system. "My own feeling is . . . that it will not be a single system—that the decision in 1984 will very likely suggest that we do two or three different kinds of modes," says Secretary of Defense Caspar Weinberger. "There is no single best system that we know of right now."

In addition to the MX, the Air Force will construct 100 B-1 bombers and deploy the first squadron in 1986. Each will cost $200 million and can supposedly penetrate Soviet air defenses through the end of the decade. Research will continue on the components of a so-called "stealth" bomber specially designed to elude detection by Soviet radar. Weinberger and others determined that the plane could not be deployed before the early 1990's, by which time B-52's will supposedly be obsolete. The "stealth" bomber, under Reagan's plan, will not be deployed until at least 100 B-1's have been constructed.

To provide further strategic support, the Navy intends to deploy by 1989 a more accurate nuclear missile aboard Trident submarines. Each will carry more warheads than the current model and could supposedly destroy missile silos anywhere in the Soviet Union. Additional, less significant parts of the strategic plan include as yet unspecified improvements in civil defense, some new radar systems for North America, six more AWAC's surveillance planes for use near U.S. borders, and a firmer commitment to "develop technologies for space-based missile defense."

Reagan says the rationale for the overall program is that "a window of vulnerability is opening, one that would jeopardize not just our hopes for serious productive arms negotiations, but our hopes for peace and freedom." In usual Defense Department parlance, this window is a period of time when the Soviets could theoretically destroy the bulk of U.S. land-based missiles, inhibiting a capability to respond in kind and generally intimidating American leaders. President Carter proposed to counter this vulnerability by hiding the land-based missiles in multiple shelters (*Science*, 30 May 1980, p. 1007), a costly and politically risky plan that he considered justified by the seriousness of the threat.

The Reagan Administration, by electing to deposit the MX missiles in existing silos, has at once diminished opposition in states where the controversial new shelters would have been located, and substantially reduced the program's

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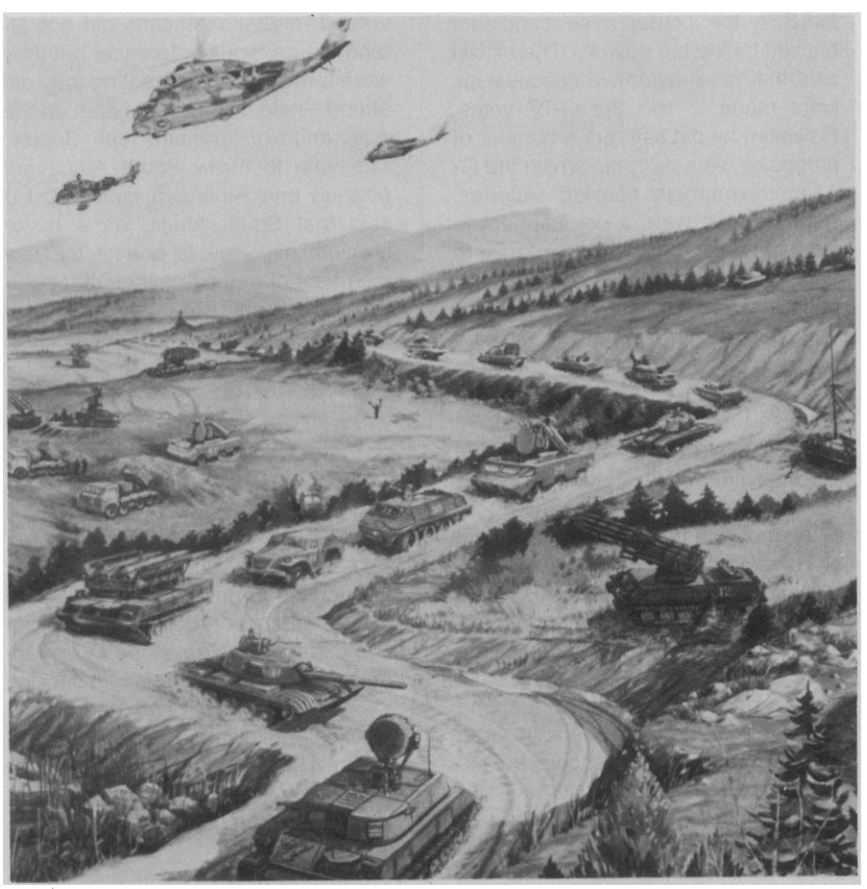

The Soviet threat

This imaginative illustration appears in a Pentagon booklet touting the glories of Soviet armaments. It was released 3 days before Reagan announced his strategic program.

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cost. Reagan and Weinberger insisted, however, that neither advantage influenced their decision. "I'm sure that nobody will believe this, but these decisions are based on the best kind of professional advice and examination," says a senior defense official. A special advisory panel led by physicist Charles Townes convinced the department that the Soviets could build enough warheads to target all of the missile hiding spots.

Weinberger claims that by fortifying the silos with steel and concrete between now and 1986 the missiles can be protected against the effects of an accurate Soviet attack, thus assuring an adequate U.S. nuclear response. But this claim is fraught with contradictions. One is that missile vulnerability supposedly begins in 1984, long before the MX, the B-1, or the hardened silos will be operable in any substantial number. A second problem is that previous Defense Department officials, including former Secretary of Defense Harold Brown, have insisted that silo hardening is an inadequate solution. A number of congressmen, including conservative Senators John Tower (R–Tex.) and Henry Jackson (D–Wash.) and liberal Senators Edward Kennedy (D–Mass.) and Gary Hart (D–Colo.), have been convinced by this previous testimony and are expected to ask some difficult questions about the Pentagon's change of heart. One explanation advanced by MX critics is that Reagan and his advisers consider the missile vulnerability problem to be much less serious than they have been willing to admit. But this, too, is denied. "It doesn't reflect a more relaxed view about the threat . . . to our Minutemen and Titans," a senior defense official reports.

Others in the Administration, including Reagan, acknowledge that their program is based on much more than simply a nuclear first-strike vulnerability. At a press conference on 2 October, Reagan spoke of an imbalance in the NATO line at "the Western front," and of Soviet superiority at sea. Several days before the strategic program was announced, the Pentagon published a 99-page glossy booklet* that touts Soviet tank and airplane production capabilities. "It is not scare talk. It is not propaganda or anything of the sort. It is a real and growing threat to the safety and security of the West and of freedom-loving nations everywhere and it requires action on the part of all of us," Weinberger told an audience of European and American journalists in releasing the booklet.

On one hand, Weinberger denies that the Administration's program is designed to achieve a military advantage. "The only people engaged in an arms race at the moment are the Soviets. We have not entered and we don't propose to get into simply an arms race for the sake of counting numbers or anything of that kind." But, like Reagan himself, Weinberger also speaks wistfully of the period in the 1950's when "we had in the United States unquestioned military superiority and it was the greatest force for peace that the world has known for many, many centuries." The Administration's real aim will be an important topic of debate in the coming months.

—R. JEFFREY SMITH

Soviet Military Strength (Government Printing Office, Washington, D.C., 1981).

Reagan Eyes the Message Gap

A key element in the revitalization of the U.S. nuclear arsenal, President Reagan said, as he unveiled his weapons package, is "to strengthen and rebuild our communications and control system—a much neglected factor in our strategic deterrent. I consider this . . . as important as any of the other decisions announced today."

Though strong in some areas, the package of proposed improvements falls short of creating a reliable system that would ensure contact between the President and the strategic U.S. nuclear forces in the event of a nuclear war. Many of the improvements, moreover, have been in the procurement pipeline for years. Reagan did not announce how much of the $180 billion weapons package would be devoted to plugging the communication gap.

New initiatives in the Reagan package include plans to add satellite receivers and very low frequency radios to strategic bombers and to airborne communication posts used by military commanders. Also new are plans to put surveillance radars in Florida and another, as yet unnamed, state to better protect the southern United States from attack by Soviet submarines. A new system of special sensors on satellites, meanwhile, would pinpoint nuclear blasts on the surface of the earth. These sensors would help the President or his successor know quickly what U.S. bases and missile fields were unscathed after a Soviet strike. This information would be essential if conventional lines of military communication failed.

Old initiatives that received a new coat of paint were plans to "harden" airborne command posts against the destructive long-range effects of nuclear weapons such as electromagnetic pulse (EMP) (*Science*, 29 May, p. 1009). Other reruns include plans to build mobile ground terminals that would receive signals from early-warning satellites and continued commitment to a new generation of communication satellites (*Science*, 11 September, p. 1228). A decision has not yet been made on whether to build the controversial radio system known as ELF, or Extremely Low Frequency, that would allow military and civilian leaders to have reliable communications with the fleet of U.S. submarines.

The myriad improvements proposed by Reagan are intended to create a communications system that would function in the midst of a nuclear war and allow the President to fire a "limited" number of nuclear volleys, one at a time, rather than unleashing the nuclear arsenal all at once.

Critics of the limited-nuclear-war philosophy, including the 5000-member Federation of American Scientists, say that the planned improvements to the military's command and communications network do not add up to a reliable system and that gaps still abound.

The Reagan Administration, for example, has indefinitely postponed construction of the Satellite X-Ray Test Facility, a $100-million machine that would simulate the EMP that a single nuclear blast in space would send through dozens of critical military satellites. Such a nuclear explosion can produce fields in the skin of a satellite of up to 1 million volts per meter. Despite the fact that the bulk of long-distance military messages are today carried by satellite, not one has been tested to see if it can withstand the high-voltage surge of EMP. The Defense Nuclear Agency, which specializes in understanding the effects of nuclear weapons, has repeatedly asked for the facility. But the Pentagon this year again cut the machine from the budget, saying it was too expensive.—WILLIAM J. BROAD

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