

LaRouche's Concept Of the SDI

The following two articles expand on LaRouche's assertion that the Strategic Defense Initiative, had it been adopted according to its original design, would have provided the basis for moving the world into a new anti-imperial system, free of the fourth Roman Empire (Great Britain) and much more capable of dealing with the galactic threats mankind faces today.

The first is a chapter from a March 1982 Memorandum by LaRouche, entitled "Only Beam-Weapons Could Bring to an End the Kissingerian Age of Mutual Thermonuclear Terror: A Proposed Modern Military Policy of the United States," in which he details his proposal from a economic-scientific, as well as strategic standpoint. The memorandum was published by the National Democratic Policy Committee (NDPC), the political action committee LaRouche headed at the time.

The second is a speech given by EIR Counterintelligence editor Jeffrey Steinberg in March 1993, on what happened to LaRouche's proposal, which led to its adoption by President Reagan, and its killing by the British-controlled Soviet leadership.

An extensive collection of LaRouche's and EIR's further writings about the SDI, both scientific and political, can be found at www.larouchepub.com

2. A Short History of Beam-Weapons Technology

Public discussion of anti-missile beam-weapons technology began during mid-1977, as an outgrowth of discussions between physics-trained Major-General George Keegan and nuclear physicist Dr. Steven Bardwell of the Fusion Energy Foundation.

In his earlier duties as chief of Air Force Intelligence, General Keegan had detected what he believed to be Soviet development of a new kind of weapons capability. During preceding years, especially since the founding of the Fusion Energy Foundation in 1974,

those of us associated with the FEF had performed a public role in promoting Riemannian relativistic physics, and had publicized informed estimates of Soviet breakthroughs in relevant aspects of relativistic plasma-physics. General Keegan discussed his problem of assessment of Soviet capabilities with Dr. Bardwell on this basis.

Afterwards, also during 1977, present NDPC Advisory Committee Chairman LaRouche ordered a public campaign for U.S. development of relativistic plasma-beam anti-missile weapon systems. During the same period, General Keegan made a parallel effort independently of the FEF and NSIPS [New Solidarity International Press Service] campaigns.

Although General Keegan's views on this subject are largely shared by Britain's Vice Air Marshal Stewart Menaul, the London International Institute for Strategic Studies (IISS) immediately launched an international campaign of vilification against General Keegan, FEF and LaRouche on this issue. Some West German military circles reported themselves dazed by the ferocity of the attempted "brainwashing" to which they were subjected by IISS on this account.

There were two principal reasons for continued strong opposition to beam-weapons development from IISS and other quarters since 1977.

Primarily, IISS represents circles committed politically to a global "post-industrial society" perspective and a zero-technological-growth perspective. Whatever IISS might have estimated to be the objective military merits of beam-weapons, beam-weapons implied both an escalation of NASA programs and also a NASA-like crash-program in areas subsuming fusion-energy research and development. To adopt a policy of developing beam-weapons would mean an automatic end to the drift of the West toward the utopian goals of a "technetronic" variety of "post-industrial society."

Secondly, the variety of theoretical physics applicable to beam-weapons development is Riemannian physics, as opposed to the Newton-Maxwell varieties and their offshoots. Even most professional scientists of today are admittedly ignorant of the continuing, embittered conflict between the two schools of science up through and immediately following World War II. Most British, American, and, other contemporary generations of physics professionals, and most emphatically, contemporary mathematicians, are simply indoctrinated in the Newton-Maxwell empiricist school.

The mere existence of relativistic plasma-beams has



EIRNS/Stuart Lewis

Lyndon LaRouche addresses an April 13, 1983 conference in Washington, presenting his concept of a Strategic Defense Initiative to an audience of some 600 people.

devastating implications for the authority of the empiricist faction's school as a whole.

The lawful phenomena manifest in the generation of "shock" effects by such plasma-beams are a confirmation of a law of physics proven by a crucial experiment designed by Bernhard Riemann in 1859. This experiment, which focused on the operation of such universal laws in the case of generation of acoustical shock-waves, was the theoretical basis for an entire school of fluid dynamics, including aerodynamics, which arose in Germany and Italy under the direct influence of Riemann's work.

As recently as the 1890s, Rayleigh staked the credibility of the entire British school of physics on the as-

sertion that Riemannian shock-waves are not generated in acoustical media. During the 1890s through the 1920s, Bertrand Russell's career within science and philosophy was premised on his Cambridge University assignment to attempt to eradicate the influence of the work of Bernhard Riemann and Georg Cantor. Out of this effort, formerly led by Russell, developed the "unification of the sciences" project, now sponsored by the Reverend Moon's Unification Church, and the influential History of the Applied Sciences project, based presently at Harvard and Johns Hopkins universities.

Whether or not the professional mathematician or physicist is aware of these issues, the hairs rise on the nape of his neck of most today whenever he is challenged to subordinate his activities of research and development to purely Riemannian methods. President Reagan's current science adviser, Dr. George Keyworth, is a professed fanatic on these issues.

Despite the 1977 IISS campaign of personal vilification against such as Keegan, Bardwell, and LaRouche, the practical issue of beam-weapons could not be suppressed so easily. Above all, there were increasing indications of Soviet progress toward developing precisely such capabilities. The energy with which the Soviets have continued their space programs and certain other indicators have been most relevant on this point.

Ironically, the physics of beam-weapons development was already in practice with the first successful production of a deployable thermonuclear weapon. Dr. Friedwardt Winterberg has published a book, *The Physical Principles of Thermonuclear Explosive Devices* (1981), in which the basic physics of the H-bomb are outlined. Dr. Steven Bardwell is compiling for early publication a guide to beam-weapons systems meeting the technical needs of both intelligent laymen and professionals. We limit our remarks here to the most general principles involved.

The possibility of a thermonuclear detonation may be fairly described as depending upon reaching certain minimum critical values of temperature and compression. The problem is that compression-heating of the charge tends to cause the charge's material to expand in such a fashion as to defeat the required degree of compression. Consequently, working within the limits of a

fission trigger, the problem of thermonuclear detonation is that known as the problem of effecting isentropic compression; this may be fairly described as preventing compression from being converted to heat in such a manner as to defeat the continuing process of compression.

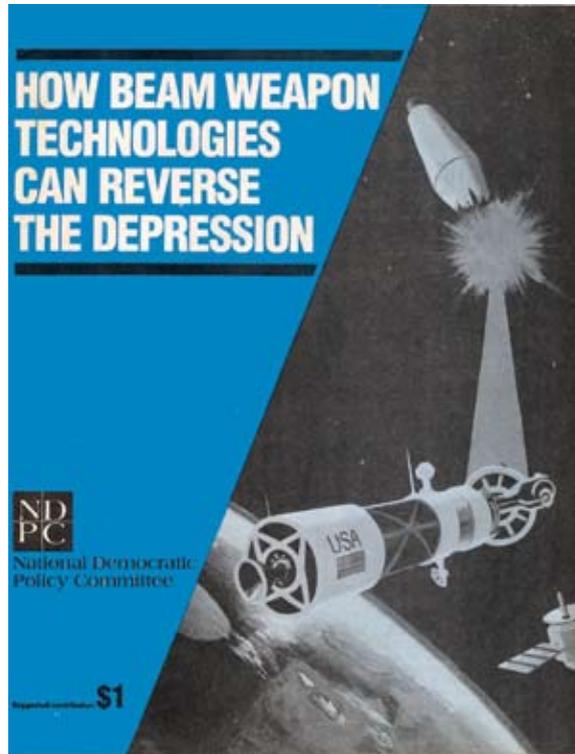
The solution to this problem of isentropic compression is defined in principle by Riemann's cited 1859 paper outlining the generation of an acoustical shock-wave in an "infinite cylinder."

That 1859 paper was "classified" by Western governments as part of the security-wraps around the H-bomb's secrets—although the significance of the long-published 1859 paper is openly treated in *published Soviet literature*! A similarly ludicrous exercise in the name of "national security" occurred under the direction of James R. Schlesinger, who classified Soviet secrets revealed to a California scientific audience by a prominent Soviet relativistic-beam specialist! Schlesinger's infantile action, we later learned, was taken at the insistence of the British government!

The translation of these principles of H-bomb detonation into weapons-systems which can kill H-bombs began to be possible with the development of the laser. As we continue the development of beam-systems beyond the ordinary sort of laser into the range of higher-order energy-densities, such as x-ray lasers and so forth, we develop the capability of producing controlled beams whose physical behavior is analogous to the 1859 experimental design of Riemann.

This line of development leads into three categories of military beam-weapons capabilities, of which the first two are presently practicable projects of relatively short-term research and development.

1. *Laser anti-missile systems.* These are stationed inside an orbiting space-platform or powered



The LaRouche movement's organizing for beam-weapon defense included millions of pamphlets, magazines, newspapers, and several national TV shows during sequential Presidential campaigns.

ered space-vehicle. (Powered space vehicles are part of the spectrum of space-based systems designed to cope with anti-satellite weapons-attack.) The platform selects its target, typically a nuclear-armed missile entering the stratosphere. The laser beam dwells on the target, tracking and following the moving missile as the beam burns ("ablates") its way through protective layers, and then performs its destructive function on the apparatus within the shielding.

2. *The Relativistic-Beam System.* The beam in this case destroys the target upon impact. Unlike the laser, which must burn its way through, a relativistic beam, from suitable

forms of x-ray lasers on up, transmits a destructive shock upon contact, and then moves on quickly to the next assigned target.

3. *Future Systems.* As Bardwell elaborated the work of a special task-force in 1977, it is feasible, on principle, to develop a ground-based anti-missile beam-weapons system. One of the beams of this system bores a channel through the atmosphere. The killer-beam progresses along this channel to its target. Space-based killer-beams against earth-targets are, on principle, a feasible system for the future.

It is proposed that the United States immediately launch a "crash program" for earliest-possible deployment of anti-missile beam-weapons systems of the second category, and undertake longer-term research and development respecting systems of category three.

Budgetary Requirements of the Program

We do not specify dollar-amounts for such development here. Rather, we indicate now the considerations

upon which budgetary-requirement 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 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 McCormack Fusion Energy Engineering Act of 1980, 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 place 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 microexplosion. 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 breakthrough 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.

Mastery of beam-technologies is also the key to improved breeding of nuclear fuels. Related methods permit us to generate controlled neutron-fluxes of the variety which can destroy the radioactivity of unwanted by-products of fission combustion. In related ways, as we have already just emphasized, this is the doorway which leads us to new, vastly superior forms of basic industrial technologies beyond the imagination of most citizens today.

Out of the repertoire of methods and hardware *produced by such civilian research*, our Air Force (for example) can assemble the off-the-shelf capabilities needed for the indicated range of military systems.

Ironically, these indicated expenditures will not cost the American taxpayer a net penny. The NASA research and development effort is best estimated to have paid back to the U.S. civilian economy more than 10 dollars for each dollar spent. The breakthroughs in technology effected directly or indirectly through NASA research and development gave the United States its highest rate of annual increase of productivity during the post-war period. Even after NASA began to be taken down during 1966-1967, the chief source for the diminishing rate of growth of productivity during the years thereafter was technology produced by NASA research and development.

Indeed, in our military technology today, what is presented as a new system is usually something chiefly left over from the drawing-boards of aerospace research and development from the pre-1967 period. We have fallen behind by about 15 years in our nation’s technological capability, especially in respect to technologies of military relevance.

Even were such pay-back not assured, how much would any sane citizen pay to free his or her family from the continued and presently increasing threat of thermonuclear holocaust?