Loophole Seen in Space Treaty

The swampy semantics of the pact may still permit the launch of armed satellites, the Pentagon believes; the State Department is not so sure.

There's a loophole, it seems, in the carefully hammered-out space treaty drawn up last year by the United States and the Soviet Union. Through this hole the Pentagon may launch armed satellites able to disable enemy missiles.

The most notable phrase in the treaty, which has already been ratified by both major powers and will go into effect as soon as Britain and two other countries have ratified it, is one agreeing not to place in orbit "nuclear weapons or any other kinds of weapons of mass destruction." The loophole is the word "mass."

In 1964, the Department of Defense canceled a project called Bambi, which would have used satellites to find and shoot down enemy missiles soon after launch, when the missiles were still moving relatively slowly. Bambi, DOD decided, was far too expensive at the time, due to the cost of building and launching the large numbers of huge satellites that would have been required.

Recently, the House Military Appropriations Subcommittee released testimony by Dr. Charles M. Herzfeld, former head of DOD's Advanced Research Projects Agency, in which he revealed, months after the formulation of the space treaty, that the U.S. is again looking at orbiting missile-killers. "We think the time has gotten ripe again to look at the whole question," Dr. Herzfeld told the Congressmen, "because the costs of putting things in orbit have gone down dramatically, the reliability of space engineering has gone up dramatically, so that the overall cost of the system ought to come down significantly."

But now there's the treaty in the way. Last week, a Pentagon source was quoted as saying that such a system would not violate the treaty because it would be entirely defensive. The U.S. Arms Control and Disarmament Agency, however, labels this excuse as "cockeyed," since the treaty does not specify that the forbidden weapons of mass destruction are limited to those described by their owners as offensive.

Yet the Pentagon official confirms Dr. Herzfeld's testimony, saying that orbiting interception systems are being investigated with an eye toward picking off ICBM's either early in flight, or midway to their targets when they would be high above the earth. Unless the Defense Department plans a showdown with the State Department over U.S. intentions under the treaty, it must have another approach to the problem.

One possibility is the use of nuclear weapons, but ones not of "mass destruction." About two years ago, Dr. Arthur Kantrowitz, head of Avco-Everett Co., proposed development of a satellite-borne weapon using a focussed beam of radiation from a nuclear reactor as an atomic heat ray to vaporize enemy missiles. Though such a weapon would have essentially the effect of a super laser beam and would not do the broad damage of a bomb, the State Department, chief interpreter of the treaty's provisions, condemns this kind of loopholing as well. Says Leonard C. Meeker, the Department's chief legal adviser and an important figure in the original treaty negotiations, "any nuclear weapon is forbidden in space by the treaty. Even a small one is considered by the treaty to be a weapon of mass destruction."

On the other hand—and here's the loophole—as one State Department official puts it, "even the largest of the non-nuclear explosive weapons being used today are not considered to be weapons of mass destruction." This interpretation would permit satellites to be armed with missiles carrying warheads full of TNT or some more powerful conventional explosive.

Unfortunately—if you're on the Pentagon's side—there's a drawback here too, but this time it is not the treaty. With conventional explosive, an antimissile missile would have to hit its target right on the nose—a problem equivalent to stopping a bullet by hitting it with another bullet. The only present way around this—and it looks like a good one—requires nuclear explosions to be set off in space, which would violate not only the space treaty but also the nuclear test ban treaty, which would go out the window anyway, if the missiles were flying.

The nuclear technique uses high-energy X-rays, produced in the blast of a special kind of bomb, to set off the conventional explosive triggers within an enemy nuclear warhead. The weapon would probably be about a one-megaton hydrogen bomb with some of its uranium replaced by tritium. The tritium would raise the temperature of the blast so high that almost four-fifths of its energy would be released as X-rays. This system, though not allowable on satellites, is being strongly pushed by military leaders for use on the controversial Nike-X antimissile system.

The cost of a Nike system is estimated everywhere from about $4 billion for a "thin" system designed to show the Russians that the U.S. is not obsessed with offensive weapons, to Defense Secretary McNamara's $40 billion figure for a full-scale program including everything down to interceptor aircraft and shelters.

Because a satellite-borne conventionally armed missile would have to make a direct hit to disable an enemy ICBM —which a ground-launched X-ray bomb could do from as far as two miles away—the satellite system would probably require many more missiles to do as efficient a job. Placing the satellites 23,000 miles up in synchronous orbits, where they would hover over one spot on the earth, would enable fewer of them to provide broad coverage, but the physical distance that would have to be covered by their missiles makes such an approach impractical. A more likely choice would be to put more satellites in circular orbits between 100 and 200 miles up, similar to those of the manned Gemini spacecraft. This would still offer relatively broad coverage while greatly reducing the antimissile's trip time.

On the other hand, in such low orbits the satellites would be sitting ducks for an enemy trying to shoot them down, even with unsophisticated ground-to-air missiles. Some kind of protection would be necessary; in fact, it was for this purpose that Dr. Kantrowitz originally proposed his atomic heat ray.

Future developments in conventional explosives could markedly enhance their abilities as missile-killers, while orbital assembly techniques could enable much bigger and heavier conventional weapons to be carried by satellites. These would be "weapons of mass destruction," and would come under the treaty, according to the State Department official. When interpreting the treaty, he says, the participating nations will have to consider its original intent, which should eliminate any purely semantic evasiveness.

On the other hand, a country trying ex post facto to justify its actions under the treaty is hardly about to let its loopholes be plugged up by any intent not actually in the document.

What then, if a country does orbit some kind of satellite-borne weapon, using some tricky interpretation of the treaty to excuse its actions? "If Russia launched a satellite that we thought violated the treaty and was a threat to the United States," says the official, "we would, if the technology permitted, attempt to eliminate the threat."

This drastic action by the U.S. would not necessarily lead to war. The situation under the space treaty, he pointed out would be similar to the Cuban missile blockade by the U.S. under the provision of the United Nations Charter for regional peace-keeping operations. Things got tense, but the Soviet Union realized that making a lot of noise over a disputed violation of international law was preferable to going to war. "Of course, shooting down one of their satellites is another matter. I suppose they could always sue for damages."

FROM SWITZERLAND

World Drug Law Sought

Drugs good enough to export often aren't good enough to sell at home—and the countries that must import their medicines are bitterly unhappy about the situation.

Drugs are manufactured, by and large, in the world's prosperous nations. The United States, United Kingdom, Switzerland, Germany, France, the Netherlands, Denmark, Japan and Italy among them share almost all of the more than $1 billion-a-year in international commerce in pharmaceuticals.

When, in any one of these nations, a drug manufacturer is found to be less than perfect, it is a subject of national concern. And there are laws in all of them to protect consumers from impure pharmaceuticals.

There is no such international law; in the commerce between the developed and developing nations, it is a case of buyer beware.

Now, a group of underdeveloped nations is calling for international law to provide protection against practices by drug exporters which none of the exporting nations would tolerate within its own borders.

In Geneva, where the World Health Organization is headquartered, the poorer countries are calling for the immediate drafting of international regulations, binding on nations that sign a treaty, to protect them against often murderously useless drugs.

After a week of negotiations recently a group of nations pushed through the World Health Assembly a resolution asking WHO to work up at least the principles of such regulations, for study by the executive board in January.

Under the regulations, nations having pharmaceutical exports would guarantee that drugs in world trade are subject to the same strict quality control procedures as medicines produced for the home market.

In the U.S., for instance, drugs don't have to meet the Food and Drug Administration rigorous requirements, if they meet the standards of the importing nation, are not marketed domestically and are clearly labeled "for export."

For the first time, complainants are citing examples, while being careful at this stage not to identify exporters. An African bloc led by Dr. M. P. Otolorin of Nigeria charges "fraud" and "malpractice" by "important pharmaceutical firms." He recalls a shipment to Nigeria of chalk labeled "sulfonamide."

Pakistan's health minister, Dr. M. A. Haque, cites a shipment of several tons of a common drug, presumably an antibiotic, that was completely valueless.

Several Western ministers report privately that they have seen bad batches of penicillin and other products in India and elsewhere.

Authoritative officials at WHO say the problem is immense, involving perhaps 50 percent of all drugs. They point out that many countries—including such developing nations as India, United Arab Republic and Brazil—now export, some through subsidiaries of important Western drug firms. Officials say reputable firms sometimes print labels, "for export only," and one observes, "This is not nice at all."

Pharmaceuticals and raw materials pass through many hands, often under poor storage and transport conditions. Apprehending irresponsible parties, including bootleggers, is admittedly very difficult.

WHO has been asked to prepare cost estimates for regional quality control laboratories, to which poor countries can send batches of drugs intended for import, for thorough tests. Each nation would like to have its own food and drug administration, but most lack the money and manpower. WHO says it will ask the U.N. Development Fund for grants.

Nigeria has threatened to organize a "union" of drug-importing nations and to boycott countries and companies that resist their demands, particularly for "international export certificates," approved by governments, if not WHO itself, guaranteeing quality control testing identical to that at home. WHO's experts had previously concluded that these are impractical. But Dr. Otolorin said, "At least we can see who opposes us."

While Western delegates resist strong immediate supranational action, there are clear signs that big nations are offering more and more assurances.

Dr. B. D. Blood of the U.S. Public Health Service Office of International Health pledges that the U.S. is ready to provide "consultative, technical assistance and training facilities to any nation in developing national codes for manufacture, packaging and quality control . . . and testing services, if some practicable international system can be developed under the aegis of WHO."

France says it has started training technicians from several developing countries and will satisfy any importer who requests proof of controls.

Italy also offers testing facilities for any importing nations regardless of the source of the drugs.

Dr. Karl Evang, Norway's health minister, has allied himself with the Africans and is pressing hard for new laws. He claims WHO has been too "defeatist" until now on this problem.

"We live in a new world, because of