

# Nuclear Bans And The Technology Gap

- Any atomic device that explodes can be used as a weapon, even if its prime purpose is canal digging.

- Atomic weapon technology has little application to the four basic types of civilian use of nuclear products: power, desalination, research, and isotopes for medicine and industry.

On these two premises rest the United States attitudes toward two of the efforts now being made to avert the further spread of nuclear weapons capability. Five nations—the U.S., U.S.S.R., China, France and England—now have the bomb in one configuration or another. And the effort to prevent further proliferation, against the fear of the have-nots that they may be technologically second class without nuclear technology, is creating some tenuous partnerships.

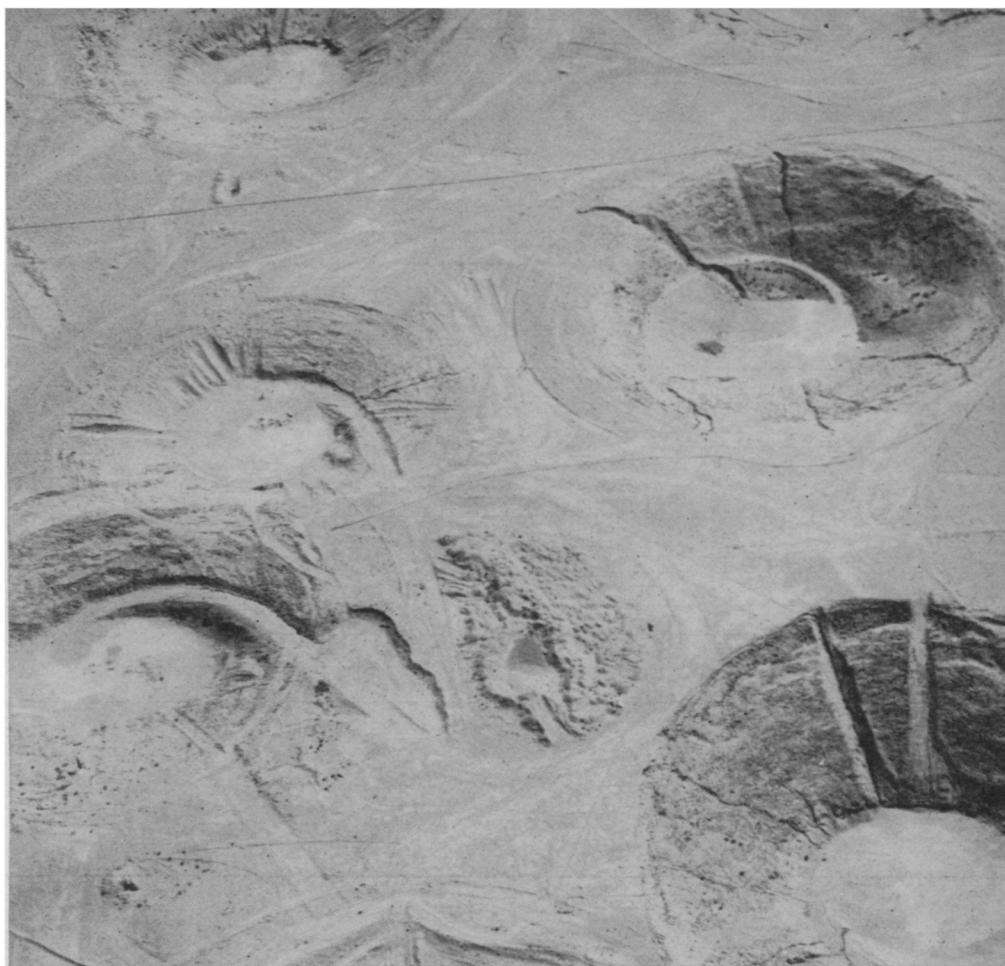
This week the U.S. and Soviet Russia, though at loggerheads over Vietnam, were to present jointly to a 17-nation disarmament conference a draft of a treaty designed to prevent the spread of nuclear weapons.

Meanwhile, in Mexico City, delegates from 21 Latin American nations have ratified the final text of a treaty to exclude atomic armaments from an area reaching from the Rio Grande to Antarctica. The U.S.—again in agreement with the U.S.S.R.—urged, and feels it achieved, changes in language that would prohibit development of any atomic explosives, not weapons alone, in the area.

If a Latin country wanted to blast out a canal with atomic devices, it would have to come to the United States or another existing nuclear power for the “dynamite.”

But that did not create as many problems as the broader treaty.

The U.S.-U.S.S.R. treaty, by which the nuclear powers would agree not to give atomic devices to other countries, and non-nuclear powers would agree not to build them, ran head on into the



Los Alamos

Atom bomb tracks: craters left in Yucca Flat by underground atomic tests.

technology gap and Germany's fear of falling behind in research and technology.

Without West Germany, there could be no solid accord. And German Foreign Minister Willy Brandt, willing to ban all atomic explosives from German soil, still expressed the fear that the treaty language would bar peaceful development in industry and science.

He was concerned, he said in New York, that the treaty might be used “to weaken the position and competition of industrial states who will not and do not want to become nuclear weapon states.”

Mr. Brandt seemed to be raising again the technological gap which has bedeviled European leaders for some months.

The doctrine of the technology gap holds that the immense inputs of government money into American space and military systems, as well as the sheer size and technological ability of U.S. firms, has given this country an immense advantage in development.

If the United States has and holds a commanding lead in the science-based industries of the near future, the gap theory holds, it will dominate the world's economic landscape and have political leverage in foreign countries as well.

The United States credits Europe's

concern; a panel under Presidential Science Adviser Dr. Donald F. Hornig is already exploring U.S. policy alternatives in that area. And Washington immediately declared the treaty's ban on explosives would not cut Germany off from peaceful uses of the atom. Language in the treaty will make this explicit.

Of all civilian uses, only excavation—for harbors, canals, passes over mountains, and the like—requires weapons technology. Any nation wishing to use these techniques—which have not been proved out as yet—could buy the services of an already nuclear-armed nation much more cheaply than it could develop its own A-bombs.

In the beginning, United States sources pointed out, much was learned about power reactors as the result of an interest in bombs, but it would be foolish for other nations to take this road at this late date—they could more easily avoid the preliminaries and go directly to reactor technology.

On another question production of fissionable material today is a separate step in the use of atomic power. Once produced, it can be used either in a reactor or a bomb. And in the future, the so-called breeder reactors on which the U.S., France, Euratom and others are moving fast, might produce more fissionable material than they consume.

To guard against this plutonium going into weapons, the International Atomic Energy Agency has the right, under already-existing treaties, to "follow" the plutonium produced in 24 countries to insure that it goes toward peaceful uses. And the U.S. in recent months has taken steps to strengthen IAEA safeguards.

This system could be included as well in the final non-proliferation treaty, expected to be the subject of long discussion and many changes of language in Geneva.

The global treaty will have to have language specifically allowing its signatories to keep up with atomic technology apart from bombs. European nations already, right or wrong, fear they are falling behind the United States in technology and that this threatens their future economies and status in the world.

Britain, for example, uses the "technology gap" as a reason for pressing for acceptance into the Common Market—she says she can help close the gap. France's President Charles de Gaulle promotes the gap as another reason to increase France's independent course in world affairs. Some Germans brandish it in an effort to increase space and military spending. Italy sees it as a tool to repair the tattered fabric of Atlantic unity.

Regardless of how overblown the fear of the gap may be, the Europeans believe it is there, and they are not going to sign anything that might widen it.

The Latin American treaty, four years in the making, was hailed by the State Department as a "milestone" on the road to disarmament. It sets up the first nuclear-free zone in an inhabited area. (Antarctica and space have already been so designated by treaties.) The key change from early language, in the U.S. view, was in Article III. As drawn, it defined a nuclear weapon as "any uncontrolled nuclear fission intended to be used for war." The final, and more comprehensive language became "any fission device of uncontrolled form with characteristics appropriate for weapons of war."

The distinction is empty at the moment; if any nation declares that it has developed a nuclear explosive that for some now-unforeseen reason could not be used as a weapon, the State Department said, the question would have to be rethought.

But by stating that the signatory nations could not build their own nuclear devices for peaceful explosions, the Latin treaty avoids conflict with the pending global treaty, and makes its eventual signing by many nations more likely.

## Euratom Threatened

Political difficulties between the six European Common Market countries threaten a large-scale technical breakdown in the European Atomic Energy Community—Euratom—European officials fear.

Community research networks which could be affected have involved expenditure of about \$300 million. National research programs could be threatened as a result.

Research contracts in the Community, which expired at the end of 1966, including one for an association with France on fast reactors, have not been renewed. The Euratom Commission says that, failing a quick decision to extend the contracts, the association will have to be wound up.

Under the association the Community, that is all member states, owns part of the plant and all knowledge acquired in it. Halting cooperation could, it is feared, create a crisis of confidence between member countries.

Abandoning research into them could

undermine Community research as a whole.

A further difficulty is that a decision is overdue on Euratom's third five-year research and development program. The second five-year program ends this year.

The Commission has laid down guidelines for far-reaching changes in the character of joint research. But member countries have not yet considered them.

Euratom officials, many of whom blame the French, say that doubt whether a third five-year program is to be adopted has jeopardized projects like the Belgian materials testing reactor at Mol, on which work is already slowing. Belgium could not operate Mol fully on her own.

Finally, political and other differences among the six have meant delay in voting the Euratom research budget for 1967. It is having to find money to keep research going by a system of credits voted on a monthly basis.

### DRUG REGULATION

## FDA Gets Miltown Ruling

Miltown and Equanil, two of the most frequently prescribed tranquilizers in the United States, moved a step closer to Government control when a Federal hearing examiner ruled that they have a potential for abuse.

On the basis of evidence accumulated during a two and a half month public hearing, William E. Brennan concluded that any drug containing meprobamate, used to relieve tension and anxiety, has a potential for abuse because of its depressant effect on the central nervous system. Brennan sent his recommendation to Food and Drug Commissioner James L. Goddard who will make the final decision as to whether or not meprobamate tranquilizers come under the Drug Abuse Control Amendments of 1965.

The Amendments require manufacturers and druggists to keep strict records of the production and sale of drugs and put a six-month time limit on the validity of doctors' prescriptions for them.

If Dr. Goddard goes along with Brennan's ruling, as he is expected to, Wallace Laboratories which holds exclusive rights to manufacture meprobamates in the U.S. plans to take its case to court. Wallace sells its product under the trade name of Miltown, and licenses other companies, mainly Wyeth

Laboratories which sells Equanil.

During the lengthy hearings, both the Government and Wallace presented testimony from qualified physicians. Some reported that meprobamate is being indiscriminately used without medical supervision and that it can be linked to suicide and other forms of irrational behavior. Others claim meprobamate is not being abused any more than aspirin, hooks only addiction-prone individuals and is practically never associated with misuse.

If the Amendments are extended to cover meprobamates in addition to barbiturates and amphetamines already included, patients are likely to get more regular medical attention because they will have to have their prescriptions rewritten every six months.

Although restrictions of the Amendments are not expected to result in a significant reduction in sales, some loss as well as anticipated sales gains by other companies whose tranquilizers are not subject to this kind of FDA control are likely to have some bearing on the drug companies' margin of profit.

Serax, a non-meprobamate medication for the relief of tension, anxiety and depression, is one such competing product. Its manufacturer, Wyeth, has not joined Wallace in its fight against limitations on the sale of Miltown.