

# Nuclear Offense Versus Defense

**P**resident Bush and members of his cabinet have assured the world that they plan to deploy a defense against ballistic missiles. At the same time, they have criticized the outgoing administration's proposed defense system—the "Clinton Defense"—as inadequate and flawed. The charge has merit: That system would protect only the United States, not its allies, and therefore would drive a wedge between the two. Furthermore, the Clinton Defense can discriminate only against the most naïve decoys, whereas the National Intelligence Estimate of 1999 concluded that any nation that could build intercontinental ballistic missiles could also equip them with sophisticated decoys.

But doubts of a different kind attend President Bush's proposal to deploy a more powerful system. The administration has been silent as to how it would be built, what it would cost, and how long it would take to deploy. Technically empty proposals are hardly credible bargaining tools but still stimulate military reactions. It would be irresponsible to repudiate existing treaty obligations and contravene the expressed views of allies and potential adversaries alike by announcing a deployment decision when there is nothing to deploy.

Past warfare has seen an uneasy balance between offense and defense. Offense prevailed at the beginning of World War II, when Hitler bypassed the Maginot line. But later on, defense prevailed in the Battle of Britain. This latter victory was achieved by attrition: Each air attack suffered losses of 10%, and the damage incurred after repeated sorties became unacceptable. But nuclear weapons changed all this. One-quarter of a million Japanese died from the detonation of two nuclear weapons, each of which had a power only 1/10th of the average of today's weapons. These can be delivered by a variety of means: bombs detonated on ships in harbors, delivered across national borders, dropped from aircraft of any size, or delivered by cruise missiles or ballistic missiles of either short or intercontinental range. Today's debate addresses only this last, technically most advanced, threat. Yet the United States has no significant homeland air defense and its borders are porous.

Thus the United States remains vulnerable to the detonation of nuclear weapons. The remedy has to be dissuasion of nuclear attack by two methods: deterrence and diplomacy. Deterrence threatens the originator with unacceptable retaliation, and diplomacy offers peaceful alternatives to nuclear conflict. Dissuasion has been effective for over 50 years, embodied in the tradition of non-use of nuclear weapons. It is true that North Korea and other nonnuclear weapon states could in time develop an intercontinental ballistic missile. But if "states of concern" do manufacture nuclear weapons, their delivery by ballistic missile is only one way to threaten the United States, and it is the least likely, considering the many other low-tech means of delivery available. All present nuclear weapon states still rely on nuclear deterrence for strategic stability; a U.S. national missile defense (NMD) is likely to lead China and Russia to enhance their nuclear forces. And all of the technical methods under consideration for deployment of ballistic missile defenses are far more expensive than the cost of augmenting offenses to defeat such a deployment.

President Clinton postponed the decision to deploy NMD because it failed to meet his core criteria: established technical performance, affordable cost, accommodations with allies or potential adversaries, and a demonstrated threat. President Bush has proposed a multilayered defense of increased performance. But even if begun now, no such system could be operational until well after two U.S. presidential terms. So all oratory aside, caution is indicated for all parties. The United States position needs further analysis to understand what, if anything, can realistically be deployed, on what time scale and at what cost, financial and political. Other countries have plenty of time to react. We can learn from history here: The United States has carried out R&D on a missile defense for several decades at an aggregate cost of about 100 billion of today's dollars. Yet no national missile defenses are in sight. The future is unlikely to be different. Scientific facts and technical reality cannot be coerced by policy. In this nuclear age, the United States, our allies, and all other nations are condemned to live in an offense-dominated world. That reality will not change, however strong the desire may be to protect the United States from nuclear attack using scientific and technical tools.

**Wolfgang K. H. Panofsky**

Wolfgang K. H. Panofsky is director and professor emeritus at the Stanford Linear Accelerator Center, Stanford University, Stanford, California.

