

However, this Administration is expanding defense expenditures, extending the militarization of space through the "star wars" initiative, and exacerbating, with crude cold-war rhetoric, the hostile atmosphere of contention between the superpowers.

Many intelligent observers now believe the risk of nuclear war is greater than it has ever been. We must rely on our political leadership to guide us away from this brink of catastrophe. As citizens of a democratic society, it is important to know as much as we can about those who are in charge. Scheer has rendered us an important service in documenting how Reagan and those whom he appointed took pro-nuclear positions before the 1980 election and how they continued to promote policies of nuclear confrontation as they moved into power as government officials. Scheer is an excellent journalist and his writing is crisp and readable. He has chosen quotations judiciously; although they often are long, the book remains very interesting to read. In addition to the main text, there are more than 60 pages of notes with references to books and periodicals that contain further details and eight appendices with long excerpts from Scheer's interviews.

NINA BYERS

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## The Final Epidemic: Physicians and Scientists on Nuclear War

R. Adams, S. Cullen, eds.  
254 pp. U. of Chicago P., 1981. \$4.95

Many older physicists will recall our efforts following the Trinity test of the first nuclear weapon. We attempted to prevent the spread of nuclear weapons to other countries and to prevent their use in future wars. One by one, many of us gave up in frustration. Now, after forty years, it is gratifying that members of the medical profession, in their new 5000-member organization, Physicians for Social Responsibility, are arousing their colleagues in many countries about the greatest epidemic humans have ever faced and to realize how close at hand it may be. In one chapter of *The Final Epidemic* Bernard Lown points out that, "The baton in the relay race against a nuclear Armageddon is being passed from physicist to physician." In this book physicians join physicists and engineers to discuss how serious is our course to nuclear war.

Ruth Adams and Susan Cullen include several scenarios of a nuclear war between the US and the USSR. Hundreds of millions are killed immediately, and an equal number are fatally

injured. Most of the physicians are killed and most hospitals are destroyed. Medical supplies are unavailable, food and water scarce, public services—electricity, gas, transportation, telephones, sewage treatment—are out of service. Any semblance of organized government in the US and USSR will be absent for months or years, and roving bands of men, women and children, concerned with their individual survival, will endanger everyone else.

Although the horror of the aftermath of a nuclear war as described in this book can be likened only to hell on earth, more recent data force on us the realization that we would have an even worse situation. In the northern hemisphere, temperatures would plunge below freezing even in August as a result of the dust cloud. The possibility of agriculture would be very dim for years. Some of the dust cloud would in weeks or months cross over into the



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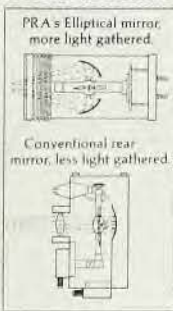
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southern hemisphere, carrying with it its solar screen and deadly radioactive fallout.

There are descriptions of the consequences of ionizing radiation exposure—both prompt and delayed—in terms of somatic, teratogenic and genetic damage to the temporary survivors. Some comparisons, however, with the situations at Hiroshima and Nagasaki are somewhat misleading. For example, Stuart C. Finch refers to the lack of an increased incidence of cancer among persons exposed *in utero* to the atomic bombing of Hiroshima and Nagasaki, suggesting that exposure of pregnant women to ionizing radiation might not be a very serious matter. I believe a different and clear answer is given to this question in a recent article by G. W. Kneale and A. M. Stewart (*Health Physics* 3, 388, 1982). Also, estimates in this text of the number of cancers expected per person-rem are based on early dose estimates on survivors of the atomic bombing of Hiroshima and Nagasaki. These values are below some of the present estimates by factors ranging from 2 to 10. Even so, Robert J. Lifton emphasizes in the book that the survivors in Hiroshima and Nagasaki had the great advantage of intact nearby cities not under the clouds of lethal fallout and governments that came quickly to their rescue.

The book touches on many other subjects, a few of which are overkill, firestorms, poisoning from CO, deadly fumes from burning plastics, anoxia (oxygen exhaustion), disruption of the ozone layer, the electromagnetic pulse, ineffectiveness of fallout shelters, weakening of the human immune system by radiation, problems caused by the delayed burial of hundreds of millions of bodies of humans and other animals, and epidemics. Also, weapons proliferation, types of nuclear weapons and delivery systems of the US and the USSR, fallout patterns, first strike, germ and chemical warfare, and psychosocial trauma. Several chapters point to the present inadequacy of medical treatment and nourishment for many in the US and millions in the developing countries. Starvation and disease already result from diversion of funds to weapons production. Our pressing ahead on a narrow band of industry that serves our weaponry compromises our steel, automobile, textile and chemical industries, and makes them vulnerable to competition.

Because we find ourselves, the US and the USSR, occupying the same planet, we should instead spend some of our defense funds exploring ways of understanding each other better and of maintaining peace.

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