

Nuclear war: facing reality

In this issue Wolfgang Panofsky (page 32) assesses the status of the nuclear arms race and finds that, despite efforts to achieve arms control, nuclear-weapons arsenals have mushroomed in number, size, and destructive power, and they are being used more and more for purposes other than massive deterrence. These findings lead us to a disturbing conclusion—the superpowers are progressively increasing the risk of nuclear war as they act and react in the game of international power politics. Underlying the alarming trends in nuclear policy (such as the shift in the US from “mutual assured deterrence” to a range of “options for fighting limited nuclear wars”), Panofsky believes, is a failure in perception on the part of policy makers of the physical reality of nuclear weapons (a reality that has been well documented by physicists).

Robert Jay Lifton (a founder of the International Physicians for the Prevention of Nuclear War) contends that most of us (national leaders and ordinary citizens both) do, in fact, have an accurate understanding of what would happen in a nuclear war, but that this reality is so painful that we involuntarily use “psychological denial” to keep it out of awareness and conduct our lives as though the bomb does not exist. Thus one can explain the failures in perception noted by Panofsky and the more general puzzling question: Given that nuclear war is such a critical problem, why do not people in all walks of life evidence a great deal more concern about it. (The same mechanism is thought to have prevented many victims slated for Nazi death camps from making efforts to escape when it might still have been possible.) Some such effect must also be at work in the physics community. Certainly physicists, compared to any other group, are in a better position to understand the effects of nuclear war and have a special obligation to do something about it, yet the volume and priority of efforts by physicists to confront this problem have diminished over the years even as the danger has intensified. (An informal sampling of *PHYSICS TODAY* readers indicates that physicists agree on the imminent danger of nuclear war.)

A shining *exception* to this trend towards noninvolvement is Andrei Sakharov. In this issue

on page 25 you will find an essay by Sakharov “The responsibility of scientists,” which he sent from exile in Gorky to the recent international conference in his honor. I urge you to read it. At the conference session on “Issues of War and Peace,” the session chairman, Victor Weisskopf, and one of the invited speakers, Herbert York, both independently quoted the same passage from a statement made by Sakharov after his exile over a year ago. Every physicist should learn it by heart:

Despite all that has happened, I feel that the questions of war and peace and disarmament are so crucial that they must be given absolute priority, even in the most difficult circumstances. It is imperative that all possible means be used to solve these questions and lay the groundwork for further progress. Most urgent of all are steps to avert nuclear war, which is the greatest peril confronting the modern world. The goals of all responsible people in the world coincide in this regard, including, I hope and believe, the Soviet leaders.

Sakharov's Nobel citation describes him as the “spokesman for the conscience of mankind.” In his essay Sakharov calls on Soviet and Western scientists alike to be faithful to their “special professional and social responsibilities” and not shrink from taking a public stand when the occasion demands. No one has a better right to present that challenge. With Sakharov's example before us, let physicists on both sides of the globe rededicate themselves to confronting the realities (see Panofsky's article) of our modern world, no matter how painful, and speaking out for truth and the best interests of mankind, no matter what the cost.

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