

conventional or nuclear warhead nearby.

The warhead can be "shot down" by laser or "charged particle" beams fired either from a nearby satellite or from the ground.

Because of the small size and great speed of the warhead, destroying it by any of these means is extraordinarily difficult, and requires extremely intricate and expensive devices. In addition, each method of destruction has drawbacks and weaknesses. All methods can be overwhelmed or "saturated" by a sufficient number of attacking missiles, or foiled by decoys, that confuse the defenders and force them to disperse their ABM forces.

Direct impact and "shotgun" weapons can be de-activated by "shotgun" defenses in the warhead, and dodged. Conventional explosive devices can be prematurely detonated or dodged. Nuclear explosives would generate electromagnetic surges that could harm the satellites and other weapons of those who employed them.

Bad weather can degrade or entirely deactivate ground-based laser and particle beam weapons. Space or satellite based weapons can be shot down.

In addition, no defense systems can be "battle-tested". Therefore, no one can know how effective they'd be in wartime. This weakness would be critical in regard to a defense system that would have to be nearly 100% perfect under the most adverse conditions.

In this respect, consider the recent "test" of an anti-missile weapon in which a missile was destroyed by a direct hit by an anti-missile missile. The test was hailed as "proof" that anti-missile weapons can be effective. Actually, the test proved little, for the attacking warhead employed no defensive measures. The test was like placing a World War II bomber on remote control so that it couldn't maneuver, removing its guns, shooting it down with a fighter plane, and claiming that a "perfect" defense against bombers had been found. The appalling destruction of European and Japanese cities, and of battle-ships and other naval units wrought by bombers in World War II, shows where the reality lies. A defensive weapon that works perfectly in a "laboratory" test will be much less effective under battle conditions where countermeasures are being used against it.

The difficulty of developing anti-missile defenses also is illustrated by the destruction wrought by World War II bombers. Despite the efforts of the best scientists and engineers on both sides, and years of "field" testing, anti-aircraft defenses were rarely able to destroy the 10% of an attacking bomber force that would make repeated attacks prohibitively costly. Strategists of air warfare, such as Italian General Douhet, and U.S. General "Billy" Mitchell, rightly predicted that "The bomber will always get through."

Hundreds of billions of dollars could be spent on inadequate ABM weapons.

Additional dangers of ABM systems are that they will make inspected arms control and disarmament agreements more difficult, and nuclear weapons less controllable. Any ABM system that can destroy missiles also can destroy the observation satellites necessary to verify arms control agreements. Therefore, any nation that possesses them will be in a stronger position to violate arms control agreements and launch a surprise attack. This will make its "enemy" less interested in arms control agreements, and more tempted to strike first.

In regard to the controllability of nuclear weapons, ABM systems will be able to destroy the navigational satellites that can be used to aim nuclear weapons, and navigate airplanes and ships. Therefore, they will pose a threat to the entire military deterrence system of an "enemy". Again, the "enemy" will be more inclined to entertain thoughts of preventive war.

The Reagan administration certainly is aware of most of these facts about ABM systems. Also, it knows that extensive ABM systems will violate the 1972 treaty against such systems. Why, then, is it promoting Star Wars defense systems? Probably, Reagan makes certain moral assumptions, ignores crucial facts, and is following a strategy for "victory". His moral assumption is that the U.S. is "good", and the Soviet Union an "evil empire". Consequently, he's dissatisfied with "balanced deterrence", and wants always to hold a military position superior to that of the Soviet Union.

Second, he believes that deterrence will work as long as the U.S. is militarily stronger than the Soviet Union.

Third, he believes that the Russians can be broken economically, and "forced to