



The Truth About CBR* WARFARE

By NORMAN COUSINS

In the belief that there is no strength in secrecy, the editors of *Family Weekly* present this provocative article as a public service. U. S. military defense officials agree that the American people are entitled to know the facts about CBR, one of the most important developments in modern warfare, and they urge the fullest possible discussion of the subject.

The author, Norman Cousins, has been recognized as a leading analyst of the problems of the atomic age. Editor of the "Saturday Review" and co-chairman of the National Committee for a Sane Nuclear Policy, Cousins is author of several books, including "In God We Trust," "A Treasury of American Democracy," and "Dr. Schweitzer of Lambarene." His latest book, "In Place of Folly," to be published by Harper & Brothers, deals with the subject covered by this article.

AS THE CROWD watched, the scientist placed a droplet of liquid in the rabbit's eye. The animal twitched, shuddered, and rolled over on its side. Seventy seconds later it was dead.

A gas was pumped into a black dog's glass cage. The dog was instantly paralyzed.

Five goats, tethered on a barren hillside, were fired on from a distance of two miles by six howitzers. Minutes after the gas-filled projectiles exploded, all but one of the animals were dead.

These incidents were part of a demonstration conducted in late August by the Army Chemical Corps at the Dugway Proving Ground in Utah. The demonstration, to which only a carefully screened group of observers was invited, marked the unveiling of the Army's newest techniques in chemical, bacteriological, and radiological warfare—or CBR, as it is more familiarly known.

The exhibits all involved animals. The weapons, however, were designed for use on men.

These weapons, now being manufactured and held in readiness by the major world powers (including the United States), promise unprecedented horrors should they ever be used. For CBR techniques are by their nature nonselective; they are specifically designed to kill or injure large numbers of people at once. For example:

—Using chemicals, an enemy could spray many square miles with droplets that cause death within 15 minutes. Or he could produce temporary blindness or deafness, general paralysis, or personality changes such as confusion or cowardice.

—Using biological organisms, an enemy could spread diseases over an entire population. Commenting not long ago on this aspect of CBR warfare, LeRoy D. Fothergill, special adviser to the U.S. Army Biological Laboratory, declared: "The infection of an entire continent by biological clouds is possible under proper conditions."

—Using radiological weapons, an enemy could bombard populations with radiation of various types and doses, depending on the effect desired.

Because these effects, like the effects of nuclear weapons, would not be confined to those nations that happened to be at war with each other, CBR weapons raise an urgent question about the permissible limits of warfare in the modern world.

To many people, this question seems an academic

one, and therefore unimportant. CBR weapons, these people say, are so horrible that no country would dare use them. Even though various nations are manufacturing them, the argument runs, they would use them only as a retaliatory threat.

This view has solid historical support. In 1899 at The Hague, many nations, including France and Germany, signed a treaty banning the use of projectiles filled with poison gas. During World War I, however, various kinds of gases were used by France, Germany, Britain, and the United States. By the end of the war, public revulsion against the terrors of gas was running so high that an attempt was made at Washington in 1921 to ban the use of it in warfare. The attempt failed.

In 1925, however, a number of leading nations signed a treaty at Geneva under which both poison gas and bacteriological weapons were outlawed. (Among the signers were Great Britain, France, and the U.S.S.R.; among the nonsigners, the United States and Japan.) In 1943, President Franklin D. Roosevelt declared that under no circumstances would the United States be the first nation to use poison gas or other chemical weapons. During World War II, all the contending nations had poison gases available, but they did not use them.

This brief history of the use of poison gases, indicating clearly that an increasing measure of restraint has come into being, has led to a widespread belief that CBR weapons would unquestionably be proscribed in any future conflict. Public opinion, gathering strength over the years, appears to have created significant obstacles to their use.

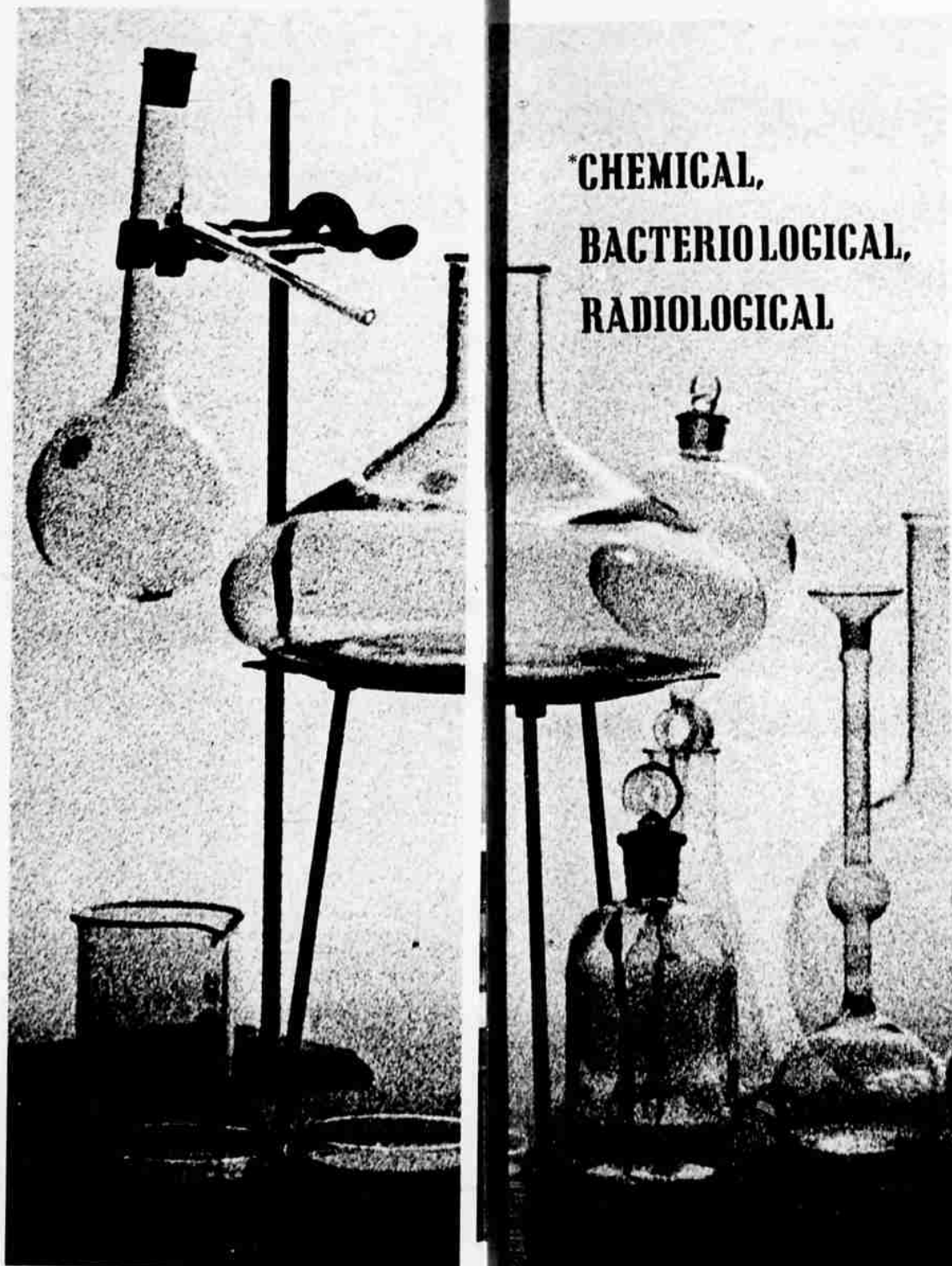
On the other hand, the existence of this restraint has been sharply criticized by U.S. military officials in recent testimony before Congressional committees. They have called for recognition, by both legislators and the public, that the nation needs to be free of any prohibitions on the use of CBR weapons. In short, American military leaders have taken an official position in favor of their use.

THEIR ARGUMENT is that deadly gases, germs, and radiation represent the most effective, the cheapest, and—in their own words—the most "humane" form of warfare available in the modern world. Compared to the cataclysmic effects of nuclear warfare, they say, CBR offers an almost kindly way of waging war.

Furthermore, the advocates of CBR argue, the great advantage of these weapons is that they attack people without destroying great cities and industrial establishments. Essentially, then, the case for CBR warfare rests on a simple proposition: CBR is less fiendish and therefore less reprehensible than nuclear warfare.

To understand the basis for this proposition, it is necessary to look more closely at what chemical, biological, and radiological weapons can do.

Modern chemical warfare falls into two main categories. In the first category are chemicals that act on the human nervous system. When these



*CHEMICAL,
BACTERIOLOGICAL,
RADIOLOGICAL

agents are breathed into the lungs, they pass into the blood stream, where they interfere with the oxygen supply and thereby injure the central nervous system.

The most revolutionary development of this type has the U.S. code name of "GB." This nerve gas is odorless and invisible. It is easy to disseminate. It can be delivered by short-range, medium-range, or long-range missiles. It can be spread over wide areas or used in limited situations by aerosol sprays. It can even be used in tiny dispensers of the kind that carry household deodorizers.

GB, now being manufactured by the U.S. Army Chemical Corps and, so far as is known, by other major powers, acts like a superinsecticide against humans. Like DDT, its effect is widespread and almost instantaneous. A droplet the size of a pencil dot on the skin will kill a man within 15 minutes.

AMERICAN MILITARY officials, testifying before a Congressional committee last year, brought out that shelters, no matter how deep, could offer no protection against a gas of this type because no ventilating system has yet been devised that can filter out GB. Under an attack by GB, a shelter would become a deathtrap.

The second category of chemical warfare includes the psychochemicals. Developed since 1955, these chemicals are not lethal except in large quantities. Instead, their purpose is to change the human personality and eliminate the will to resist or the capacity to think logically and purposefully. Men exposed to certain of the psychochemicals become cringing, confused, and fawning specimens. In one experiment, a cat in a cage with a mouse was given a small injection of a psychochemical. The cat fled from the mouse in terror.

Biological warfare, or the deliberate use of manufactured microorganisms for war purposes, can produce virulent disease strains which overcome the usual degree of natural or acquired immunity in human beings. Other valued characteristics include high infection potential, fast reproduction, and slow rate of natural decay.

The use of bacteriological weapons need not be confined to direct use on humans. Indirectly, human beings can be attacked by transmitting disease to animals and plants, thus contaminating the food supply.

In seeking funds from Congress, CBR proponents have expressed confidence that bacteriological weapons can take their place alongside nerve gases as cheaper and more effective devices against human life than nuclear weapons.

The final element of CBR is radiological warfare. Whenever a nuclear explosion seeks its principal effect through radiation rather than through blast or heat, it falls in the category of a radiological weapon. Thus, the inclusion of a layer of cobalt in a nuclear bomb could create a radiation hazard far beyond even that of strontium 90.

Latest research in radiological warfare has been

Man has learned how to kill millions with germs, gases, invisible rays; now he must find a way to insure that these awesome weapons will never be used

directed toward the development of a neutron bomb that could be used to attack large industrial centers or cities, killing off the population but leaving the machinery and buildings intact. Research also has been directed toward the creation of tactical radiological weapons for use in limited-war situations. By laying down a barrage of radioactive isotopes with fast-decay characteristics, it would be possible, for example, to keep enemy troops from using an important mountain pass for a predetermined length of time. Other isotopes could be tailored to fit other specific military needs.

If these are the effects of CBR weapons, it seems reasonable to grant that they are, in one sense, more "humane" than nuclear arms. A hydrogen bomb can incinerate several million persons at one time, deform and disfigure millions more, and make a shambles of entire cities. Nothing in the history of human horror can compare with it.

But the fact that thermonuclear warfare is more calamitous than CBR warfare is not a moral argument in favor of the latter. It doesn't make bombs and poison gas humane forms of warfare.

Once the position is taken, however, that it is proper to fight a war with nuclear weapons, the case against CBR collapses. What is important is to make a case against both. For nuclear weapons combine the worst features of chemical and biological warfare with the worst features of war by TNT. Nuclear bombs cause disease—leukemia, aplastic anemia, and other forms of cancer. They also leave an indelible stain on future generations through chromosome poisoning. Therefore, any argument against CBR warfare also applies to thermonuclear warfare and vice versa.

THE EXISTENCE of nuclear and CBR weapons should produce not merely a revulsion but also a determination to mobilize all our energies against war. It will be academic whether a man is dying of encephalitis produced by a biological weapon or aplastic anemia produced by nuclear radiation.

That there can be a debate over the relative horrors of thermonuclear war and CBR war is a painful commentary on the human situation in our time. The real question is not whether the hydrogen bomb is more or less ghastly than a nerve gas, but whether mankind, before it is too late, can prevent a war in which either or both may be used.

As the public debate over CBR proceeds, another fact of mountainous importance is bound to emerge. For the first time in history, nations are preparing for a war which neither side can win. The next war will result in mutual suicide.

This being the case, it would seem clear that every nation ought to be mobilizing its energy, its wisdom, and its conscience to achieve peace—peace with freedom and justice. Certainly, not until all peoples put at least as much thrust into the struggle for peace as they have into the new techniques of war can they satisfy their responsibility to themselves and to the future of mankind.

PHOTOGRAPH BY RAYMOND JACOBS