

budgetary requirements estimations must be premised.

For reasons which ought to be obvious from study of previous instances of "science-driver" categories of military programs, including the Nazi Peenemünde example, effective high-technology military programs depend upon a relatively much broader base in civilian science and in the productive technology of the civilian economy. Herein lies the principal reason for sometimes almost a treasonous opposition to beam-weapon development from among advocates of a "technetronic post-industrial society."

The principal support for the military development must come from three broad-based research and development efforts in the civilian sector of governmental and private expenditures: 1) expansion of NASA, 2) expanding the rate of expenditures on fusion-energy research slightly beyond those specified in the 1980 McCormack Fusion Energy Engineering Act, and a new project-area of basic research, and 3) development in the domain of applications of relativistic beams in general.

The work of NASA defines not only our national capabilities for deploying a range of varieties of space platforms and vehicles. As the case of Voyager observations of Jupiter and Saturn illustrate the point, we efficiently overcome some among the most destructive features of the Newton-Maxwell program by empirical discoveries which confront us in space-vehicle-based exploratory observations. NASA should develop those capabilities which have subsumed military applications under the auspices of a mandate to achieve such targets as placing a habitable human observatory on Mars by such an approximate date as 2010 A.D. All that we require for military purposes respecting equipment and logistical systems in nearby space will be mastered more or less automatically as a by-product of such a mandate.

The most crucial major area of fusion-energy research respecting application of relativistic-beam technologies is what is termed "inertial confinement fusion," the isentropic compression of a small pellet containing a thermonuclear charge to effect a thermonuclear micro-explosion. This specific point of military interest in promoting civilian research and development is merely a facet of related knowledge and engineering capabilities to be acquired through sharing of knowledge by professionals engaged in all facets of fusion and related research.

Relativistic beams represent in and of themselves one of the most fruitful areas of imminent breakthroughs in civilian technology. Laser and more advanced modes of isotope separation can effect reductions in cost by up to an order of magnitude in the final phase of refinement of nuclear fuel, and have related applications for isotope separation modes of refinement of similarly most-valuable elements. As these methods are perfected, civilization's practice in metallurgy and other affected fields will be revolutionized, breaking through whole categories of what might otherwise appear to be limited resources.

Edward Teller wary of 'one-world' approach

On Saturday, Feb. 8, Dr. Edward Teller spoke at the Wehrkunde meeting in Munich (article, p. 30). His 15-minute-long remarks were unprepared, and therefore a written text was not available. What follows is a report on this speech by our correspondent Rainer Apel.

Responding to a short presentation before by SDI director, Henry Cooper, who spoke about the perspective of having a first SDI defense system ready by the mid-1990s and a full, global-scale system by the year 2000, Edward Teller opened his presentation at the Wehrkunde meeting by declaring that never before in his entire life, had he felt more in agreement with what had been said at a meeting, than at this particular meeting.

Teller said he felt glad to see—and he fully agreed with Cooper—that an idea (missile defense, SDI) which most people had been skeptical about until very recently, was now making considerable progress in international debate.

Teller said that "defense looks more and more feasible the more we go into research," and that he was optimistic now that with more research being so that "the Americans don't have to do it alone anymore because others have offered to join," a missile defense system would be working soon. In this context, Teller said he was very pleased with the Yeltsin offer to Bush, because it showed that the postwar confrontation between the two superpowers that could always have led into a "war among the big powers" was over, and that a new era could begin, an era of cooperation and concentration on the important things.

It is now certain, he said, that there would not be a war among big powers anymore, that this great scourge of the postwar era which even saw the World War II victors turning against each other in the most dangerous conflict in mankind's history, was finally overcome. There might still be wars among small powers, or between bigger and smaller powers, but Teller stated, "The danger of war has shifted from the big to the small powers."

As far as proliferation was concerned, Teller said, referring to the earlier presentation by Hans-Jochen Vogel, in favor of a one-world government and the revival of the Baruch Plan, that his own life and long experience had turned him from the ardent supporter of a one-world regime which he was as a young man, into an ardent opponent of that idea.

He explained this as follows: He came, under very difficult circumstances, and in very difficult times, as an immigrant to the United States. At that time, he was not yet familiar enough with the great achievement of the American Revolution, which was a revolution not so much directed against Britain but rather one against government, against the system of interference from the top against the ways of the society. The achievement of the American Revolution was a new moral principle on which society would operate, which was based on freedom and the absence of central control that would suppress the people, Teller said. And after all, this revolution has been the only one successful in the past 200 years. There are certainly conflicts, and many such conflicts, in this American model, but it is better to have these conflicts and no government suppressing them than to have no conflicts and a government that is in control of everything. As the latter principle of "government" was opposed then, so world government would meet resistance today.

In the 1940s and 1950s, Teller said he still believed that all the big problems of mankind could, and should, be solved by a centralized, world institution. This was also the idea of the original Baruch Plan, but people have always overlooked that the plan was "but one first step in the direction of establishing a world moral order." What is that new world moral order? Teller asked. Well, he would like to make two proposals, for the creation of two institutions for a world that has just come out of the Cold War:

Teller called for creation of an institution that would show a *new approach* on the world's fundamental problems, which would not operate through a supreme power which had the right to control and to launch sanctions; This would meet opposition throughout the world, sooner or later. What has been experienced throughout the entire history of proliferation—namely, that there is no fool-proof system that could work efficiently over a longer period of time which assures that countries like Iraq, which signed the Non-Proliferation Treaty and had all the controls, and nonetheless could develop what should not have been developed there—shows that a system only based on controls will not work.

What is needed, instead, is something that could intervene *with positive contributions* in "all those countries" to help them develop their economies and their way of life in such a way that no one would think it was necessary to build dangerous weapons in order to struggle for his or her country's rights. "We must eradicate the causes of war," said Teller, emphasizing that otherwise, even the best system of controls could not make the world more safe. All of mankind's history has proven that, if the causes of war are not eradicated, peace cannot be kept.

He also called for an effective abolition of secrecy, the other side of the "controls" coin. Teller said that during his life, he has come to the conclusion that secrecy "is an instrument of dictatorships," that this is what dictatorships are best

at, as one could see in the case of Saddam Hussein. The system of secrecy would always give an advantage to dictatorial regimes, and that is why the western nations of the free world should not allow themselves to be turned into an accomplice of such a system. However, having a worldwide exchange of knowledge among scientists and experts would allow everybody to check what his neighbor was working upon, it would not be possible to have any secrets, and so there would be no basis for dictatorial regimes to exist. Somebody would always tell somebody else about things that were supposed to be kept secret.

This exchange model would be far more effective than any system of controls that didn't break with secrecy, Teller said. One could have that exchange, in addition to certain observation systems on the ground and in space that would also employ idle Soviet scientists. But the free access to all information would be the main thing, Teller concluded.

LaRouche comments on Teller

In the early phase of organizing for the SDI, there was a certain de facto collaboration between Dr. Teller and Lyndon LaRouche, particularly on the question of the need to rapidly develop the x-ray laser as a major component of an effective SDI system. On Feb. 10, Mr. LaRouche offered the following comments on Dr. Teller's remarks at the Werhkunde meeting.

Dr. Teller stated that he was in support of the idea of a global SDI, and was, of course, glad to hear that some of critical views in opposition to SDI earlier had seemed to diminish. However, he had reservations, which I fully endorse, concerning two points: First of all, that SDI should not be seen as a one-world system, but rather it is important to defend the principle of national sovereignty of all states; and that what was required rather than a formal governmental top-down system of world rule, was rather a moral agreement which would govern relations among states. Secondly, he was opposed to secrecy. This, also from his experience that secrecy did not really accomplish anything beneficial, but rather having scientific matters open to all, was the better way to proceed, in the spirit of cooperation.

While Dr. Teller's argument has an ethical form which is amiable, I don't happen to agree with the specific way he approached it. However I do agree on the two points: that we must proceed with absolute respect for the — sovereignty of nations under traditional natural law, and that we must not bother with secrecy, but rather go on the basis of sharing scientific knowledge among all states.

In particular, the point which he did not mention, which I think is the crux of the matter, is that we in the North, i.e., in the United States, western Europe, and so forth, ought to be for the availability of technological and scientific progress as a mode of investment in production and similar things for all nations, of the South as well as of the North.