

EIR Special Report

EXECUTIVE INTELLIGENCE REVIEW

1983

Beam Weapons: The Strategic Implications for Western Europe

**Proceedings of the *EIR* Conference
Rome, Italy, November 9, 1983**

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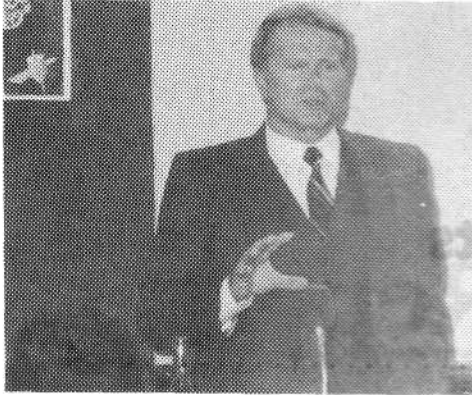
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Gen. (ret.) Volney Warner.



Gen. (ret.) Revault d'Allonnes



Col. (ret.) Marc Geneste.

About the Speakers

Fiorella Operto is the national secretary of the European Labor Party in Italy, and a member of the Board of the Club of Life. A well-known political figure in Italy, she has in the last year led a campaign in Italy in support of beam weapons technology, attempting to build a popular movement on this basis. Ms. Operto has done groundbreaking research on the Neapolitan economic school of Genovesi and Intieri, the scientific-economic tradition on which Italy as a nation was founded.

Dr. Jonathan Tennenbaum is the European coordinator of the Fusion Energy Foundation and editor of the German Language *Fusion*. He received his doctorate in mathematics at the University of California and has been active in the past as a professor at the University of Copenhagen. Since 1977, he has been working with the Fusion Energy Foundation. He is the co-author of the widely known FEF study on the industrialization of Africa, as well as numerous articles on the history and epistemology of science. Dr. Tennenbaum is an expert on advanced technology and on education in advanced technology. In particular, for the last three years he has been engaged in a research project bearing on the revival of Riemannian methods in mathematical physics. Dr. Tennenbaum has become well known in Western Europe in recent years for his public presentations, articles and interventions on the subject of defensive beam weapons.

Lyndon H. LaRouche, Jr. is the founder and a contributing editor of the *Executive Intelligence Review*, the publication which co-sponsored these proceedings. He is well-known internationally as one of the foremost proponents of the development of beam weapons. Mr. LaRouche is, in addition, the president of the International Caucus of Labor Committees, a worldwide political association. He is the Chairman of the Advisory Board of the National Democratic Policy Committee, a political action committee constituted in the United States. Mr. LaRouche declared in September his candidacy for the Democratic nomination for the office of President of the United States.

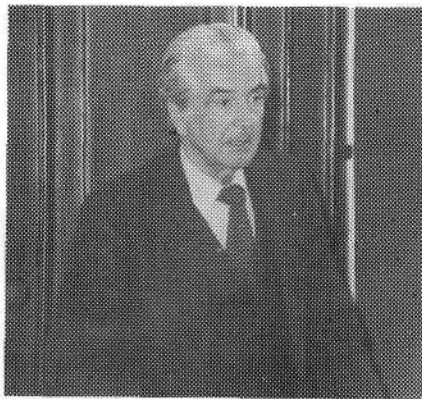
Helga Zepp-LaRouche is president of the European Labor Party in West Germany and is a prominent personality in the political life of the Federal Republic. Mrs. LaRouche is also founder of the Club of Life, the international organization which fights for development and against zero-growth and genocide. In a very short period of time, the Club of Life has emerged as the alternative pole to the malthusian policies of the Club of Rome. The Club of Life was founded in Rome last October, and thereafter held an important series of conferences in February of this year on the occasion of the summit of the Non-Aligned Nations in New Delhi, India, calling for implementation of a debtor's cartel and a new world economic order. Helga Zepp-LaRouche brought this message to many Third World countries, including, most recently, Thailand.

Discussion Forum

General (ret.) Volney Warner graduated from the U.S. Military Academy at West Point in 1950, after serving in the U.S. armed forces during the Second World War. He was part of the command of the U.S. 82nd Airborne Division, and later commander of the 9th Infantry Division in Fort Lewis. He was also part of the 18th Airborne Division in Fort Bragg. Before his retirement, Gen. Warner headed the Readiness Command at McDill base in Florida. He had a very important role in preparing the Rapid Deployment Force in the United States.

Michael Liebig is the manager of the *Executive Intelligence Review* in Western Europe, and author of many articles and speeches on the question of new defensive systems based on beam weapon, and the implications for West European defense.

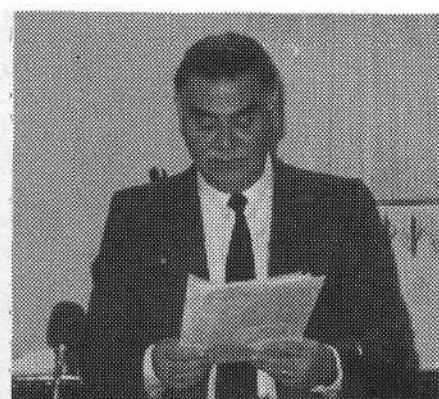
General Giulio Macri is one of the most active representatives of the beam weapons field. He was commander of the Tank Warfare Training School of the Italian Army in Cape Teolada, Sardinia, and headed the Italian military representation office at SHAPE headquarters in Europe. He is an expert on advanced military



Col. (ret.) Hans E. Seuberlich



Gen. (ret.) Antonio Pelliccia



Gen. Giulio Macri

applications, and author of many articles on this subject. Gen. Macri was also active in the United States, at Fort Leavenworth, Kansas, and participated in the special school of the United States Armed Forces in Oberammergau, West Germany. He has published articles on space war, satellites and beam weapons in the following publications: *Rivista Militare*, *Rivista Aeronautica*, *Difesa Oggi*, *Aviazione*, and *Quadranti*, and was interviewed on beam weapons by the influential Italian weekly *Gente*. Gen. Macri participated in the October 5 Bonn seminar on beam weapons organized by the *EIR*.

Colonel (ret.) Hans E. Seuberlich served in many functions in the West German Bundeswehr. During his active career, Col. Seuberlich taught in the Officer Training School of the Bundeswehr, and was responsible in the German Defense Ministry for military magazines and psychological defense. He was also Chief Instructor of the Bundeswehr War College, and German representative at the annual conferences of the Bundeswehr Testing Association in the United States and in Canada. He is the author of over 60 articles in specialized military magazines. Col. Seuberlich is Vice President of the European Organization of Military Associations, and Executive Board member and Bonn representative of the Kyffhaeuserbund, one of the most important organizations of former army officials in West Germany. He is, as well, an Executive Board member of the German Council of the European Movement and member of the Commission for Security Policy of this movement.

Colonel (ret.) Marc Geneste works presently as an engineer in Paris in the Commissariat à l'énergie atomique. He is well known for his writing on strategic questions, particularly, in recent years, in support of the neutron bomb. He is widely identified as the "father of the French neutron bomb". Col. Geneste is the author, with Samuel T. Cohen, of "Echec à la Guerre: la bombe à neutrons," a study on neutron weapons.

General (ret.) Revault d'Allonnes is a Compagnon de la Libération.

General (ret.) Antonio Pelliccia graduated from the Italian Aeronautics Academy in 1945. He has served as a fighter pilot, and as a flight instructor in Italy and the United States. For three years, Gen. Pelliccia worked at the SHAPE headquarters in Paris. He was also Vice Commander of the NATO Defense College. A former president of a working group of the Free Military Committee, he is today a member of the Center for Defense Studies at Genova University. Gen. Pelliccia is also the author of the books "Il dominio dello spazio" and "Nessuno è profeta in patria", and writes for many Italian magazines.

Piers Wooley is a London defense economist and international relations specialist. Wooley has done research advisory work for the London International Institute of Strategic Studies, and was, through September 1983, the research officer for the Conservative Party Research Bureau International Department responsible for North America, Europe, Africa, Bretton Woods Institutions, and Overseas Development. Since early October, Wooley has been at the center of a controversy in London because of his charges on Oct. 9, aired publically on the BBC weekly television news show "Panorama," that the Conservative Party had withheld information from the public on the state of the economy to cover up its intentions to carry out large-scale cuts in public expenditures in health services and other fields after the election.

Dr. Giuseppe Filipponi is director of the Italian Fusion Energy Foundation (FEF) which co-sponsored this meeting. Dr. Filipponi graduated in Physics at Milan University and is author of a program for the development of Italy in which nuclear energy plays a big role. Dr. Filipponi is also author of many articles on beam weapons which appeared on specialized magazines such as *Aeronautica*.

Webster Tarpley moderator for the Rome and Bonn beam weapons conferences, is a contributing editor of *EIR*, and a foreign policy advisor to the National Democratic Policy Committee in the U.S.



Fiorella Operto



Helga Zepp-LaRouche, Webster Tarpley und Dr. Jonathan Tennenbaum

Introduction

We present here the transcripts of the proceedings of the *EIR* conference, "Beam Weapons: The Strategic Implications for Western Europe," held in Rome, Italy, on November 9, just a month following a similar conference in Bonn, West Germany on October 5, 1983. This second conference was an even greater success than the previous one in Bonn.

This is not to say that everything, especially in the preparations of the conference, went smoothly: numerous opponents of beam weapon anti-missile defense inside and outside Italy attempted to spoil the effort. Such attempts fell flat, nevertheless, because in the short period of one month between the conferences in Bonn and Rome, the central and crucial importance of beam weapons had become dramatically accentuated in the policy and strategy debate within the Alliance, as well as in the relations of the Alliance to Moscow.

Numerous leaks and reports of the contents of the recommendations made by the Fletcher and Thayer Commissions to President Reagan have served to remove many of the doubts and much of the scepticism entertained either by opponents or proponents of beam weapons as to the President's own commitment to pursue implementation of his policy directive of March 23, 1983.

Indeed, a beam weapons ABM arms-race is already in full swing between the U.S. and the USSR, and the only difference between the NATO and Warsaw Pact countries is that this fact is a matter of public debate and discussion in the West, but not in the East.

The Soviet Union, too, showed a lively interest in the Rome conference, and assigned nearly a full dozen representatives to follow the proceedings closely. The results became apparent some days later with the publication of a report on the conference in the official Soviet government newspaper, *Izvestia*. The *Izvestia*

report consisted of a vitriolic outburst of rage against a gathering of military, political, industrial and scientific leaders, which the Soviet government paper portrayed for its readership as "cavemen," featuring *EIR*-founder and candidate for the Democratic Party presidential nomination, Lyndon H. LaRouche, Jr., pushing for President Reagan's policy of "Mutually Assured Survival."

As the reader of the following proceedings might surmise, one reason for *Izvestia's* crude language of rage is to be found in the fact that, in Rome, LaRouche revealed for the first time publicly the substance of his discussions with Soviet representatives on the subject of beam weapon defense over a lengthy period of time. The reader will note that *Izvestia* chose not to mention a word of these revelations.

Those readers who are already familiar with the proceedings of the Bonn conference will also surely notice that considerable conceptual specificity has been contributed by the speakers, some of whom also participated in the conference in Bonn. This particularly applies to the emphasis on the technological and strategic implications of beam weapons for Western Europe. Dr. Tennenbaum presented a series of specific options for application of beam weapon defense in and for Western Europe, and a number of specific recommendations were contributed by Dr. Filipponi.

A central focus of discussion was also NATO's formally still-upheld strategic doctrine of "flexible response". Most of the conference contributors made the point that the present "flexible response" doctrine provides no chance for defense against a Soviet continental offensive against Western Europe. Furthermore, while the fact may grate on the nerves of some, it is nevertheless a fact that "flexible response" is in the process of being dumped as the platform of Alliance



Piers Wolley, Webster Tarpley, Gen. Giulio Marci, Michael Liebig,



Lyndon H. LaRouche, Jr.

strategy in any case. Ironically, the drive to dump "flexible response" is most appropriately identified with the person of designated-NATO General Secretary Lord Peter Carrington.

Thus, the issue squarely faced at the Rome conference, "Beam Weapons: The Strategic Implications for Western Europe," was that of just what strategic doctrine and what policy orientation will replace the decaying "flexible response" doctrine. There are fundamentally only two tendencies of influence in the debate on what policy will replace "flexible response."

The first inevitably favors renunciation of first-use of nuclear weapons, not merely the U.S. strategic arsenal, but also tactical and theater nuclear weapons of the U.S. in Western Europe. There is indeed a widespread tendency in this direction in the NATO bureaucracy and a number of government bureaucracies. Of course, such a policy course would only exacerbate the absurdities of present strategic doctrine, and also completely destroy any chance that the population in the NATO member countries might identify with such a policy with the conviction that it represents their real security.

The second tendency, that of the proponents of beam weapons, insists that beam weapons are not merely a new or new additional weapons system, but rather a change in the military and political-strategic orientation of NATO as a whole.

In these contributions and the discussions "in the halls" of the conference, it has become clear that beam weapon anti-missile defense is both necessary as a "joint NATO project," and must be moved to the level of implementation with immediate urgency.

A program of joint research and development in the range of some several billions of dollars must be established among member nations of NATO, to be applied to research and development efforts on beam

weapons. Each member nation should provide an evaluation of its own strengths and weaknesses, including lists of laboratories, fields of related work ongoing, universities, and industrial facilities available. Such an evaluation would demonstrate the resources still existing in NATO member nations, resources which are there to be mobilized to provide, within the next few years, deployable directed-energy beam weapon defense systems.

Such a "joint NATO project" will not only be an extraordinary and unprecedented effort of collaboration within NATO; it will also represent a political, and strategic rejuvenation of NATO, and open new horizons. Petty squabbling, petty national egoisms, and the Soviet-directed adaptation to the so-called peace movement are to be overcome with this strategic orientation of a fundamentally new quality.

As we noted at the outset, the Rome conference, "Beam Weapons: The Strategic Implications for Western Europe," was a controversial conference. Beam weapons are a controversial issue, because beam weapon defense systems represent the basic drive to get out of the ruts of strategic and political orientation we are presently in. But there has never been any fundamental advance in national security or strategic perspectives anywhere which was not controversial, and, for that reason, we are extremely pleased with the proceedings of the conference we publish here.

The extraordinary attendance at the conference, particularly on the part of the Italian armed forces, industry, scientific and political personalities is a convincing demonstration that this conference was a landmark, where the development of beam weapons for Western Europe took a major step forward.

Why Europe Must Be Involved in Developing Beam Weapons

Fiorella Operto

We open our conference today in Rome on "Beam Weapons and the Implications for Western Europe", seven months after U.S. President Ronald Reagan's announcement on March 23rd of a new American strategic doctrine, a doctrine based on defensive weapons using new physical conceptions.

In the past months, we have heard a wide-ranging debate on the feasibility of these defensive systems, both land- and space-based, and on the correctness of such changes in the U.S. doctrine. All doubts as to the feasibility of beam weapons were put to rest by the two commissions set up by the Reagan administration after March 23, 1983. These commissions are the Defense Technology Study Team (DTST) of the Pentagon, called the Fletcher Commission after former NASA director John C. Fletcher, and the Thayer Commission, named after the undersecretary of Defense. Their task was to study the allocation of the defense budget for different types of weapons.

The commissions' reports, published in the September 5 issue of *Aviation Week and Space Technology*, are very optimistic on the feasibility of short-term development of these weapons systems, after conducting the study on two levels, one long-term (10-15 years) and the other short-term. According to *Aviation Week*, the reports "emphasize the possibility of developing short-wave laser systems, and also weapons systems to be sent into space and X-ray lasers pumped by a small nuclear explosion studied at the Lawrence Livermore Laboratory, California".

The following issue of the same magazine reported that investments into the beam weapons program were planned to reach between 18 and 27 billion dollars per year over a five-year period. This amounts to 200 billion dollars by the end of the century. We are on the right track, but it is not enough.

Only a few weeks ago, the West German daily *Suddeutsche Zeitung* reported that the Soviet Union seems to be investing much more in military fields than is publically admitted or leaked, especially in directed-energy weapons systems. The Soviet Union reportedly has an investment program for beam weapons of around 40 billion dollars per year. That is a crash program which, in two to three years or at most five, will result in a global weapons system.

For this reason, Lyndon LaRouche and Edward Teller insist that the West make a similar effort, not only in the U.S., but also within the Atlantic Alliance. That is why Europe is crucial. This is the reason for the series of conferences organized in Europe. We will not debate here the need to build defensive systems based on directed-energy weapons or its feasibility. The program for the realization of beam weapons is already a reality,

even if discredited members of the Pugwash movement continue to support the opposite idea. People like Kostas Tsipis of MIT, Robert Garwin, or Gen. Graham of High Frontier cannot be taken seriously.

We intend to discuss today the technical, political, economic and scientific foundations necessary to implement a joint crash program for the realization of beam weapons. We want therefore to have a concrete discussion.

For this, we could not wish for more qualified speakers than those who you will hear today. They undoubtedly represent the most qualified group of military and technical experts ever assembled by a private organization.

On the European battlefield today, the allied forces are outnumbered 3 to 1, both in conventional and nuclear terms. The Soviet Union has a marginal but significant superiority not only in respect to Western Europe but to the whole West, and is exploiting this advantage operationally in the Middle East, South East Asia and elsewhere. I do not wish to repeat figures already published in *EIR*. It is enough to note that after a Soviet first strike, the U.S., Europe and Japan would most likely have no significant retaliation capacity. The expected deployment of 100 MX missiles in the U.S. and Pershing missiles in Europe is merely a stop-gap measure to try to regain a retaliation capacity which only slightly reduces the marginal advantage of the Soviet Union.

In this situation, Europe is defenseless. The immediate danger on the NATO central front is represented by increasingly precise Soviet intermediate- and short-range missiles. At the same time, the weight of the warheads is being reduced so as to enable the Soviet Union to destroy all NATO infrastructures without destroying Europe. In addition to the SS-20s that already conform to these new qualities, the Soviets are building SS-21s, SS-22s, and SS-23s.

Western Europe also needs a global anti-missile defense that will be effective against strategic bombers. This is also in the interest of the United States. But while the U.S. has to confront the strategic forces of the Warsaw Pact—that is, the intercontinental ICBM missiles and the submarine-launched SLBM missiles—Europe is faced with the threat of short- and intermediate-range missiles.

We Europeans have more difficulty in defending ourselves than the United States. We have only a few minutes—six to eight—to face the reality of the threat. For this reason, European armed forces are more interested than their American counterpart in developing directed-energy defense systems and an effective program of civil defense.

We have little time and we must mobilize all of our

technical, financial, industrial, and mental resources. There is a deep difference between the West and the USSR: whereas the technological spinoffs of military programs, especially laser technologies, on the civilian economies of the West will be much greater than with the Apollo project, it is uncertain whether this would occur in the Soviet Union. And this is exactly what the Soviet leaders fear—a strengthened leadership in the West.

But at the same time, our weapons, aircraft, ships and tanks are obsolete. They are in no way capable of fighting the war that the Warsaw Pact is preparing to fight. The scenario of tank battles fought with nuclear warheads in the Po Valley will never be fought. The Soviets are developing tank-mounted laser systems capable of intercepting aircraft, missiles and also nuclear bombs shot from cannons. The Soviets are beginning to provide their cruisers with laser weapons for anti-missile defense: very soon the Seaskimmers, Exocets and Otomats will no longer represent an unsolved problem for the Soviet Navy. The same thing can be said of the Soviet Air Force.

In Europe, we must immediately organize our Navy, Air Force and Land Forces on the basis of the new weapons systems we will produce, laser or particle beam defensive systems that we will have to deploy to counter the Soviet threat. Our soldiers will have to enjoy a cultural level similar to that of an engineer or a scientist. Italian and European armed forces must receive from their governments all the funds needed to implement this program. From the standpoint of Europe's defense, we must consider any cuts in the armed forces budget as an obstacle to security. Budget cuts in civilian production, such as those decided upon by central banks or international institutions like the IMF, should likewise be considered as sabotage of effective defense.

European research centers, scientists and technicians of both private and public industry must be mobilized for this effort. Italy has a great scientific tradition. From Leonardo da Vinci to Enrico Fermi, generations of scientists have given humanity new resources. Who, today in Italy, are the workers of research centers that should be mobilized to this end? Note that there is no distinction in scientific research between civil and military research, especially when dealing with development of high technology.

The ENEA laboratory of Frascati is working on nuclear fusion and has already achieved significant results in plasma confinement. This center was created more on the initiative of the state than as a private laboratory, and therefore would be ideal for studying lasers, eximer and free electron lasers, systems that require high-energy electron beams that the center already possesses.

The CISE (Italian Center for Studies and Experiments) of Milan, set up at the end of the 1950s for nuclear energy research, also has a qualified laser research department, especially oriented towards industrial applications.

As for the study of atomic nuclei and elementary par-

ticles, important work is ongoing in Italy at those laboratories equipped with accelerators, like the University of Padua, while a new one is under construction at the University of Catania. Two aspects should be emphasized: (1) In Italy, state funding of scientific research is well below the European average, at less than one percent of the GNP, while it should reach over 5 percent; (2) In these centers, where insufficient funding makes the work inadequate, scientists and researchers fall prey to neutralist, pro-pacifist propaganda, which feeds on the state of neglect in which this field is left. At the CISE, trade union factions have even succeeded in imposing a blockade on the relatively limited military-related research that should be taking place there.

Private industries have, in this context, a great responsibility, especially in the initial phase, since they have men and means to deploy immediately on certain specialized aspects of critical importance to the research program. It is known that the firm MBB is experimenting on a laser mounted on a plane, for anti-missile defense; it is known that American industries as well as shipyards from the advanced sector, including France, are planning laser systems for the anti-missile defense of ships. We therefore expect from the private sector an immediate demonstration of commitment in this direction. Concerning leading industries like Aeritalia, which is well known in Europe for its space-related activities (Spacelab), they could unquestionably play a very important role in the development of directed-energy defensive systems, both tactical and strategic. Many of the electronic industries in Italy are at the vanguard in Europe in aiming systems and target-tracking, using in particular infrared energy.

Today, we demand that Western European governments and armed forces begin, as of tomorrow, to open contacts with the American government and armed forces in order to study how best to develop a coherent cooperation aimed at developing beam weapons systems, declaring at the same time full availability, not only politically, but also for scientific and financial cooperation.

During the conference held last August in Erice, at the Ettore Majorana Institute, Prof. Zichichi, Prof. Teller, Prof. Wood and other scientists from the Lawrence Livermore Laboratory, reiterated to their Soviet counterpart Velikhov, with the approval of the Government of the United States, that the U.S. beam weapons program pertains exclusively to defensive systems; to reinforce this concept they offered the Soviets the possibility of forming a permanent mixed commission for the exchange of information on the status of research on defensive means. Under such pressure, academician Velikhov agreed to forming such a mixed commission. But this did not mean that the Soviet government had accepted the United States' offer: as was made crystal clear by the shooting down of the South Korean civilian airplane (KAL 007) in the skies over Sakalin, the Burma massacre, and the Beirut massacre, the Soviet leadership is today committed to an escalation towards a Cuban missile crisis. A few days

ago, Velikhov himself attacked beam weapons as first strike weapons in the pages of *Izvestia*, reversing his statements of August.

The next months will be decisive: what we can immediately say is that the United States will not capitulate to humiliation by the Soviet Union. The Soviets perceive President Reagan's behavior as similar to that of Henry Kissingers but the United States will not capitulate. From this situation proceeds the war danger.

In this context, and with the aim of providing the human race with a protection against nuclear holocaust, it is necessary that the great scientific and humanist tradition of Italy reemerge. The school of mathematical physics of Pisa, around Riemann's student Enrico Betti and the full generation of Betti's students, such as Dini, Bianchi, Volterra, Beltrami, Ricci-Curbastro, Levi-

Civita and up to Enrico Fermi, made a fundamental contribution to science and to humanity. Thanks to that school, a great Italian aeronautical tradition developed through the use of the airplane for military means. We cannot allow what is left of this school to be destroyed. Our ability to mobilize those precious capabilities will determine whether Italy and Europe can develop a relationship of collaboration with the United States, Japan, the developing nations; or whether those nations will be condemned to Finlandization, to the loss of their national sovereignty and to the death of their once-great culture.

Let us, assembled in this room, commit ourselves to working for a great project which will make the work we now initiate appear great in the eyes of future generations.

Beam Weapons for the Defense of Western Europe

Dr. Jonathan Tennenbaum

The development of laser and particle beam weapons means a total revolution in all spheres of military technology and practice. Within a few years, weapons systems will be developed whose firepower exceeds by several orders of magnitude anything which has been available up to today.

The most obvious implication of this was addressed by President Reagan in his March 23 speech, a speech which in effect launched the beam weapon revolution: within a few years, the nuclear weapon-carrying intercontinental ballistic missile will become obsolete as a strategic offensive weapon. The United States is presently committed to the development of beam weapon systems capable of destroying any long- and medium-range missile launched against the territory of the U.S. and its allies. At the same time—and this will be the main focus of my remarks today—beam weapon technology will afford for the first time the means to defend Western Europe against other forms of nuclear assault, by short-range missiles, cruise missiles, aircraft and even tactical shells.

Since the same systems will be effective against non-nuclear weapons, their development necessitates a profound retooling of all warfighting capabilities, from the strategic level on down to the individual soldier on the battlefield. The artificial distinction between nuclear and conventional capabilities, nurtured until now by the incompetent MAD strategy, will disappear.

The problem of beam weapon defense against long- and medium-range ballistic missiles has been treated in

detail at earlier conferences of the *EIR*, as well as a number of published locations (see in particular the transcript of the October 5, 1983 *EIR* Conference in Bonn, West Germany). I will now merely recall some of the main points of strategic beam weapon defense, and then go into some specific problems associated with the application of beam weapon technologies to the defense of Western Europe.

1. Strategic beam weapon ABM defense will be achieved by an in-depth defense network consisting of a number of mutually complementing "layers" targeting enemy missiles at different points of their trajectories (see Figure 1).

2. A large spectrum of different laser and particle beam technologies are presently under study for strategic ABM defense (see Figure 2). Certain of these technologies are essentially available today; others are in advanced stages of research. The time required to achieve in-depth defense is entirely determined by the magnitude of the development effort. With a crash program of the order of 50 billion dollars a year, partial defenses could be installed within one year, and in-depth defense would be available by the end of the decade.

3. The technology base for first-generation chemical laser weapons exists already; essentially, operational systems can be built starting today. Figure 3 presents the basic parameters for a space-based hydrogen fluoride laser system. One such battle station could destroy up to 300 missiles in the boost phase, during a single 10-minute pass over the missile launch area. Variants on

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1. Strategic beam weapon ABM defense will be achieved by an in-depth defense network consisting of a number of mutually complementing "layers" targeting enemy missiles at different points of their trajectories (see Figure 1).

2. A large spectrum of different laser and particle beam technologies are presently under study for strategic ABM defense (see Figure 2). Certain of these technologies are essentially available today; others are in advanced stages of research. The time required to achieve in-depth defense is entirely determined by the magnitude of the development effort. With a crash program of the order of 50 billion dollars a year, partial defenses could be installed within one year, and in-depth defense would be available by the end of the decade.

3. The technology base for first-generation chemical laser weapons exists already; essentially, operational systems can be built starting today. Figure 3 presents the basic parameters for a space-based hydrogen fluoride laser system. One such battle station could destroy up to 300 missiles in the boost phase, during a single 10-minute pass over the missile launch area. Variants on

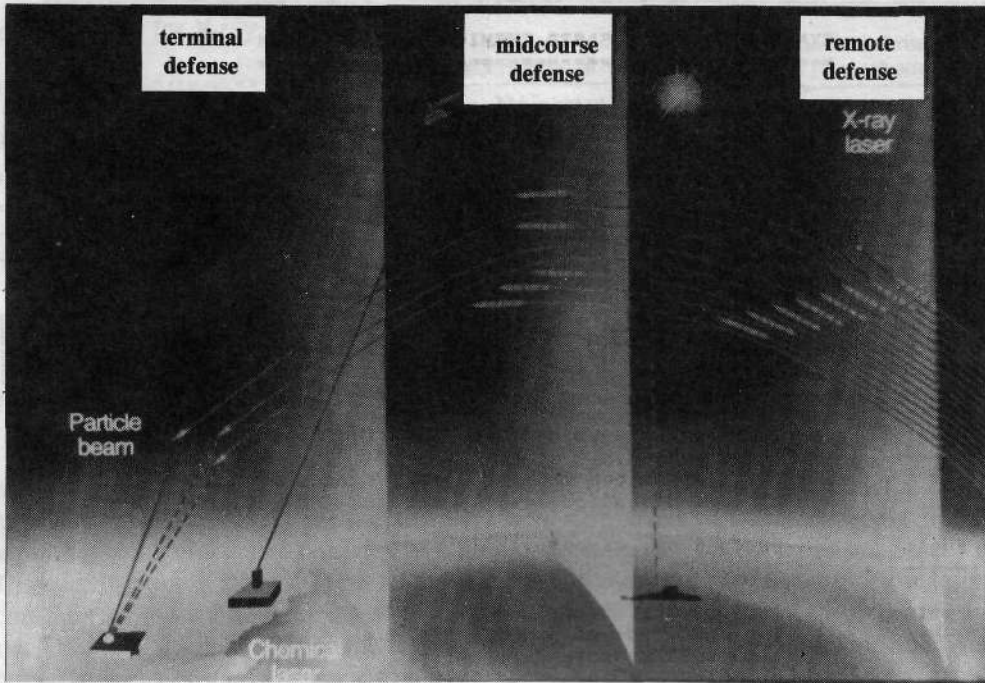
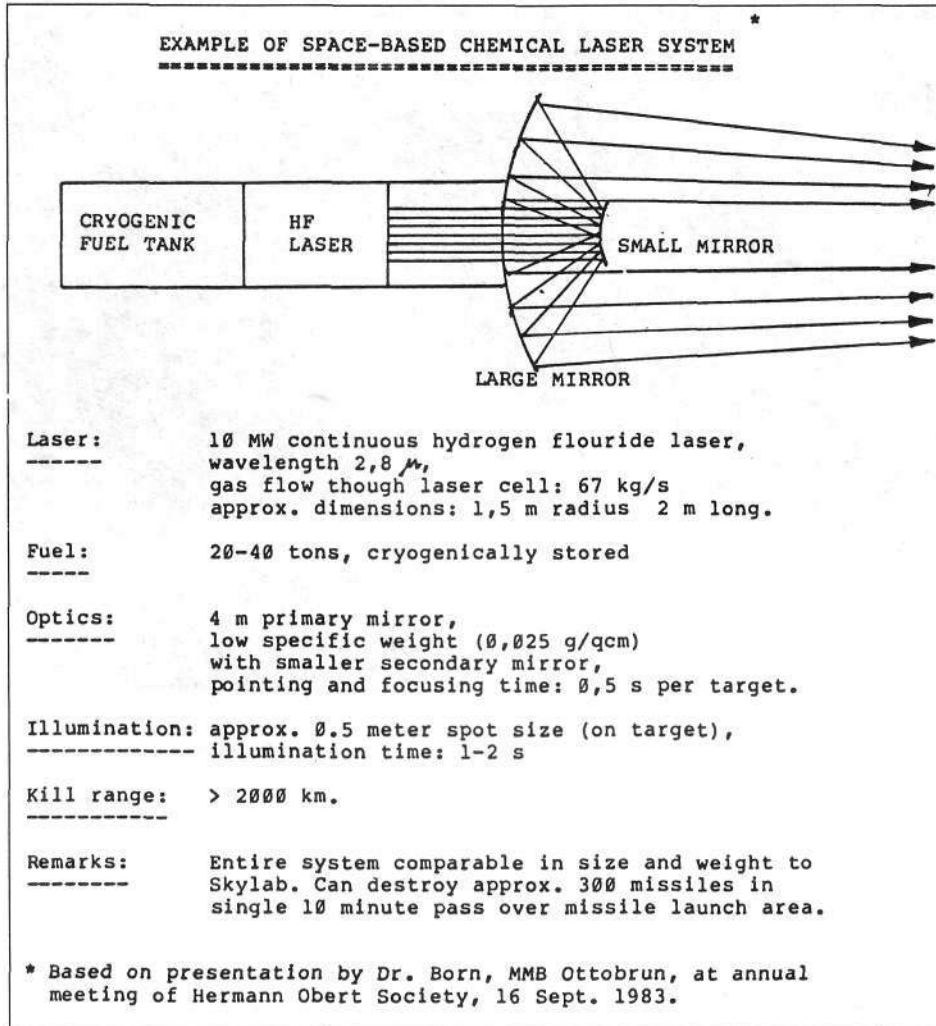


Figure 1

DIRECTED ENERGY WEAPONS	
TECHNOLOGY OPTIONS	
Conventional ABM-Systems	
SAFEGUARD (SPARTAN, SPRINT)	
F-15 ASAT System	
LOADS	
Laser Systems	
Gas Dynamic Lasers	(Airborne Laser Laboratory, tactical weapons programs)
Chemical Lasers	(DARPA programs, Navy SEALITE program)
Krypton Fluoride Laser	(Los Alamos, Rutherford Labs)
Free Electron Laser	(Lawrence Livermore, Stanford, L.U.R.E.)
X-Ray Laser	(Lawrence Livermore)
Particle Beam Systems	
Electron Beams	(ATA Lawrence Livermore, Kirtland AFB)
Ion Beams	(Sandia Labs, major accelerator labs)
Neutral Beams	(White Horse Program Los Alamos)
Muon Beams	(DESERTRON, Lawrence Livermore)
Plasma Beams	(Spheromak Los Alamos, U. of Florida)
Hypervelocity Projectiles	
Magnetic Rail Gun	(tactical weapons programs)
BASING MODES	
Ground-Based	(with/without space-based mirror)
Aircraft-Based	
"Pop-up" Mode	(ballistic trajectory in space)
Orbit-Based	(satellite)

Figure 2

Figure 3



this concept would include ground-based chemical lasers with space-based mirrors for refocussing and pointing the beam on target.

4. Within the next two to five years, beam weapons based on "new physical principles" will become available, whose firepower is far beyond that of chemical lasers. These include the X-ray laser (see Figure 4), which is presently under development in the United States. The feasibility of this laser, which uses a nuclear explosion to produce tremendous pulses of coherent X-rays, was proven in underground tests over the last two years. A single X-ray battle station could carry up to 50 independently pointed lasing rods, powered by a single nuclear charge. The detonation of the system would thereby destroy up to 50 enemy missiles simultaneously. Such X-ray battle stations would be quite small and could be rapidly launched into space in large numbers. It is estimated that the cost of "killing" an enemy missile with the X-ray laser will be less than one-tenth the cost of building the missile. Hence, the defense "saturates" the offense.

5. Other beam weapon technologies based on "new physical principles", now under study, include plasma beams, plasmoids, intense microwave bursts, directed EMP and novel particle beam technologies such as

polarized-fusion-generated neutron beams. It is quite possible that the development of the X-ray laser and these other technologies will converge upon making space a "no man's land" for ballistic missiles. In other words, any Soviet missile which sticks its head out of the atmosphere will be immediately destroyed.

Now let us turn to the problem of European defense. While it is nonsense to separate in strategic terms the defense of Western Europe from that of the U.S., the "on-site" defense of Europe poses certain technological challenges beyond those met by strategic, anti-ICBM defenses. There are two interrelated points to be considered in this connection:

(i) Without the capability of resisting a massive nuclear assault from the Warsaw Pact, there is no on-site defense of Europe. Conventional buildup means little or nothing in a situation where all significant conventional war-fighting capability in Western Europe might be destroyed within the first 10 minutes of the assault. Besides medium-range ballistic missiles, there are hundreds of short-range and cruise missile, aircraft and artillery-delivered warheads assigned by the Warsaw Pact for nuclear assault against Western Europe. We must develop a capability for neutralizing this threat.

(ii) With the advent of fast, "smart" missiles, conven-

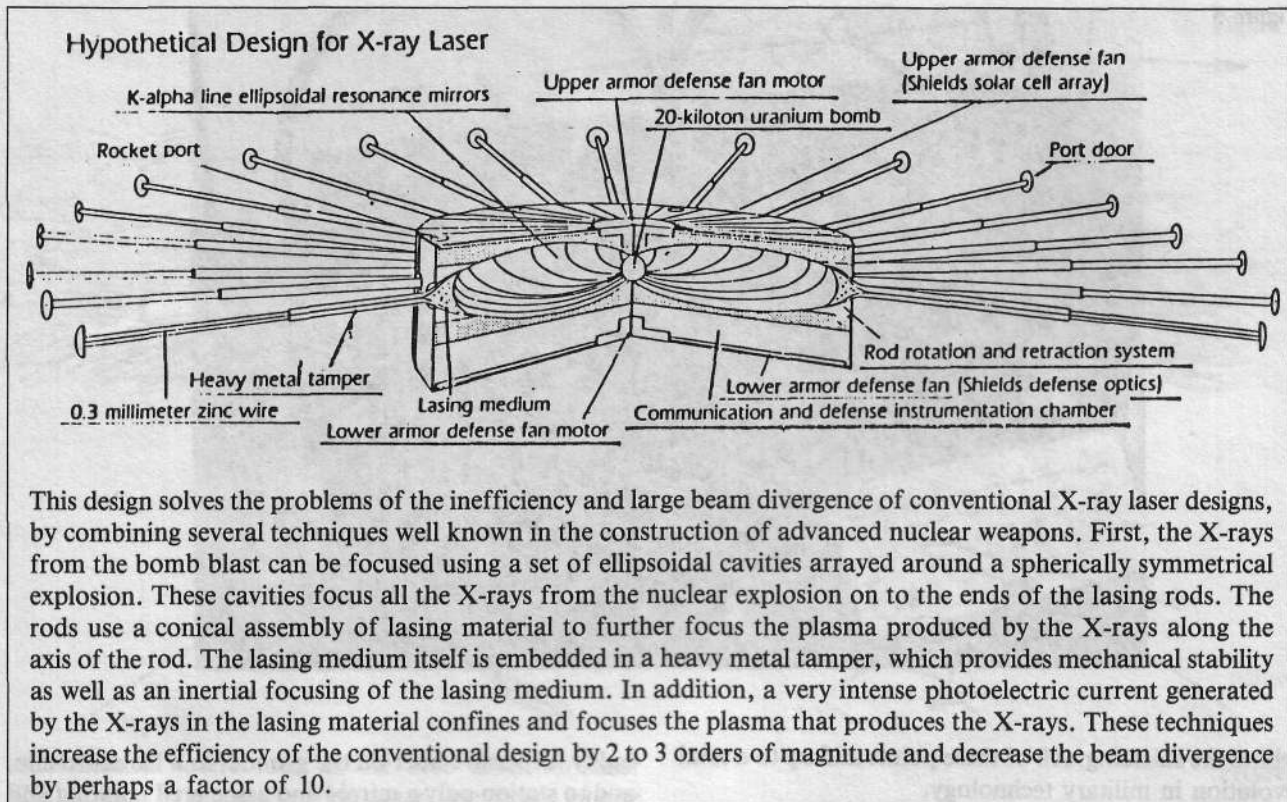


Figure 4

tional aircraft and naval vessels are becoming virtual "sitting ducks" for swift destruction by systems costing tens or hundreds of times less than the assets they destroy.

For reasons which will become clear, the solution of problem (i) subsumes that of problem (ii); hence, I shall concentrate on the technical problems of on-site European defense against nuclear assault. Let us therefore assume that through cooperation between the U.S. and Europe, beam weapon systems will be developed capable of destroying any missile which passes out of the atmosphere. Under that assumption, a number of difficulties must be solved for an effective European defense against endo-atmospheric weapons.

(i) We must deal with a great variety of delivery systems: ground-to-ground and air-to-ground missiles, fighter-bombers, cruise missiles, tactical shells.

(ii) Nuclear warheads can be quite small and light, so there is practically no way to know whether a given delivery vehicle is or is not carrying a nuclear warhead. For this reason, the distinction between nuclear and non-nuclear defense converges on nil.

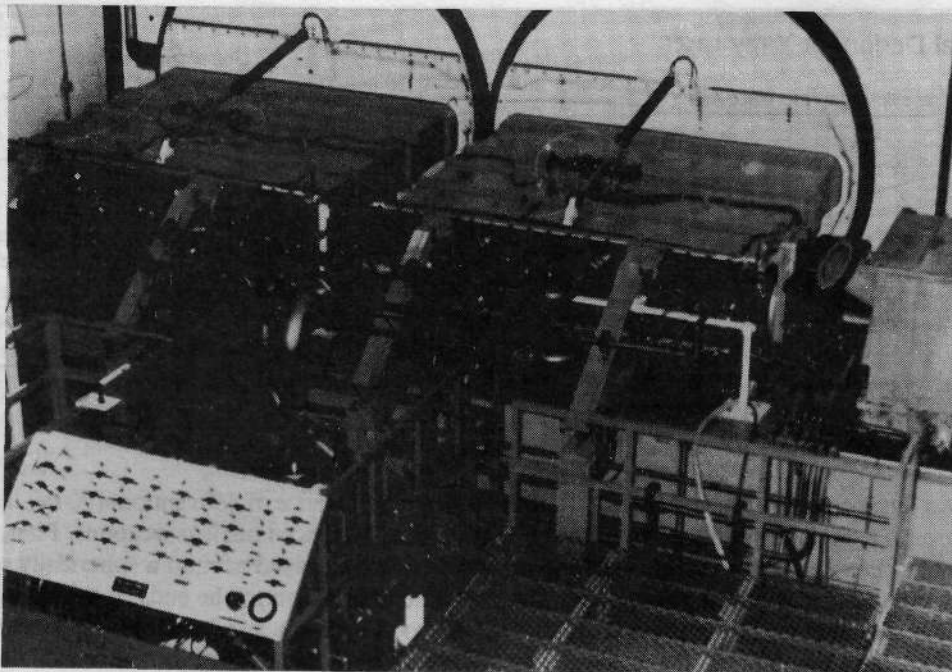
(iii) Typical delivery times for short-range nuclear weapons launched against Western Europe are very small—on the order of 1-5 minutes. Look at a map of Europe and imagine a missile travelling at more than 1 km per second!

(iv) We must be able to deal with massed fire of nuclear and conventional weapons directed at punching a hole through European defenses.

The key to meeting these formidable challenges lies in

the potentially vast increase in firepower inherent in the emerging beam weapon technology. A typical beam weapon delivers its destructive action at about 300,000 km per second—orders of magnitude beyond any weapon available until now. Furthermore, beam weapons, for example lasers, can be aimed with accuracies of mere centimeters at ranges of thousands of kilometers. This goes for propagation in the vacuum of space. While complex propagation problems may reduce performance somewhat in the atmosphere, the accuracy/range equation for endo-atmospheric beam weapons will still be far beyond anything attainable with missiles, bullets and shells. Some types of beam weapons—particularly particle beam weapons—will be capable of rates-of-fire hundreds of times higher than the fastest gattling-gun. When provided with suitable energy supplies, beam weapons never run out of ammunition: the "bullet" is a pulse of energy! Moreover, the destructive action of beam weapons can be "tuned" to the targets in such a way that a relatively infinitesimal quantity of energy, delivered in a suitably high-quality form, might destroy even a "hard" target. One example of this tuning principle is EMP: a very short electromagnetic pulse generated in the upper atmosphere by a nuclear explosion. The energy delivered by the pulse at the surface of the Earth might be a mere fraction of a J/cm²; nevertheless, all unprotected electronic circuitry over a vast area would be instantly knocked out by the pulse. Another example is the peculiar destructive mechanism of particle beams, which might penetrate a meter of heavy shielding, to "poison" in highly selective fashion the heavy explosive elements in a nuclear device

Figure 5



behind the shielding. All of these points add up to a total revolution in military technology.

It would be quite out of the question, at this point, to put forward a definitive R&D program for beam weapon defense of Western Europe. I shall instead briefly mention a few examples of the kinds of technologies which should immediately be studied in the context of European defense. So far, to my knowledge, there has been little or no open discussion of such defensive technology options in Western Europe. The following remarks are intended to help set such discussion into motion.

Chemical Lasers

High-power chemical laser technology has developed to the point where the power levels required to destroy missiles (10 MW or more) can be achieved through essentially routine scale-up of existing systems (see Figure 5 showing the 2.2 MW MIRACL chemical laser built for the U.S. Dept. of Defense). The size and weight of such a system would allow it to be installed in large, cargo-size aircraft. An airborne laser battle station, cruising at an altitude of 10 km, would have a line-of-sight range of about 350 km, which is the order of magnitude required for European defense. Groups of these laser-armed aircraft might patrol continuously over Western Europe in a manner similar to the AWAC radar system. Attacking missiles and aircraft could thereby be shot down over enemy territory, in the early stages of their flight, before they cross the frontier.

One disadvantage of this system, of course, is that the aircraft-based laser would become an attractive target for enemy countermeasures, including massed attack directed toward saturating the laser's ability to defend itself. An alternative scheme would be to station the

bulky, expensive laser on the ground, in a hardened site, and to station only a mirror and associated pointing and tracking systems in the air (see Figure 6). The mirror would refocus and direct the beam coming from the ground onto the target. Several airborne mirror units might be assigned to a single laser ground station, thereby providing redundancy and reducing the overall vulnerability of the system. In addition, the multiplicity of mirrors would increase the rate at which new targets could be engaged: while one mirror directs the beam onto one target, the other mirrors seek out and lock onto new targets. The laser beam would be switched from one mirror to the next in rapid succession. Even if all the mirrors were to be knocked out by countermeasures, new ones could be sent up. The mirror units themselves might be carried by small, automatic unmanned aircraft, including possibly helicopter-type platforms powered from the ground by microwave beams; the latter could be stationed semi-permanently within line-of-sight of the ground-based laser.

High-power chemical lasers might also be installed on large naval vessels. A final focussing mirror, mounted upon a mast 100 meters above sea-level, would have a line-of-sight range of about 35 km—roughly that required to defend naval groups against missiles of the Exocet and more advanced types. Airborne mirrors might extend the range of sea-based laser stations, allowing naval units to contribute to the defense of land areas.

MHD Power Generation

In addition to firepower, the achievement of mobility will be crucial for the effectiveness of beam weapons. For this reason, it is necessary to develop small, compact power sources able to deliver large pulses of power for laser and particle-beam systems. For particle beams and

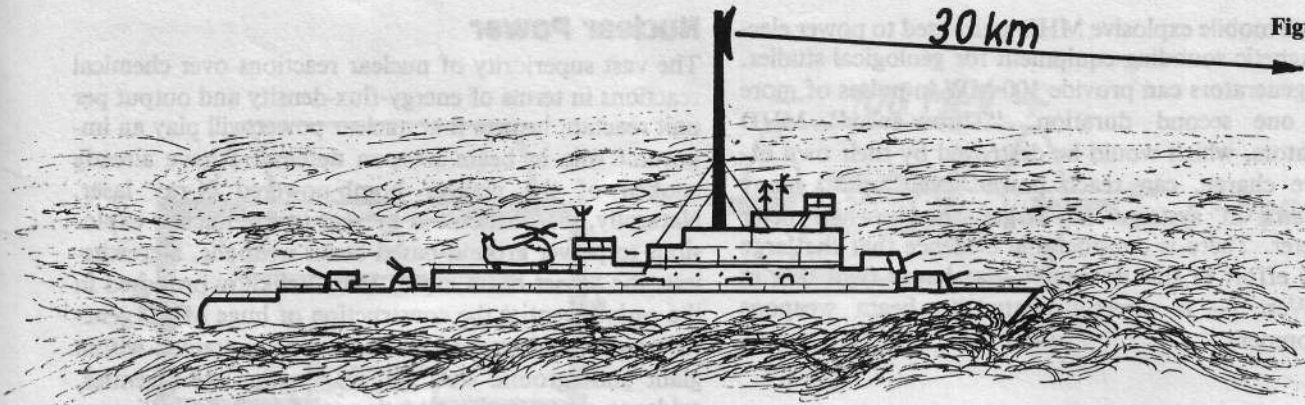


Figure 6

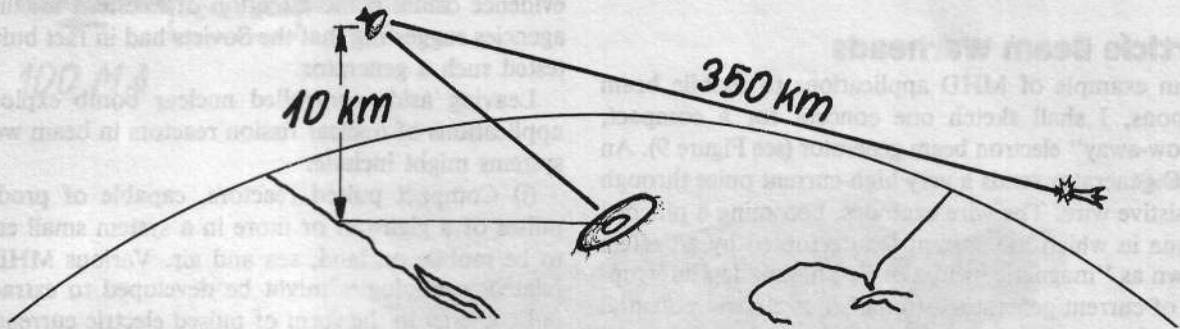


Figure 7

non-chemical lasers such as the Free Electron Laser (FEL) and Krypton Fluoride laser, we need intense pulses of electric current. Thanks to the development of the MHD generator, such power sources are in fact available.

Figure 7 shows the basic principle of the MHD generator. If a plasma (ionized gas) is made to pass across a magnetic field whose field lines run perpendicular to the gas flow, then the so-called Lorentz force induces a separation of positive and negative charges in the plasma, a potential drop which can be exploited to generate an electric current.

Over the last 15 years, the Soviet Union has mounted a large effort for the development of such generators, with special emphasis on those types in which the plasma flow is provided by an explosion ("explosive MHD"), yielding a short, high-current electric pulse. Figure 8

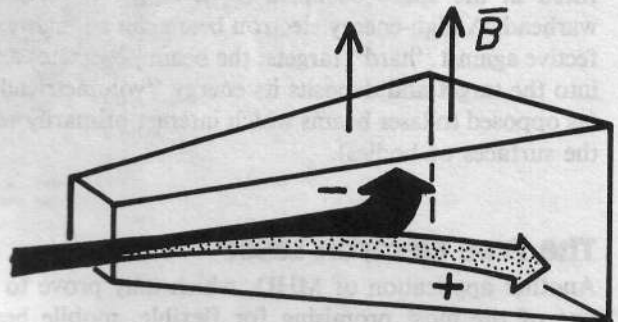
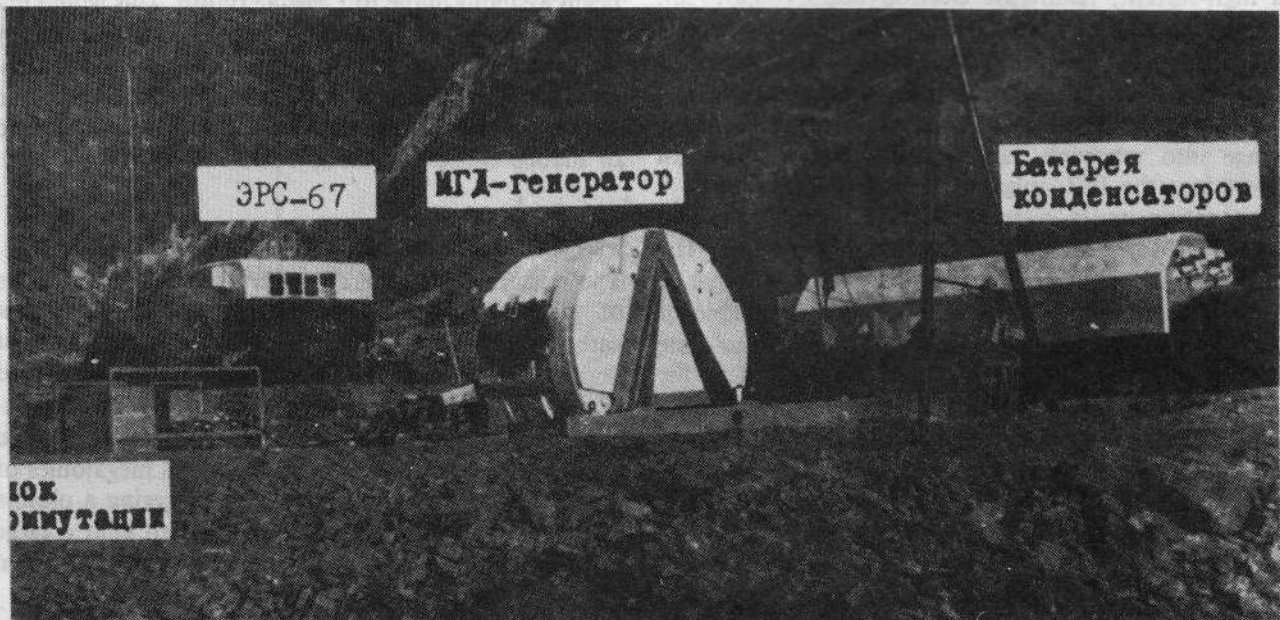


Figure 8



shows a mobile explosive MHD unit, used to power electromagnetic sounding equipment for geological studies. Such generators can provide 100 MW in pulses of more than one second duration. "Throw-away" MHD generators, which would be destroyed by their own explosive charge, can reach power levels up to many gigawatts in systems no larger than a half-meter diameter. There is considerable evidence that the large Soviet effort in this domain — far larger than that in the West — is directly related to beam weapons development.

Particle Beam Warheads

As an example of MHD applications to mobile beam weapons, I shall sketch one concept for a compact, "throw-away" electron beam generator (see Figure 9). An MHD generator sends a very high-current pulse through a resistive wire. The wire explodes, becoming a pinched plasma in which the current is interrupted by an effect known as "magnetic insulation". This sudden interruption of current generates a tremendous electric potential across the chamber containing the wire, a potential which in turn accelerates an electron beam to energies of 100 million electron volts or more. The entire system, including the MHD generator and explosive fuel, might be fitted in the space occupied by a large conventional warhead. A high-energy electron beam can be highly effective against "hard" targets; the beam penetrates deep into the target and deposits its energy "volumetrically" (as opposed to laser beams which interact primarily with the surfaces of bodies).

The Free Electron Laser

Another application of MHD, which may prove to be one of the most promising for flexible, mobile beam weapons, is the possibility of using MHD pulses to power free electron lasers. The FEL generates its coherent light beam by inducing collective oscillations in a high-current, relativistic electron beam (Figure 10). Besides its high efficiency (theoretically 30% or more), the FEL has the unique capability of continuous tunability over a wide range of output frequencies—ideally all the way from far infrared, through the visible range into ultraviolet and possibly even X-rays. In operation, the FEL might be tuned to optimize both propagation under given atmospheric conditions, and optimal absorption and destruction on the target. The effect thereby produced could be compared with that of a classical belcanto singer, whose voice is capable of shattering a wineglass at 10 meters, while at the same time hardly perturbing a candle flame held near the mouth of the singer!

The FEL also means a tremendous potential improvement in active laser radar capabilities. Backscattered light from variably-tuned FELs can be analysed to determine the nature and vulnerabilities of prospective targets.

Nuclear Power

The vast superiority of nuclear reactions over chemical reactions in terms of energy-flux-density and output per unit reactant insures that nuclear power will play an important role in beam weapon defense. I have already spoken of the nuclear bomb-powered X-ray laser. Naturally, it is difficult at present to use nuclear explosions to power ground-based beam weapons. Nevertheless, the Soviet beam expert E.P. Velikhov proposed in the early seventies the construction of huge MHD generators powered by nuclear explosions contained within giant underground steel spheres. In the late seventies, evidence came to the attention of Western intelligence agencies suggesting that the Soviets had in fact built and tested such a generator.

Leaving aside controlled nuclear bomb explosions, applications of nuclear fission reactors in beam weapon systems might include:

(i) Compact pulsed reactors, capable of producing pulses of a gigawatt or more in a system small enough to be mobile on land, sea and air. Various MHD and related technologies might be developed to extract the pulse energy in the form of pulsed electric current. The Soviets, it will be remembered, are already employing small fission reactors (not merely isotope batteries) to power some of their radar reconnaissance satellites.

(ii) It may be possible to integrate nuclear reactors in "closed-circuit" chemical laser weapons. The reaction-products from the laser cells would be recycled using nuclear process-heat to power the necessary endothermic reactions. This would allow land- and sea-based chemical lasers to operate continuously without refueling. For this purpose, reactor power levels of the order of 200 MW (continuous thermal output) would be necessary.

(iii) There exist options for pumping lasers directly by nuclear reactors.

Recent breakthroughs in laser fusion, including the use of spin-polarized fuels and new, short wavelength lasers, indicate that laser-induced fusion microexplosions might be made available as power sources for beam weapons in the foreseeable future. This would imply a tremendous quantum jump in available energy densities. In brief, energy densities otherwise only reached in self-destroying systems such as the bomb-powered X-ray laser, would become available for ground-based or mobile endoatmospheric beam weapons.

Plasma Generation of Microwaves

The possibility of generating very high-intensity bursts of microwaves in plasmas opens up a whole new category of beam weapons. In one scheme, a plasma of about one meter diameter is confined by a magnetic field in an apparatus similar to those used for controlled fusion experiments (see Figure 11). The plasma is then energized by microwaves, storing several megajoules of energy in the plasma structure. By triggering a plasma instability, the plasma can be induced to emit a large portion (perhaps 40%) of the stored energy in the form

Figure 9

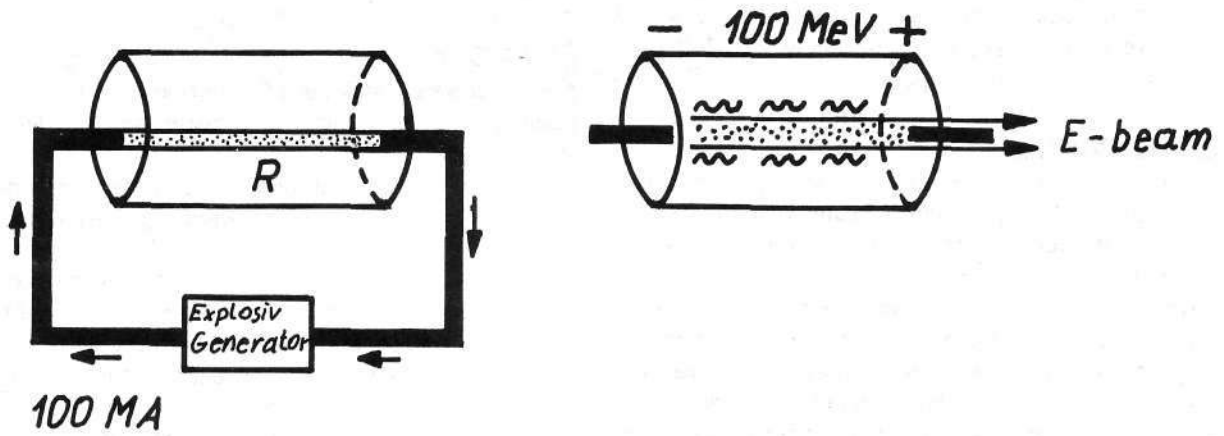


Figure 10

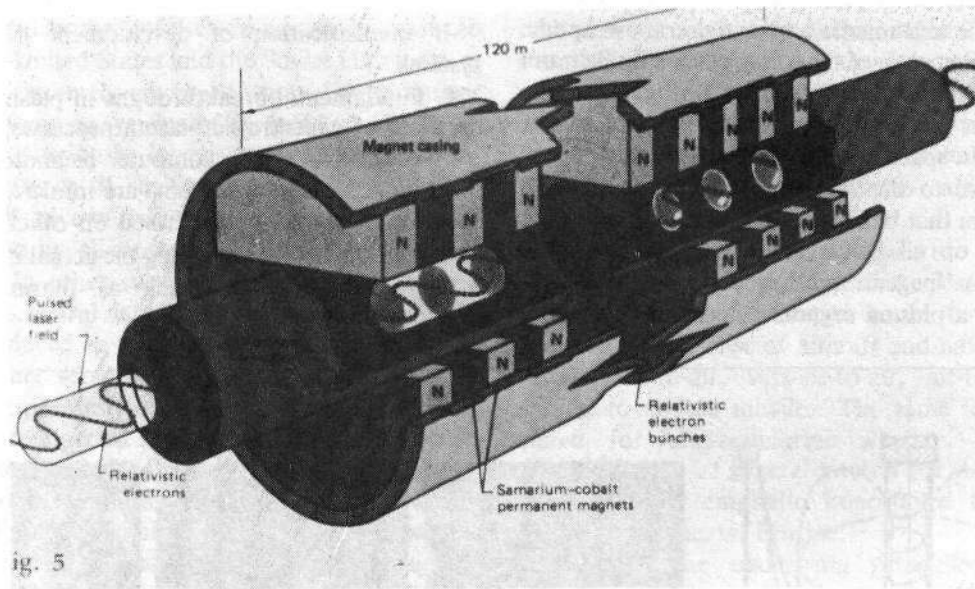
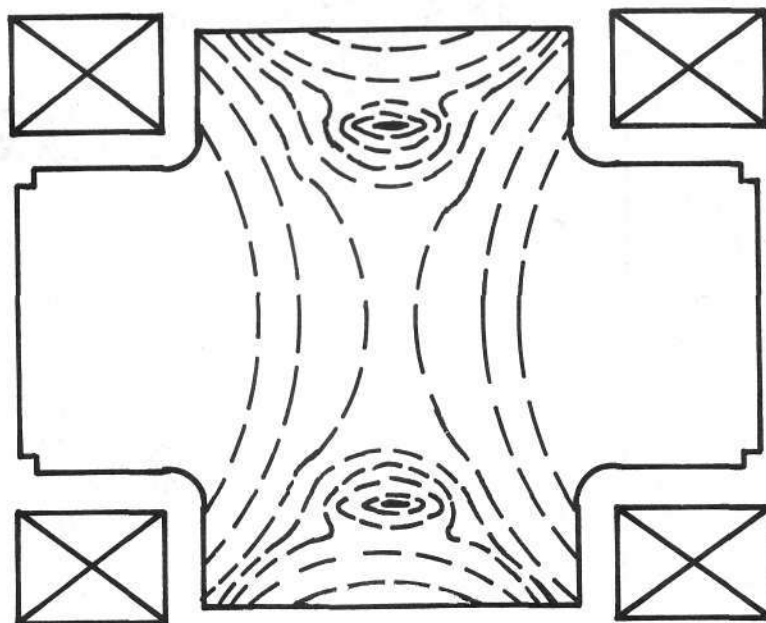


fig. 5

Figure 11



of a very short (10-100 ns) pulse of microwaves. The power of the emitted microwave beam might reach more than 100 terawatts. The propagation properties of microwave beams make them especially well suited as endoatmospheric beam weapons.

Plasma Physics

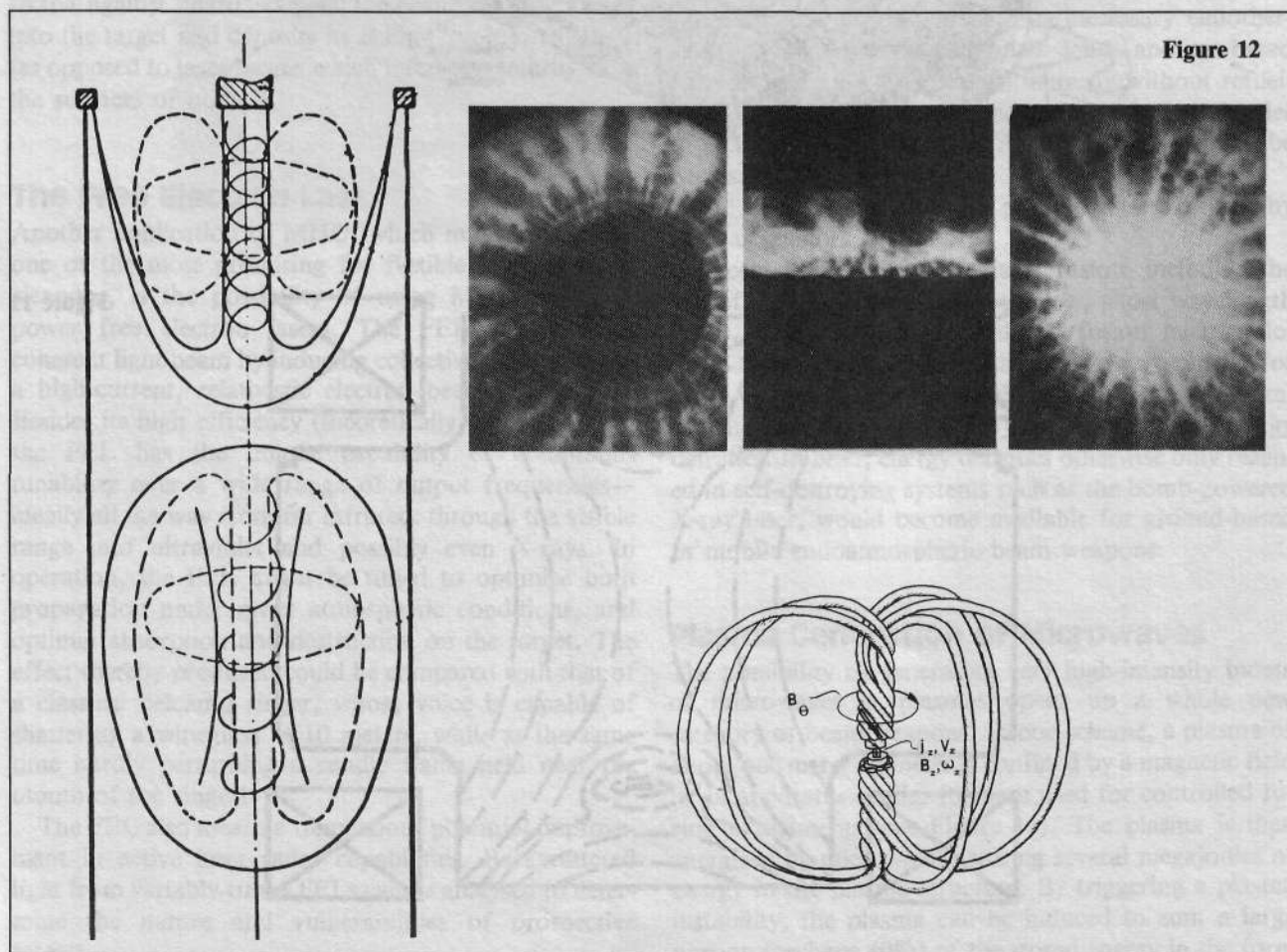
It should be clear from the preceding examples, that the problem of developing powerful beam weapons for the defense of Western Europe is closely linked with the development of plasma physics. Whether in the MHD generator, as a source of electron, microwave beams or coherent X-rays (as in the X-ray laser), or as the medium for the production of fusion energy, plasmas are characterized by their very high ratio of usable free energy. Self-confining plasma structures (see Figure 12) can store the equivalent of several grams of TNT in plasmoids of 1/2 cm diameter. Such plasmoids are presently under study as possible anti-missile and anti-aircraft weapons. Plasma vortex filaments, of the sort predicted by Beltrami in the 19th century and observed by Bostick, are also crucial for understanding the propagation properties of particle beams in space and in the atmosphere. It is absolutely essential to the success of a European beam weapon program that basic research into plasma physics be stepped up on all fronts. The focus of this basic research must be "negentropic" processes—that is, processes in which a plasma organizes itself in such a way

that its potential is increased for doing useful forms of physical work.

Proposals

Let me close by making a few proposals for European research and development of beam weapon defenses. We require:

1. Immediate development of large, high-power chemical lasers with the aim toward rapid deployment in Europe.
2. Crash programs for the development of the Free Electron Laser, the explosive MHD generator and other nuclear and non-nuclear power sources for beam weapons, and new forms of beam weapons such as plasma microwave generators.
3. Intensified theoretical and experimental study of self-induced transparency (and related propagation effects) and of resonance destruction of targets.
4. Intensification of development of laser radar systems.
5. Fundamental breakthroughs in plasma physics, in the field of negentropic plasma processes.
6. Breakthroughs in computer technology. Our present digital computer systems are intolerably "stupid"; new forms of computers based on other principles of organization, more resembling the actual mode of action of physical processes (such as plasmas) must be developed.



President Reagan's New Strategic Doctrine as the Alternative to Soviet Thermonuclear Confrontation

Lyndon H. LaRouche, Jr.

On the 23rd of March this year, President Ronald Reagan informed the world that the United States had adopted a fundamental change in strategic doctrine. Since that date, the United States has been committed to ending more than twenty years of global thermonuclear terror, and to accomplish this by means of developing ballistic-missile-defense systems based on "new physical principles."

As Dr. Jonathan Tennenbaum will indicate some leading technical features of the new weapons-systems to you, both the United States and the Soviet Union are at present in an extremely advanced state of development of defensive weapons-systems of greater firepower than any weapons previously in existence. In some cases, working prototypes of such systems have been tested and proven effective in field tests, to the point that their production and installation could proceed more or less immediately. In other cases, these systems have been proven by successful laboratory demonstrations, and could be produced as early as between two and five years. Still other versions are proven to be feasible in terms of principles tested in laboratories, and could be deployed within a period ranging from five to ten years.

Whether such defensive systems could or could not assure us total destruction of all the missiles of a full-scale Soviet strategic assault, for example, is a debatable but useless question. We have the prospect of being able to destroy up to 95% or more of intercontinental and intermediate-range thermonuclear ballistic missiles, a ratio which is sufficient to make thermonuclear strategic bombardment technologically obsolete as a primary mode of heavy-artillery bombardment for general warfare. Weapons firing approximately 10,000 kilowatts of pulsed power, for example, hitting their targets at the speed of light, fire at approximately 100,000 times the speed of a ballistic missile's warhead and 6,000 times or more the speed of the fastest anti-missile rocket. This is the greatest firepower of any weapons-system conceived, which enables us to destroy missiles at a fraction of the cost of producing and launching such missiles.

Under conditions of crash-program development, modelled on the accomplishments of the U.S.A.'s NASA work of the 1960s, both the United States and the Soviet Union could have in place a first generation of such new defensive-weapons systems by as early as 1987 or 1988. The best estimate of the cost of deploying such a strategic system is approximately \$200 billions 1983 U.S. dollars, a fraction of the present annual military budget of either of the two superpowers. Whether five years or ten years is required to put such a first genera-

tion system into place is essentially a matter of the rate at which expenditures are made.

The deployment of such systems would replace the present U.S. nuclear umbrella over Europe, providing Europe for the first time a genuine defense against the destructive force of a Soviet thermonuclear-missile attack, a quality of defense not possible with thermonuclear deterrence. Additionally, nations such as Italy and the Federal Republic of Germany, which are prohibited from developing nuclear arsenals of their own, should be encouraged to develop national ballistic-missile-defense systems of their own, especially as what are called point-defense and terminal defense, ground-based laser and particle-beam systems to defend logistical and population-centers against incoming warheads.

The new defensive technologies are not limited to defense against strategic missiles. Laser and related technologies now developed could be manufactured presently for defense of aircraft and naval vessels from tactical air-to-air, surface-to-air, air-to-surface, and surface-to-surface missiles. The same technologies are suited for anti-submarine warfare. These tactical capabilities are of general interest for the air and naval arms, and of emphatic importance for defense of Western continental Europe.

Although the underlying principles of the new strategic and tactical defensive weapons-systems are elementary to contemporary physics, the deployment of such technologies means a sweeping and profound transformation in the design of the arms and conduct of warfare, a change more profound and sweeping than the revolution in warfare which France's Lazare Carnot accomplished around the pivot of improved types of massed fire by mobile field artillery. For the practice of military science, and related matters of defense-policies of governments, the emergence of these new technologies obliges us to return to the kinds of general-staff organization and direction of military arms and logistical capabilities which we associate with the tradition of Carnot and Scharnhorst.

These new technologies, this new strategic doctrine of the United States, means not only an end in sight for more than twenty years of Nuclear Deterrence. It means also an end to toleration of the doctrines and institutions of so-called "systems analysis" which the U.S. Rand Corporation and Robert S. McNamara's neo-malthusian "whiz kids" introduced to the U.S.A. and NATO during the 1960s. It means a return to policies of high rates of technological advancement in military science, and a return to strategic policies based on high

rates of technological growth in the agriculture, industry and basic economic infrastructure of nations. It means a reversal of twenty years of growing influence of irrationalism over the cultures and governments of nations, a reversal from cultural pessimism to cultural optimism, a reversal energized by a resurgence of technological optimism, of scientific optimism.

Those, broadly, are the technological features of the new U.S. strategic doctrine and the effects of that doctrine as it is put into general practice. These are matters which will be treated in other aspects of today's conference presentations and discussions. I turn our attention now to the principal topics of my report to you today. From this point onward, I shall situate the new U.S. strategic doctrine in terms of reference of a rapid escalation toward global thermonuclear confrontation now in progress between the Soviet Union and the United States.

To begin, I refer your attention once again to the President's March 23rd address, and also to public statements issued by U.S. Defense Secretary Caspar Weinberger during the weeks immediately following the President's first announcement of the new doctrine. I focus your attention on the fact that the President and Secretary Weinberger offered to enter into negotiations with the Soviet government, to the purpose of jointly developing such anti-missile defensive systems, and to jointly proceed toward taking-down the thermonuclear-missile arsenals terrifying the world today. As you know, the Soviet government abruptly and rudely rejected those offers of negotiation. Then, beginning August of this year, the Soviet government proceeded to unleash a global pattern of escalating strategic confrontations with the United States, an escalation whose purpose is to bring about a new thermonuclear confrontation with the United States during the first six months of 1984.

In this connection, the time has come for me to report certain facts which have never been made public anywhere up to the moment I speak to you now. Insofar as I either know or suspect what I know to be a secret or privileged matter of the Government of the United States, I shall of course say nothing here. However, what I am at liberty to report now will be sufficient to inform you of what European military professionals and other policy-makers need to know as allies of my country.

From February 1982 through the middle of April 1983, I was engaged in continuing private discussions with representatives of the Soviet Union on the subject of the strategic doctrine which the President announced on March 23rd of this year. These discussions were conducted within the limits of the law of the United States pertaining to such discussions by private citizens. They were, however, conducted with full knowledge of appropriate official channels, and the Soviet representatives involved conducted their part of the discussions with full understanding of the arrangement. The limited purpose of these discussions was to explore conceptions with a view to reporting my findings to appropriate

channels of my government, and to ensure at the same time that were my recommendations accepted by my government, the Soviet government would have competent knowledge of the intent and implications of the policy being proposed.

Despite the private and informal nature of these fact-finding discussions, the President's announcement of March 23rd caused those discussions to secure the highest strategic importance in Moscow, and to become a significant factor in the unfolding of the global strategic situation after that date. At the same time, these discussions placed me in a situation of special advantage for understanding exactly what the Soviet government was thinking, and its purpose in rejecting the President's offer of negotiations under the new strategic doctrine. As you shall soon learn, this has bearing on the deeper, global implications of recent events in Grenada, and probable new developments about to erupt in various parts of our planet.

Background to the Discussions

Before turning to those discussions themselves, I must give briefly some of the background to those discussions, and some explanation of the connection between my own formulation of the new U.S. strategic doctrine, at a February 1982 Washington, D.C. seminar, and the President's promulgation of his own version of that doctrine this past March 23rd.

There is nothing new in the proposal for development of Ballistic Missile Defense systems based on lasers and other "new physical principles." Such a proposal first appeared in the published literature in the first, 1962, edition of Marshall V.D. Sokolovski's famous *Soviet Military Strategy*. From 1962 until the present date, the development of such strategic anti-missile systems has been the center of Soviet war-winning strategy against the West, and is a crucial feature of present Soviet anti-missile deployments in preparation for a thermonuclear showdown as early as the first six months of 1984. This subject was debated in proceedings of the famous Pugwash Conference throughout the 1960s. The Soviet commitment to development of such systems was being escalated at the time of the 1972 ABM treaty by Henry A. Kissinger—a fact of which Kissinger, but not the U.S. Congress, had knowledge at the time the President and Congress ratified the treaty in the Autumn of 1972. During 1977, the issue of Soviet deployment of such anti-missile capabilities was made public by retired Major-General George Keegan, with whom some of my associates collaborated at that time, when our experts confirmed General Keegan's views on this matter. During that year, I issued my own first public declaration in support of U.S. development of such systems, for which both I and General Keegan were roundly denounced in NATO circles by the London International Institute for Strategic Studies.

What was new in my February 1982 proposal for a new U.S. strategic doctrine was not simply my proposal

that both superpowers cooperate in developing and deploying ballistic-missile-defense based on the so-called "new physical principles." It was not the development of laser and particle-beam weapons-systems which was original in my proposals. What was new was my building around such weapons-systems a comprehensive strategic doctrine proposed to replace and destroy the existing doctrines of Nuclear Deterrence, and to seek to accomplish this by agreement to that effect by both superpowers.

My design for such a new strategic doctrine was completed during the final quarter of 1981, but was withheld from public circulation until my associates and I presented this at a Washington, D.C. seminar we organized for this purpose during February of 1982. We arranged to hold a seminar to be attended by both Warsaw Pact representatives and representatives of the U.S. intelligence, military, and scientific communities. This proposal, once delivered, gained rapid interest and support within influential military and scientific circles in the United States. Exemplary is the formal support it obtained from some retired military professionals during May 1982, and the success of some scientific circles in urging Dr. Edward Teller to become a leading spokesman for such a policy, as may be remembered from Dr. Teller's public address to the Washington D.C. National Press Club on 25 October 1982. Dr. Teller's campaign brought the matter to public controversy in the leading international news-media, and was influential in prompting the adoption of the leading military features of the doctrine by President Reagan.

It is to be emphasized that not all of my design has been adopted by the U.S. government. The kernel of the proposed doctrine was adopted by the President and Secretary Weinberger, as their public statements attest. Also, the President and Secretary Weinberger have made strenuous efforts, as has Dr. Teller, to persuade the Soviet government to cooperate in implementing the new alternative to thermonuclear nightmare. Recently, Dr. Teller has declared publicly his agreement with the proposal to conduct a U.S. economic mobilization like that of 1939-1943, which is also an original feature of my February 1982 proposal; however, I doubt that this is yet adopted by the majority of President Reagan's administration—at least, not for 1984. It is clearly the case that President Reagan has not yet accepted my proposal that general international monetary reform must be an integral feature of the new strategic doctrine, although I continue to hope that events will soon convince my government of the need for this change from present policies.

Nonetheless, all of these elements, both those elements presently adopted by my government, and those not adopted so far, were integral features of my discussions with Soviet representatives, and as elements of those discussions significantly shaped Soviet perceptions of the new strategic doctrine as a whole. From the Soviet vantage-point, the question is whether U.S. policy is dominated by the influence of both Britain's Lord Peter Carrington and Henry Kissinger as well as

the Harriman-Rockefeller faction of the Democratic Party, or whether the opposing currents which I typify will tend to prevail in shaping U.S. strategic outlooks. They assume that if the current which I typify prevails, that the entirety of the policies I propose must tend to be influential in U.S. policy, and they are depending upon my leading opponents, such as Kissinger and Walter Mondale, to prevent the influence of my kind of thinking from becoming as influential as Moscow feared it had become on March 23rd. It has been communicated to me from Moscow, that the highest level of the Soviet political command currently views me as Soviet public enemy number one—whether other Soviet circles view me in a more kindly light, I do not know.

The Soviet Discussions

In any case, the February 1982 seminar led immediately to my direct and indirect discussions with Soviet representatives in various locations. I informed relevant persons in my government of these proceedings, and informed Soviet representatives of this fact. So matters proceeded from February 1982 into the middle of April 1983.

Soviet interest covered two overlapping areas. The first was my proposed strategic doctrine itself. Second, it had come to Soviet attention that my own quarterly forecasts for the U.S. economy, regularly published since November 1979, had proven consistently accurate, whereas their own, as well as those of the U.S. Government and private forecasting services generally, had been usually wrong, and overall absurd when compared with results. As it turned out, it was Soviet belief that my economic analysis of the proposed strategic doctrine was correct which played a leading part in Moscow's summary rejection of the President's proposal of March 23rd.

The policy discussed with Soviet representatives had the following leading features.

First, the combined Soviet and NATO deployment of what are called Forward Nuclear Defense capabilities, including the Soviet SS-20s and Pershing II's, had brought the world to the brink of policies of "launch on warning." Whenever one superpower places a first-strike nuclear-assault capability within ten minutes or less of targets in the opposing superpower's homeland, the threatened power is forced to adopt a policy of launching a full-scale thermonuclear barrage against the homeland of the other at the first indication of launch of forward-based systems. Since Defense Secretary James Schlesinger's announcements of 1974 and Henry A. Kissinger's proposing the NATO double-track policy in 1979, the world has been moving at an accelerating rate toward a condition of "launch on warning." At present, the Soviet command is virtually at a state of launch-on-warning, and will be at that state by the end of the present year. When the Soviet forces take indicated countermeasures targetting the U.S. homeland, and also deploy SS-20s to eliminate the U.S. nuclear

submarine force in a first-strike assault, the United States will be forced to launch on warning. This trend was already clear before the end of 1981, and it was also clear that 1983-1984 would be the point at which such a state would emerge.

The point has been reached, at which any continuation of the Nuclear Deterrence doctrine means a high probability for thermonuclear war during the months ahead.

Second, in face of this indicated problem, the present form of strategic-arms-limitation negotiations are worse than useless. These strategic-arms-limitation negotiations are premised on negotiating the level of thermonuclear-deterrent capabilities. Therefore, such negotiations perpetuate the very doctrine of Nuclear Deterrence which is now leading us into thermonuclear general warfare. Such negotiations, involving agreements on which the Soviet command will merely continue to cheat as it has over the past ten years, increase the danger of thermonuclear war by fostering deluded confidence in Nuclear Deterrence.

Third, peace movements today are a more foolish delusion than those of 1912-1914 and 1938-1939.

In the United States, the Nuclear Freeze movement is sponsored by such names as McGeorge Bundy, Robert S. McNamara, and others of those who guided the United States into the prolonged and useless war in Vietnam. From such "pacifists," those of us who lived through the 1960s expect nothing but the worst. Our suspicions are well-founded. This same band of peaceniks around Robert S. McNamara have been consistently the leading proponents, together with Henry A. Kissinger, for the most ferocious measures of economic austerity against developing nations generally, policies whose results in terms of famine, epidemics, and social upheavals prompted by misery, presently have literally genocidal effects among some developing nations, and threaten similar effects upon many more. Moreover, these advocates of Nuclear Freeze are leading proponents of local, colonialist wars against developing nations, and are otherwise supporters of various separatist and other "integrist" insurgencies against existing nations of both the developing sector and Europe. The leading cause for strategic instability and war worldwide is the spread of destabilizations throughout Latin America, Africa, the Middle East, the Asian Subcontinent, and Southeast Asia. Not only are leaders of the Nuclear Freeze movement the most savage in their actions against developing nations, but their policies for ruin of developing nations are the policies which lead us directly toward general warfare. This is a purported moral insurgency against warfare led by immoral wretches who support genocidal measures against entire peoples and whose actions can have no result but to lead to general warfare.

At the same time, the peace movement in Western Europe and North America today is either directly orchestrated by the Soviet Union or is conducted by circles acting in collaboration with the Soviet Union. Whether dupes in the West intend this result or not, their actions

are in support of a Soviet psychological-warfare effort to weaken the political will of the West in preparation for a thermonuclear confrontation now being mobilized globally by Moscow. The peace movement encourages Moscow to proceed with that confrontation, and thus lures Moscow into those actions which will provoke desperation reactions from a U.S. population which will never permit itself to be subjugated to Soviet global hegemony.

These three sets of facts must lead us to the following general conclusion. *First*, to avoid immediate threats of escalation toward general thermonuclear warfare, we must immediately scrap the Nuclear Deterrence doctrine. The implementation of the President's strategic doctrine will not by itself give us durable peace. It will merely delay the prospect of general warfare by ten to fifteen years, a precious ten to fifteen years, during which to deal with the political causes of the continuing adversary relationship between the superpowers. *Second*, the delay in danger of general warfare must be used to develop the non-military political solutions which change fundamentally the definition of the strategic interests of the powers in a way promoting durable peace.

So far, since the President's address of March 23rd, it has been the first of these two points which has attracted most public discussion. The argument against the President's doctrine has been that the new doctrine destroys the doctrine of Nuclear Deterrence. That is true, of course. The objectors argue that it is the Nuclear Deterrence doctrine which has given us peace, and which is the guarantor of continued peace, an objection which is factually absurd. It is Nuclear Deterrence which has brought the world to the present brink of thermonuclear war.

In my discussions with Soviet representatives, and in other connections, I have been advantaged by the work of my associates and myself in promoting development of controlled thermonuclear fusion technologies. Through this work over the past decade, we were advantaged to know more or less the scientific-technological capabilities of the respective superpowers as those capabilities bear on developing the new kinds of defensive weapons-systems. At the close of 1981, as I shaped the new strategic doctrine, I was advantaged to know that both superpowers had reached the point that both could rapidly develop and deploy the kinds of defensive weapons-systems proposed. Thus, the time had been reached to proceed with destruction of the Nuclear Deterrence policy. It was not only necessary to do so; the time had come when it was practical to do so. No leading Soviet specialist could privately disagree with me on this point.

Some primitive but effective weapons-systems of this new class are more or less immediately available today. Others are provably within reach within two to ten years of development. Therefore, if both superpowers agreed to such a change in strategic doctrine, the agenda of negotiations between them could be profoundly changed. We could scrap the existing form of arms-limitation discussions, and negotiate a new agenda featuring beam-

weapons development, and under that agenda negotiate the systematic take-down of the thermonuclear arsenals. Even though several years would be required actually to emplace the new systems in significant degree, the fact that agreement were reached to do so would color the approach to every immediate question in the realm of armaments and strategic issues generally.

The limitation of the causes of warfare requires two broad categories of political cooperation between the two superpowers.

The first must be cooperation in creating a new global economic order among states, consistent in effect with the 1967 Encyclical *Populorum Progressio*. We must replace the bankrupt and oppressive Bretton Woods system with a new global monetary order supplying low-cost long-term credit for technology-transfer to developing nations. This will foster a capital-goods export-boom in industrialized nations, while increasing the productive powers of labor among developing nations. If the United States and the Soviet Union can join to effect what Dr. Teller has called the "common aims of mankind" in this way, that cooperation will contribute greatly to removing the political causes of war.

Such an implementation of *Populorum Progressio* is not to be considered as something merely added onto the strategic doctrine. The new technologies required for defensive weapons-systems represent the greatest technological advance in the productive powers of labor in human existence to date. The mere \$200 billions spent over five years or so, by each superpower in developing the new defensive systems, will be paid back to humanity many times over even during the remaining years of this century, through great advances in the productive powers of labor occurring as these technologies spill over into civilian economy through improved machine-tools and other categories of capital-goods production.

The second general area of political cooperation must be in the areas of exploration and human colonization of nearby space. This has more direct bearing on the technologies employed in the new defensive weapons-systems, and has profound implications for changing the way in which the human race views itself within our universe.

With or without beam-weapons, the progress of science today is more or less entirely centered around a revolution in our knowledge of the laws of our universe emerging from three overlapping areas of fundamental research. The first is a revolution in plasma physics fostered by advances toward mastery of controlled thermonuclear fusion as the future primary energy-source of human existence. The second, somewhat distinct but closely related to the first, is progress in development of high-powered modes of coherent radiation of beams of energy, for which the development of the so-called free-electron laser is one of the most interesting programs presently under way. The third area is a new approach to the mastery of living processes, for which microbiotechnology is an important but ultimately relatively minor feature. If one were obliged to identify some single area of human activity in which all three elements

perform an interdependent function, one must choose man's colonization of the Moon and Mars as exemplary.

Thermonuclear fusion means the potential for accelerating space-vessels toward relativistic speeds in powered interplanetary flight. This is indispensable for manned exploration of our solar system, and for later manned flights beyond our solar system; it is also indispensable for significant human travel from Earth-orbit to orbital positions above human colonies on Mars. This energy-source is indispensable for creating and maintaining an Earth-like artificial environment in large, inhabited chambers on the Moon or Mars. The power of the high-powered laser and particle-beam is the indispensable tool by which to capture energy produced by thermonuclear fusion for work in space or work done by human colonies on the Moon or Mars. For extended space-travel and for colonies on the Moon or Mars, we must produce the food travellers and colonists require, a task which recommends progress in biotechnology to us.

As to the Creator's purpose in beckoning us into space, we must wait until we reach there and discover what tasks await us. We do know at present that certain scientific researches can not be completed except in exploration of space, researches with important benefits for man on Earth. It is sufficient for us to know that it is our destiny to explore and colonize nearby space, and that we shall do so during the course of the next century, provided mankind does not collapse into a new dark age of neo-malthusian irrationalism and bestiality now rampantly insurgent about us today. We also know that as we look upward to these impending tasks of space-exploration, men and women are uplifted in spirit to think of man as man in Creation, and to slip less easily into the condition of beast-men squabbling over patches of mud in the swamps of Earthly life.

We also know in advance, as the limited but important accomplishments of NASA show us already, that the mustering of science to solve the problems of man's exploration of space will increase greatly our power to master problems confronting us on Earth.

To build the commitments upon which a durable peace can be established, we must adopt goals and tasks which reach deep into the coming century. First, we must establish universal justice on earth for all nations and peoples, a work which must include the establishment of economic justice for all nations. This will require approximately two generations before the grandchildren of today's youth in the poorest nations can be lifted to a state of self-sufficient equality. This is a task spanning approximately fifty years. At the same time, over a longer span, we must take steps toward man's colonization of nearby space, a task which aids us in looking dimly but realistically about a century ahead. If the two superpowers, and other nations as well, can adopt such common aims for mankind, the habits acquired over fifty to a hundred years of collaboration may be reasonably expected to bring forth a new level of culture upon our planet. Mankind always requires large tasks which lift the individual's and nation's

perception of self-interest above the petty and hedonistic squabbles of venal individuals.

It has been and continues to be my proposal that the negotiation of agreement on the new strategic doctrine be the foundation for developing agreement for collaboration on these two larger tasks of the next hundred years.

My discussion of these matters with Soviet representatives affirmed what I know by other means. The Soviet government has no serious technical disagreement with any part of the strategic package I have outlined. The military doctrine I have proposed is consistent, in terms of military science, with what the Soviet school of Marshal Sokolovski has adopted as its war-winning doctrine for approximately twenty years. The feasibility of the new species of strategic defensive weapons-systems is well-known to Soviet circles including Academician Velikhov and Major-General Basov; the Soviet Union is now working at the utmost speed to develop and deploy such weapons-systems. As a matter of economic science, the Soviet Union would not argue against the desirability of technology-transfer to developing nations—despite the fact that the Soviet Union has been the bitterest and most stubborn opponent of permitting developing nations to employ nuclear energy. Nor does the Soviet Union oppose scientific cooperation in development of thermonuclear fusion and space exploration. Also, the Soviet Union would agree that the technologies involved in beam-weapons systems, if spilled over into the economy, would prompt a significant rise in the productive powers of labor.

Nonetheless, the Soviet government rudely, even violently rejected the President's offer of March 23rd. During the middle of April, "the highest political level" ordered a termination of discussions with me, and has subsequently classed me as the embodiment and leader of the "right wing" in the United States. However, before breaking-off discussions, Soviet channels reported to me the Soviet government's reasons for rejecting the President's offer.

"Yes, the doctrine would work as you suggest," it was conceded, "but we will never accept it." The explanation for Soviet rejection of even non-committal exploratory negotiations was given precisely and point by point.

1. "The Soviet Union will never negotiate strategic policy with an adversary. The United States is our adversary."

2. "The Soviet Union will never negotiate with President Reagan."

This accurate. It has been consistent Soviet policy never to negotiate with President Reagan since the early Summer of 1982, at the time Yuri Andropov was formally adopted as successor to Leonid Brezhnev. The Soviet Union has made purely cosmetic offers of willingness to negotiate with the U.S.A., including back-channel discussions with Henry A. Kissinger, but has never made any effort at substantive negotiations with President Reagan. It is waiting to negotiate with one of President Reagan's seven pro-Nuclear Freeze opponents

among leading candidates for the Democratic Presidential nomination. The Soviet leadership has so far adopted the view that to negotiate substantive matters with the President might give Ronald Reagan's reelection campaign the kind of "statesmanlike" credibility with voters which Richard Nixon gained from the 1972 SALT and ABM treaty negotiations.

3. "The economic spill-overs of these weapons technologies will work as you propose. However, because of our economic bottlenecks, your country would leap ahead of us, and that we will never tolerate."

The great fear in Moscow is that the United States might resume the relative economic strength it enjoyed during the middle of the 1960s. It is implied that under those conditions, the United States could afford to outrun the Soviet Union in military spending—whereas, at present, the Soviet economy is outspending the U.S. on military accounts. The Soviet leadership is fearful of the United States' potential to pull off an economic miracle of recovery through aid of a high-technology crash-program like the early NASA effort.

Evaluation of the Soviet Rejection

I interpreted the orders to break off discussions with me as crucial evidence of Soviet intentions to move quickly toward a thermonuclear confrontation with the United States, and so informed my friends in the U.S. Government. I forecast that the Soviets would begin to escalate a count-down toward a thermonuclear confrontation as early as August 1983. Events proved my Spring 1983 forecast of such a Soviet posture to be correct; the count-down toward thermonuclear confrontation began during August, and has been escalating in various sections of the globe ever since.

The general evidence I had available in making and submitting this evaluation was essentially as follows.

The Soviet leadership knew that as long as superpower negotiations were defined within the setting of Nuclear Deterrence doctrines, that a new missiles-crisis before the end of 1983 was probable, and virtually certain by Spring of 1984. Unless some qualitatively new dimension in superpower negotiations occurred before December 1983, a chain-reaction of measures and counter-measures leading to a global missiles-crisis as early as 1984 was almost unstoppable. Therefore, in flatly rejecting even exploratory negotiations on the basis offered by the President, the Soviets had manifestly committed themselves to an early thermonuclear confrontation. They had not merely accepted such a confrontation; they were consciously seeking its occurrence.

Additionally, there are several leading reasons the Soviet leadership views 1984 as the year of opportunity for probable Soviet success in accomplishing an historically decisive humiliation of the United States.

1. *The Shift in the Military Balance.* The Soviet Union is presently ahead of the United States in strategic military capabilities. This margin of Soviet advantage is such that the Soviet Union has more or less the accep-

table military margin of calculated risk to launch a preemptive thermonuclear assault upon the United States, unless the U.S. combined missile-forces were on full alert-status and the U.S. operating under a launch under attack policy.

The key point on which to concentrate to understand this Soviet advantage is the relevance of the Soviet SS-20 as an anti-submarine-warfare weapon, which is the principal military function of such a weapon within the Soviet missile-arsenal taken as a whole. Simply, the nominal margin of U.S. missile-strength vis-a-vis the Soviet forces is the submarine-launched second-strike arsenal. If this element of U.S. capabilities were eliminated, the relatively aged U.S. land-based missile-arsenal is at a quantitative and qualitative disadvantage under conditions of Soviet first-strike assault. I won't go through the basic calculations, which military professionals here know at least as well as I do. I emphasize only that by aid of modern tracking and trailing of the handful for NATO nuclear submarines actually deployed at any one time, and the ability to locate those submarines' position within a range of 10,000 to 100,000 square kilometers, MIRVed SS-20s are an ideal counter-force capability against the nuclear-submarine fleet of the Atlantic Alliance, and are not the portion of the Soviet arsenal indicated for deployment against Western Europe.

2. Except for Southeast Asia, Korea, and Japan, the entirety of the section of the world economy under rule of the Bretton Woods monetary institutions is presently gripped by a deepening economic depression, which tends to prevent the United States and Western Europe from mobilizing to restore the military balance with Soviet forces.

The October 1983 Quarterly LaRouche-Riemann Forecast for the U.S. economy identifies the evidence proving that the reported 1983 economic upswing in the U.S. is a statistical hoax concocted chiefly by officials at the Federal Reserve System. Relative to 1982 levels, the physical output of the U.S. economy contracted by about 4% during 1983. The Federal Reserve System's fraudulent report turned a decline in the value of U.S. steel output into a 36% reported rise. It overstated auto production for the first three quarters of 1983 by 24%; it understated the inflation rate by 300%; and reported the worst U.S. food-production since World War II as a "record year" for agriculture. Meanwhile, the U.S. Bureau of Labor Statistics dropped more than 1 millions unemployed from the labor-force, to create the appearance of a decline in unemployment-rates, and understated the gross cumulative level of unemployment by 100%. I do not suggest that President Reagan was in any way responsible for this hoax; I have evidence that the President was in fact the chief intended victim of this deliberate fraud by the Federal Reserve, as part of a scheme to induce him to tolerate policies and conditions he would not have tolerated had he been given honest figures.

The U.S. economy itself has been on a roller-coaster of ups and downs, overall downward, since Volcker in-

roduced his policies in October 1979. This, aggravated by the collapse of world trade under pressure of IMF conditionalities, has plunged the world into an economic depression resembling that of 1929-1931.

3. Since the Summer of 1982, the world has been walking along the crumbling brink of a 1931-style international financial collapse. Contrary to news-media accounts, the heart of this problem is not the approximately \$750 billions foreign debt of the developing nations, but the nearly \$10 trillions of combined public and private debt of the industrialized nations. We are presently at the brink of a chain-reaction collapse in North America and Western Europe, which would wipe out between \$1 and \$2 trillions of paper values in the first wave of a 1931-style collapse.

In the effort to delay by perhaps a quarter or two more the threatened collapse in the northern hemisphere, bankers maddened by desperation are ferociously looting the developing nations, creating in Latin America and elsewhere an economic, social and political crisis of profound and ominously immediate strategic implications. The looting of the developing sector today, under the guidance of Lord Peter Carrington's firm, Kissinger Associates, Inc., is taking on the dimensions of horror of the Nazi looting of occupied countries during World War II.

4. The political system of alliances centered upon the United States is crumbling. The Middle East and North Africa are being destroyed. The Subcontinent of Asia is now in the opening phase of a massive and potentially generalized destabilization through deployments of various integrist insurgencies steered from Iran and Europe. The Philippines, Indonesia, and Malaysia are presently either undergoing destabilization, or are targetted for early eruptions of Islamic Fundamentalist destabilization. The Republic of Korea is now massively targetted for early destabilization and possible outbreak of renewed war. Latin America's relationship to the United States is being demolished under the influence of the policies of Lord Carrington's Kissinger Associates, Inc. Within Western Europe and North America, the political will of governments and the alliance itself are being ruined by the combined impact of Middle Europe treachery and the Nuclear Freeze and Peace movements.

5. The United States itself is presently seized by the inward-looking delusions traditionally associated with a presidential-election campaign, in which the majority of the President's opponents are variously Democratic and Republican liberals, massively supported by the news-media generally, who openly proclaim Andropov the peace-lover and Reagan the war-monger.

These five conditions add up to what must be seen from Moscow as an historic strategic opportunity. For, if President Reagan were reelected, beginning November 1984, he would without doubt unleash a massive economic mobilization modelled significantly on the precedent of the 1939-1943 period, to the effect that the Soviet strategic advantage of the present moment would rapidly evaporate. This present period of twelve months ahead is a period of the United States' greatest strategic

vulnerability to a Soviet thermonuclear confrontation which has ever existed or is likely to exist in the foreseeable future. If the United States is sharply confronted now, some in Moscow delude themselves, it will lack the political will to do anything but capitulate massively to Soviet demands. It might be imagined in Moscow, therefore, that through such concessions the Soviet Union could secure for itself a proverbial thousand years of global military hegemony.

I shall not present here the extent of the intelligence which I had at my disposal this past April and May when I assembled my evaluation of Soviet response to the President's March 23rd address. It is irrelevant, for our purposes here, to examine the reasons which, during April of this year, prompted me to select August as the point that the Soviet escalation toward thermonuclear confrontation would begin.

The point to be made is that there is no hope of avoiding thermonuclear war during the period ahead unless the Soviet leadership enters into negotiations of the sort implied in the President's March 23rd announcement. It should also be clear that the Soviet leadership will continue to reject such negotiations as long as Moscow believes that it might gain an historic strategic political victory in the course of the ongoing escalation toward confrontation now in progress.

Since April of this year, and most emphatically since this past August, there has been a raging battle within leading Washington circles between those forces which agree more or less with my evaluation and those opposing forces which accept the strategic assessment offered variously by Henry Kissinger and leading circles of the U.S. State Department. Up until the terrorist killing of nearly 300 U.S. Marines in Beirut and the murder of Prime Minister Bishop of Grenada, those who more or less shared my view were in a decided minority. Now, the correlation of factional forces has shifted significantly in favor of my strategic estimation. I do not know whether those who share my general outlook are presently a majority, but the actions taken in Grenada show that the present direction of developments in Washington, and among the American citizens on the streets around the nation, is shifting toward my view.

The essential problem is that for a long time, since the middle of the 1960s, the United States has ceased to be a politically credible strategic force in the eyes of other nations and its own citizenry. The Kissinger years and the disaster of David Rockefeller's Carter Administration bequeathed a disaster to the Reagan Administration, a disaster which the President did not begin to significantly reverse until his address of March 23rd. Now, by his stubborn defense of the principle of sovereignty of nations in the case of Lebanon, and his assistance to the threatened state of the Caribbean in the case of the Soviet military coup d'état in Grenada, the President has begun to win back the lost credibility of the U.S. Government from among growing portions of the citizenry and among portions of the United States' allies. Congressmen long stubborn opponents of the President on these issues are beginning to capitulate

begrudgingly to the President under pressures from an angry citizenry in the streets.

With this renewed credibility, and a clearer picture of Soviet posture and intentions than ever before, it is probable that the President will proceed in the direction of actions which have the twofold effect of causing the Soviet government to rethink the matter of thermonuclear confrontation, and to consider more seriously the offer which the President made on March 23rd. The best way to persuade the Soviet Union to accept the new strategic doctrine of the United States is to act to implement that doctrine now.

Let those of us more fully aware of the dangers threatening us act now to influence the governments of Western Europe and North America to enter jointly into a cooperative economic mobilization modelled upon the U.S. mobilization of 1939-1943, and in that context re-equip and retrain our defensive forces with the new kind of strategic and tactical defensive technologies we are discussing here today.

Is it still possible to avoid thermonuclear war? No one on earth knows. Perhaps it is already too late, but we have no available course of action but to try. Nothing can possibly succeed except negotiations on the basis of the strategic doctrine of March 23rd. As we say in the vernacular of the United States, "It's our best shot; let's put everything we have into making that effort succeed."

A New Policy for the Alliance

I conclude this presentation with one final point, a point most appropriate made among those assembled on the historic soil of Italy, the Italy of St. Ambrose, St. Augustine, Dante Alighieri, Cardinal Nicholas of Cusa, and Leonardo da Vinci.

I do not think that what I have to say in this final point can be rightly described in any way as chauvinistic. I have demonstrated often enough my love for the nations and people of the Arab world, of victimized Iran, of Pakistan, of India, of Africa, and Southeast Asia, my concern for the well-being of the people of China, and my affectionate respect for the people and achievements of Japan. Yet, that love and respect does not permit me to blind myself to the special and precious contributions to civilization of Western European Judeo-Christian culture.

Amid the ruins of the evil which St. Augustine rightly recognized in the Roman Empire, and the sordid degeneracy of Byzantium, on this soil of Italy there arose around the persons of St. Ambrose and St. Augustine, an affirmation of the highest truths of both Apostolic Christianity and of the Judaism of Moses and Philo of Alexandria. Expressed in that precious Latin term, *filioque*, was a conception of the Creator, of the lawful ordering of our universe, and of man's place in that universe under the Creator. Although much evil has invaded and sometimes ruled European nations since St. Augustine lived, the heritage of St. Augustine

and the *filioque* has produced repeatedly new insurgencies of the noblest qualities of which mortal man has shown himself capable.

When the work of Charlemagne was destroyed, in the evil dark age of the fourteenth century, around the political heirs of the great Dante, there arose, centered in Italy during the fifteenth century, the greatest efflorescence of culture which has ever occurred at any known time in any place. Centered around the powerful personality of the great scientist and lawgiver Cardinal Nicholas of Cusa, there arose a new conception of political society, of universal natural law, and an eruption of scientific progress unlike anything the world has seen since. Those of us who share that heritage—in Western Europe, and in the Americas, are both the sons and daughters of St. Augustine and of Cusa's circle of collaborators. Today, as that great heritage seems almost at the verge of extinction in Italy, as in most of Europe and North America, it is our duty to remember who we are, what heritage we represent, and to act as those great predecessors of ours would have acted were they alive to act today.

In the great struggle between East and West which grips the world today, we should think back to the city of Florence in 1439, when the friends of Cusa met with the representatives of the Paleologues to the purpose of uniting East and West under the common banner of the *filioque*. Poor Russia, brutalized by the worst of Byzantium and emerging from the long dark centuries of the Mongol Yoke, then served as the chief bastion for the destruction of the great ecumenical agreement made at Florence. Despite the efforts of Russia's great heroes of attempted "Westernization," the dark grip of the brutalized past grips most of that nation still today.

Among Soviet spokesmen I have met, there are many who are likeable individuals, toward whom as individuals I could wish nothing but good. Yet, even in those cases, as I look deep into their minds, there is a great emptiness there, a lack of that ennobled conception of man's divine potentialities which we should associate with the tradition of *filioque* in Western culture. Whether they profess to be religious or not, they are gripped by a dark, paganist kind of mysticism, which makes them sophisticated and rational on the surface but confused savages underneath. They are incapable of that special quality of love for mankind which those of us share who walk in the tradition of Augustine, Dante, and Cusa.

This presents us with a twofold problem, a twofold task. Our first task is that of reaffirming and defending that precious spark of continuity we associate with the tradition of Augustine. We must do that, not only for ourselves, not only for our nations, for our posterity, but for the sake of all humanity. Imagine the fate of a world in which this spark were lost to humanity! That we could not tolerate at any price. Yet, while defending this heritage against such brutish mysticisms as we encounter as commonplace in the East, we must extend to the people of the East that same ecumenical policy

which the Council of Florence displayed more than five hundred years ago.

Nations, in and of themselves, are not worth defending at any price. What must be defended is that heritage, a heritage embodied in those nations and peoples which further it. If we are moral, if we share that heritage efficiently, the ugly work of warfare, when unavoidable, must never be anything but a necessary, incidental means to that higher purpose.

We are immediately the bearers of more than 2,500 years of republican tradition since Solon of Athens, of nearly 2,000 years of the heritage of Philo of Alexandria and Apostolic Christianity, the tradition most efficiently identified by the single Latin word, *filioque*. If that precious tradition, that spark, were to be removed from among nations, mankind as a whole would degenerate into the moral condition of beasts.

Our mortal lives are as nothing in themselves. We are born. We live briefly. We die. The memories of pleasures enjoyed in the flesh die in our graves with us. It is only that of our mortal existence which outlives us, which serves a higher, continuing purpose, which makes our having lived worth while. The conception of man and society implicit in that Latin word, *filioque*, expresses everything which coincides with such a higher purpose, the only quality which makes the entire human species worth saving. To defend that principle, the higher purpose of our individual existence, there is no price too high if that price must be paid.

Let us rise above the conception of military alliances which our nations have practiced during the past decades. Let us become nations united to a common higher purpose, the purpose expressed by our precious tradition. Let us do what is necessary to fulfill the requirements of that purpose. With that, I believe that I am understood by most here. I need say no more.

Questions and Answers

Question: *I am an engineering student at the Rome University, and I find an enormous resistance and difficulty in introducing and discussing such ideas as the creativity of the human mind, the capability of man to dominate the environment and everything happening around him. If we look at the leading debates, such as the exploitation of solar energy and so on, we can understand how pessimism dominates man and his future. I think that it is very difficult to push for human progress, because our environment is poisoned by ideas which have very little to do with civilian progress. I would like to know: how is it possible to intervene and change this environment, which is only aimed at energy-saving, and not to looking for new sources through technological development.*

LaRouche: This is an old problem, not a new problem. It was invented, to the best of our knowledge of the classics, by the son of the pagan goddess Sibilla, Dionysius. We have permitted our children in the univer-

sities to be converted into members of a dionysian cult, who are literally being deployed, under the influence of this counterculture idea, to destroy the cities and assassinate their parents. This is called terrorism.

What is required is something that I am criticized for very much by people who don't understand Socrates; people think that Socrates was a very polite fellow. They forget the fact that the terrorists, or the Greenies, or the environmentalists, since the beginning of the 4th century B.C., had him murdered. So, he was not a very pleasant fellow to them.

If you understand the Platonic method, the method of Socrates, which is the only method being applied to these cases, you understand that it was essentially polemical; it destroyed the credibility of personalities and of ideas and policies against which it was directed.

The problem is that the people who are pushing, in the name of science, the ideas of the Club of Rome, are variously evil, stupid and wrong. Until you realize and say to students, and others, that these people are evil, stupid and wrong, and incompetent, the students aren't going to listen to you. If you say, "Well let's debate; there's some flaw in their argument"—there's no flaw in their argument, their ideas are evil, their ideas are incompetent. But we have allowed corrupt news media, corrupt professors, to destroy civilization from within the West because there are not enough people who are nasty like me, who follow the tradition of Socrates, and who seek to destroy the reputations, influence and ideas of evil people. That's one thing that students understand. I have done a lot of work with students in the past; you cannot win students over with intellectual cowardice.

Question: *I listened with great attention to what you said because I am studying the field of developing new weapons. We saw that while technology developed rapidly through history, the structures which could have used them remained in absolute stagnation. We reached therefore a situation today in which we have on the one side instruments which should be used, and on the other side, the people who should use them belong to structures which are affected by an absolute obsolescence. ... I wanted to ask Mr. LaRouche whether you think that with the introduction of this new technology it will be possible to put an end to the absolute obsolescence affecting almost all political structures on Earth.*

LaRouche: People often talk about weapons systems: if we build such and such a system, or if we use such and such a technology, will people behave nicely? Those idiots! The question is a practical question: what is the character of the people who rule society? It is not a question of technology as such, it is not a question of systems, but a question of who rules. The question today is that people who believe in the tradition of Western civilization, republican tradition which is identical, we must rule. Otherwise, nothing is any good. Unless the humanist tradition, as the 15th century of Italy had defined the word humanism properly; unless those forces rule, nothing good will happen. This technology is merely a necessary step.

It is not accidental that those of us who represent that

humanist tradition are the proponents of this technology. Therefore, as we fight to bring this technology to power, with its implications, we must make sure that the power over the nation passes into the hands of those who are humanists, and that we educate our children in society to the point that, instead of turning out the existentialists who destroy themselves and their whole nation because they believe in no future, instead of turning out irrational hedonists, we produce from among our young true citizens who represent in the mass of the people a humanist elite. That's the only way it's going to work. The important thing is to take back our schools from the beasts; free our children from the rule of beasts who teach in the schools, who make programs; provide our children with a culture. But to do that, we must take power, and order society to develop out of our own children and other peoples' children the mass of individuals who are decent and fit to rule society. There is no sense in the world otherwise.

The question is how to rule.

Question: *You spoke during your speech of humanism in relation to the counterposition between the East and the West. In this respect, I wanted to ask: in the present political situation how do you judge the support and complicity the western world, through the United States, has with other countries, like in Latin America, in which the situation is extremely tense. Could not more interventions like the one done by President Reagan (which I agree with) be made?*

LaRouche: It's very simple in that case. You have to look to that great liberal, Lord Peter Carrington and his subordinate, Henry Kissinger. Most of the dirty things that have been done by the U.S. were not done by the U.S.; they were done by a gang that owns Henry Kissinger, and a large part by Henry Kissinger himself over the recent period. It's not a matter of the United States; it's a matter of who rules the United States. It's not a matter of any other country, it's a matter of who rules that country; not in the sense of a personality, but what policy rules.

The fundamental interest of the United States as a nation, is to develop the economies and promote development of the economies of Iberoamerica, to promote the development of individual freedom in the states of Iberoamerica in the form of providing children education, providing the development of the kind of children (who give) those countries the opportunity to use that development for the good of mankind. Why should the U.S. ever have desired to repress the development of Iberoamerica? Yet, over the past 20 years, beginning with a coup which that great liberal Cyrus Vance orchestrated in Brazil in the early 1960s in order to keep Gaullism from reaching Brazil, we have since learned to destroy from the United States every effort of Iberoamerican countries to develop themselves. Who did it? Did the U.S. do it? No, the U.S. didn't do it, except passively. The people of the U.S. were home attending to their careers, minding their family business, and voting as they thought they ought to, without understanding what they were voting for. It was

people like Henry Kissinger, McGeorge Bundy, and the people who own them who did this. And the people who own them are not Americans; they are only the agents of something that exists in Britain, that exists in Switzerland, that exists in Venice. The problem is not particular to any one nation.

We have in Western civilization two forces, and the fight between them can be traced back in detail from over 2500 years: between those of us who represent the republican tradition, and those who represent the oligarchical tradition. The question simply, again, is not what to do; that's important. But the question of what we might be able to do depends upon the right people attaining the power to do it. The question is who rules, not in the sense of personality, but in quality of people. How would you bring together, develop, affirm, mobilize, inspire, the people who are fit to rule Western civilization? What tasks must you accomplish to bring them to power? How do you keep them in power once they get there? How would you reproduce them in the next two, three, four generations, through education and culture? This is what is important. Once we do that, then the kind of garbage which lies around the world, and there's much of it, then we can begin to solve it. You cannot solve the problems by saying, "Let's make demands on governments that they overthrow this, make this coup, etc. Why can't we just make a coup d'état?" I've yet to make one, but I'm perfectly capable of doing it.

But the point is that an agenda of coups and counter-coups is not the answer. What we need is to bring the right people into power with their own weapons, and fight to strengthen people around the world who are fighting in their own country for the same purpose; and help create an alliance which makes them credible, by giving them the systems when they come to power, and make sure they stay in power by making them credible. You get a good government in Argentina, you must cooperate with it; you get a good government in Mexico, you must cooperate with it. In Venezuela the same thing; Colombia, Bolivia, Peru, the same thing; the same thing in Africa, the same thing in the Middle East. We will never have in the next fifty years good government in the Middle East; but we will have approximation of good government, so we will support it. That's the kind of policy we want.

The first thing is, the so-called objective political science approach to politics is impotent. If you wish to have good government, then think about taking power. But make sure you have the moral qualities to become a competent government.

Question: *To the question of technology, Mr. LaRouche answered that misunderstandings are due to the corruption dominating at various levels. I take notice of this since I work with energy questions and I often cannot explain to myself how people who should have a certain training take absurd positions. What can we do since we all understand that the mass media are in the hands of those who make disinformation and true psychological-warfare? Even if we want to make small interventions, shall we be able in time to win against the enemy or at least put him*

into an inferior situation?

LaRouche: Over the past 100 years, and actually longer, in no case has Western civilization taken a step forward in institutions except under conditions of war. This is a fact. Except for conditions of war, we would have been a garbage pile a long time ago, Western Europe and the United States, an industrial garbage pile, but for two world wars. Because only the press of war impelled us to mobilize economically. The war was very costly nonetheless; but at the end of the war, we had built up productive potentials which carried us through into the 1970s. It was that, plus the Korean War mobilization, plus NASA which was then wound down, giving us the post-1967 problems.

It is a peculiar fact that, because our people have been degraded almost to barbarism in culture, in terms of the majority of our people, they are incapable of understanding the connection between their individual behavior and the survival of their nation and themselves, except when this question is posed in the form of war. Therefore, it has been truly impossible for statesmen to put through programs of improvement which were otherwise justified except under (extreme) crisis. We are at that point: how are we going to crush this evil thing, which has taken over and corrupted our societies. But only the people can do it; it's a powerful force. Only the people can do it. Why couldn't the people do it? Well, for the reasons I've just given. In the U.S. today, you have ordinary people in the streets who are prepared to lynch news-media people on the issue of Grenada. The people of the U.S.—85-90%—support the President on his action in Grenada, and I think it will probably be 95% pretty soon. But according to the news media, you would think it's the other way. The people are furious at the news media; they hate the news media. And they will destroy it, because of such issues.

This has changed the perspective. I think the primary responsibility for this lies in the United States, because Europe has been conquered so many times. Europe does not have the resources to change the strategic process alone, independently. Europe has been under conditions where the U.S. has been not credible for twenty years. The U.S. has not been credible strategically for 20 years, and everybody in Europe who's lived through those 20 years knows it. Therefore, Europe is looking to the United States to give Europe courage, or to give Europe a basis for courage. In Europe, the population is much more frightened; the people have been conquered many times, are more easily disposed to accept conquest than the United States people are. Therefore, we in the United States must do things that encourage people of Europe to know their strength, to break people in Europe out of this terrorist fear, or at least some of them, to mobilize them.

In that mobilization of the popular will, we must at the same time change the schools, change the tax policies, change the energy policies, change the industrial policies, create new combinations of political parties, not the old ones, so that when the mobilization has ended, we have set into motion new institutions and engage the popular

will which will keep the thing going. Above all, we must learn the lesson so that we never have to repeat that effort again in the future.

This time, when we come out of the war, we must not make the mistake that the United States made in 1945: we must continue to apply the lessons, to build a world of the kind that is fit for our grandchildren to live in, to build the parties, the policies, the news media. But I think there is no way to do it, but to say: "Well, we've come to it again; these idiots that we've tolerated have brought us again to the verge of another world war, the same kinds of policies that brought us to two previous world wars. We're at it again, we've got to get a war mobilization. Well, let's do it, if we have to do it."

Let's hope the war doesn't come, but we'd better go ahead and mobilize. This time, let us make the changes that we have to make for this mobilization. Let us include in the mobilization everything that society needs. And once we have gotten through this, let us make sure we never make the same mistake again. That's the only solution.

The thing to study is Alexander the Great. Then, as now, before the death of Philip of Macedon, civilization was doomed. Nothing could save it. There were two forces in the world: the Academy at Athens, and the Temple of Ammon in Cyrenaica—only two forces in the world which represented anything that was civilized. Then suddenly, Philip was dead. There was a struggle. The Academy of Athens and the Temple of Ammon of Cyrenaica launched Alexander into power, and Alexander the Great destroyed the enemy. They killed him, but he destroyed the enemy to the point that it took them two centuries to build back the evil. Only under conditions of crisis of this kind, is it possible to destroy this evil. And only if you think, more or less, as the advisors of Alexander the Great thought, in the 3rd century B.C., as Plato thought, will people respond. Crisis, people will respond only to crisis. Make sure that when they respond to the need for a military mobilization, that we build into that the other things we must build in. And once we have built them in the government, make sure they stay alive when the end of the mobilization is over.

The Significance of the Doctrine of Mutually Assured Survival for Countering the Ideology of the So-called Peace Movement

Helga Zepp-LaRouche

Good afternoon, ladies and gentlemen.

I want to address problems related to military problems, which have to be taken into account, even though they are not usually included in the field of military strategic discussion. As has become clear from the speech of my husband this morning, we are in a showdown crisis between the superpowers, in the context of which Western Europe is faced with the most severe security problem for its existence.

I see three major problems which have to be dealt with. One is that under the present, still-existing, or half-existing military doctrine—namely the doctrine of Mutually Assured Destruction (MAD)—there is no way out of the crisis, because both superpowers are moving their forward-based defense systems into an ever-closer range. It is a question of time when this situation will get out of control. Secondly, we are facing a military collapse, both economically and financially. Thirdly, there is the problem which in one sense I regard as nearly the most serious, the subjective condition of the population of Western Europe.

All these three aspects have to be dramatically reversed if Europe in its present form is to survive. The change in the political situation can be made; but it requires something which has been totally absent in the political leaders and leading political institutions up until now. It requires the *Entschlossenheit*, decisiveness, which a

military command would need in times of war, to make these changes *before* we get into war.

In the discussion of military strategy, it is not usual to include economic issues as such. But now, this has to be done from both a negative as well as a positive point of view. We are in a world economic crisis. World economic production has collapsed dramatically over the last couple of years. If you look at the European economies, we are faced with disaster. The Italian economy is totally bankrupt. As a matter of fact, the only still-functioning aspect is the export of arms; Italy is the fourth largest arms producer in the world. But the actual industry, that which maintains the living standard of the population, is shrinking and collapsing. France has nearly reached a state of bankruptcy; some months ago, the French government had to take a loan from the EEC just to pay its employees. The British economy is more bankrupt than Margaret Thatcher has admitted; the statistics published about the British economy are false. The same goes for the U.S., where the *EIR* has published how the Federal Reserve has manipulated the figures about the real economy of the U.S. in order to pretend that there is an upswing.

The reality is that we are on the verge of losing major capacities, industrial capacities; we are on the verge of a banking crash. If you look at the West German situation, in certain cities there is already 17% unemployment.

ment. The machine tool, shipbuilding, the steel industries are bankrupt. There are now 3.5 million unemployed in Germany, and there are statistics projecting that by winter there may be 5-6 million unemployed. People should remember that there were 6 million unemployed when Hitler came to power, and such figures can be expected for this coming winter. The largest private bank in West Germany, Schroeder Muenchmeyer, just went bankrupt because of mismanagement, very similar to the case of the Herstatt collapse; and it is possible, in a couple of days or weeks, that we shall enter a banking crash of the dimensions of 1931, similar to the Vienna Kreditanstalt which triggered the financial crash.

Needless to say, frictions are occurring in the context of the British criticism of U.S. policy in Grenada, and there are other frictions around the refinancing the Brazilian debt package. In other words, there are many, many points of potential financial collapse which could bring down as much as \$3 trillion, which obviously should be looked at also from a military point of view because if such a crash were to occur, world chaos would erupt. And, unfortunately, under the present conditions, it is quite obvious that the Soviets would exploit such chaos.

The subjective problem is related to the economic problem, but I think that Pope John Paul II was absolutely correct when he, about one year ago, said that Western civilization has reached what you could only call senility, a state of moral senility. If you compare history from the standpoint of several centuries, you can say that for at least one hundred years, we have been plunging increasingly into a new dark age, which takes especially devastating forms in Western Europe. The security-related effect of that is that the population of Western Europe, or at least the large majority, does not see any reason to defend their own nations. They are willing to unilaterally disarm, in total disregard of what that would do to the strategic balance; and as many wars in the past have proven, if an adversary succeeds in convincing the population of his adversary that he is not the adversary, then he has basically won the war. Right now, if you go through Western European countries one by one, you would think in many cases that you are really in a state of war with the U.S., and that in a war scenario the potential adversary would *not* be the Soviet Union, but the U.S.A.

In West Germany, for example, the majority of the institutions are in a very anti-American mode, convinced that the Soviets are the peace-loving ones, compared with the Americans. This is not only true for the Green-Peace movement, which is a total revival of the fascist movement of the 1930s. This is the case for the SPD, for large parts of the FDP, for the trade unions, and, most significantly, for the West German churches, the Protestant Church and the Catholic Church. Not to mention the eruption of sects that are growing, like Baghwan, which have thrown the population into a state of unbelievable irrationality.

In Italy, I do not think that the situation looks much

better, because here also, the role of the Churches, or certain aspects of the Churches, are supporting the peace movement, which is not really a peace movement. (I want to come to this point later, because what a peace movement is should be something quite different.) In Italy, the Franciscans are the leaders of the peace movement, pushing unilateral disarmament; the Jesuits are heading the peace movement; and the PCI, naturally, is involved in this as well. If you look at Western Europe from the outside—just coming back from Thailand, I have a very fresh look from the outside—the image you get of Europe is that of a dying continent. Europe is a degenerating civilization, which is also reflected by the fact that all European countries have negative birthrates, including the so-called Catholic countries of southern Europe. Apart from the fact that this is a reflection of moral decay, and the fact that people have no hope—they don't see a reason why it is worth having children and building for the future—it is also a rather dramatic economic problem for the immediate future. If you go to West Germany, you see that people have entered a collective psychosis. You turn on the TV, and they say that the best area in Germany is the area between the two borders, between East and West Germany, because this is the poorest area; and because people were so poor, fortunately, the industrial revolution never took place and there are still the old villages and the old houses, with industry never having developed there.

Today, you have escapism of the youth, an incredible amount of flight from reality, revival of romanticism and the youth movement, and fear—a fear which is both based on reality, but which is also an irrational fear stemming from a lack of reason and a lack of understanding of science and technology, and a rejection of these virtues.

I would just say here that one of the most important reasons (not the only reason) for the present miserable condition of Western Europe is the philosophy and activities of the Club of Rome and similar organizations which, for the last 10-15 years, have spread their pessimistic world outlooks—limits to growth, that the world has come to an end. They have managed to poison the minds of people, especially young people, so that you have an increasing number of young people who are running around with buttons saying "No future generation". I want to stress here that, if we do not take on this challenge, and start an epistemological debate which goes to the most fundamental issues of the ontological discussion of the nature of the universe, of the philosophy behind the different political factions right now, there is no way that we can turn this around.

I want to immediately start the debate, and say that the Club of Rome thesis is fundamentally absurd, because it ignores the human capability for unlimited growth of knowledge. If the Club of Rome had been correct, ecological catastrophe would already have happened approximately 10,000 years ago, because at that point, when the human population was still hunters and gatherers, the total population density of the earth was approximately 5 to a maximum 10 million people, and

the number of people who could be maintained per square kilometer was 1 person/15 sq km. If people had remained on this level, naturally the then-existing resources would soon have been exhausted. This can be followed through the entire course of human history: if a mode of production of a given society remained on the same level of technology and therefore had a level of energy density that remained constant, then sooner or later the resources of that level were exhausted. Or, the social costs for the production of these resources would become so expensive that such a collapse would then occur. History proves that each time a culture imposes zero-population growth, that culture necessarily will go under. But it was the great ability of man to make qualitative advances at each step, to invent new technologies, such that these technologies allowed new resources to be used. It must be stressed that this is *the* fundamental difference between animals and human beings. No animal—no elephant, no dog—has ever been able to do that; but to do this is the precise distinction between human beings and animals.

When a new technology had been established, this would immediately lead to an increase in energy density which, in turn, would increase the population density, up to the point that we now have a population density of approximately 4.5 billion people on earth. If you look at the leaps from solar energy—namely the hunting and gathering society—to fossil fuels, to fission, you can actually already project that if we reach thermonuclear fusion (which can probably be begun to be used commercially by the year 1990 or the beginning of the 1990s), we can easily have a population potential of about 40 billion people on this earth living quite comfortably because we will have greened the desert and changed nature so that it will be possible.

I want to stress here that the totality of evolution proves that negentropic growth is the principle of universal laws, and that it is not simple multiplication, not simple increase in numbers. When a certain potential for multiplication has been saturated, then the conflict with the environment starts. At that point, if you just project, in a linear fashion or even in a quantitatively exponential fashion, a continuation of the same mode, you naturally end up in an ecological catastrophe. It seems as if the limits to growth have been reached. But, in reality, all it signifies is that a tremendous evolutionary pressure is building up as a preparation for a qualitative breakthrough and a new growth explosion.

What history up until now proves, is that progress is not voluntary. You cannot decide if you want to go into technological and scientific progress. Scientific progress is a necessity; it is a law of the universe and either people adhere to that law of the universe, or society collapses. I want to stress here that the first person to develop that idea, already in the 15th century, was Cardinal Nicholas of Cusa. He was not only a great scientist and cardinal, and the actual founder of ecumenicism; he developed the system, that ontologically-founded system, which I think still today gives us the possibility to achieve world peace. As one important aspect, he developed the Chris-

tian notion of evolution, already in the 15th century, making the distinction of a qualitative negentropic evolution from inorganic matter to organic matter, to animal life, to human reason. On each level, he describes the process I described before: in order to achieve the fullest potentiality of each species, this species has to develop up to the point where it already participates in the next higher species. In other words, he defines those points of evolution at which the need for a jump occurs; and these, from a rigorous scientific viewpoint, are the only relevant points to be investigated.

From that standpoint, when we are discussing laser technology today, or plasma physics, or fusion, we are discussing a problem which Nicholas of Cusa defined in the 15th century as one of these evolutionary points going from one level of species into the next higher level of species.

The Club of Rome naturally fought against precisely this idea of the perfectability of the universe, and the establishment of ever-higher orders of the universe, and, quite consciously and knowledgeably, made these linear projections in basically predicting that the limits of growth had been reached. Peccei, who I think in the consequence of his policies is 100 times worse than Adolf Hitler, even goes so far as to say that the human mind, the human creativity which enables the mind to always develop to a higher level, that it is this in the human mind which is what is wrong with the universe, that it is a cancer that should be eliminated. I think that it is the Club of Rome which is responsible for the ecology movement and the peace movement in its present form, which is not a true peace movement; it would not have been possible if there had not been the green movement before.

So I would suggest that, since Rome is the place where the Club of Rome was founded, it would be an act of liberation for the citizens of Rome to declare the Club of Rome *persona non grata*. Then, the next time one of these scoundrels is trying to enter your beautiful city, you should use some medieval methods of getting them out.

It must be stressed that what the Club of Rome represents, and to the extent that they influence the peace movement as an ecological, anti-scientific, irrationalist movement, is the precise tradition of the philosophy which led to Mussolini and which led to Hitler. Because if you investigate what was the pre-history of fascism in Germany or fascism in Italy, you find that it was the conscious spread of irrationalism and conscious spreading of cultural pessimism which made this catastrophe possible. It was Nietzsche who rewrote history to deemphasize the humanist conception of the perfectability of man and the idea of continuous progress. He rewrote history to emphasize the dionysian outbursts of irrationality, and identified a totally bestial conception of man, saying that the universe is not negentropically organized but that it is a cyclical, eternal return of the same.

The role of the sequence of bestsellers from Nietzsche, Lagarde, Langbein, Moeller van den Bruck, Oswald

Spengler ("The Decay of the West"), must be understood. If you read these books, you see that the Club of Rome and these books are identical, because they have a tremendous disgust for human capability; and they are fundamentally immoral because they deny that human beings can improve themselves, that they can self-perfect themselves. It happens to be that it was this current in the 1930s in Germany, namely the part of the movement in which the nationalist socialists were one part—namely Moeller von den Bruck, translator of Dostoevsky into German and the man who invented the notion of the Third Reich, who wrote the book "The Third Reich" which was later used by the Nazis as the concept they wanted to implement—it was this wing, the national bolshevik wing of the Strasser brothers, which was fundamentally anti-science, anti-technology, anti-nation state, anti-centralization, pro-separatist; which was absolutely coherent with the Pan European Union of Coudenhove-Kalergi, the inventor of eugenics, the racist nazi doctrine; these are the same forces today.

That is the main thing the Soviets have to confront themselves with: the peace movement and the separatist movement today are absolutely identical. The Corsicans, the Sicilians, the Bretons, the Alsace-Loriatians, and so forth, the people who are together in the Society for Endangered Peoples, or the organization CIEMEN located in Barcelona, are working hand-in-hand with the peace movement. You have to understand that what is coming together today in the form of the peace movement, is that very dangerous mixture of romanticism, innocent people, but also quite conscious neo-Nazi or old Nazi networks like Henning Eichberg; in Germany, for example, the case of the publication *Wir Selbst*, in which Qaddafi recently made an apology for Adolf Hitler, and which happens to be the organ which brings together the rightwing and the leftwing.

I only want to state that what we are faced with in the peace movement today, which is a Green-peace movement, has nothing to do whatsoever with movements like Mahatma Ghandi's or other similar phenomena.

The Soviet Union is playing a game which is of utmost danger, if they think that by furthering a fascist movement in the West, they can gain anything out of it, because a Frankenstein monster is being created—in the same way that international finance brought Hitler into power. Up to 1938, people in the *New York Times* and Great Britain and elsewhere supported quite nicely the Hitler project; they helped to create it, but then the Frankenstein monster went out of control—the same process we are facing today.

It is quite clear that we need a dramatic change. We have to replace the cultural pessimism which grips our youth in Europe right now; we have to change it. We have to scrap the MAD doctrine because, for most European nations, but especially for West Germany, to live in the consciousness that under the MAD doctrine West Germany is nothing but a tripwire for the outbreak of nuclear war, is a condition which gives you the feeling of hopelessness. Every Bundeswehr maneuver stops at the point at which nuclear weapons are being used.

Everybody knows that if war breaks out, there is nothing left of Germany, and relatively little of the rest of Western Europe, which is the condition under which the peace movement finds fertile ground.

Therefore, the only way to change this is to replace this old obsolete doctrine, to replace the present disarmament negotiations, and to make the Mutually Assured Survival doctrine point number one of the discussion in Geneva, which would follow the path which established in Sicily in the Erice conference between Soviet, U.S. and European scientists: the idea that both superpowers in parallel establish these systems. Then, after that, disarmament becomes realistic because nuclear weapons are obsolete.

I want to only briefly identify something much more significant, because the military doctrine is only the last step. In order to give our youth new hope, and motivate them to learn natural science, to become engineers, to do something with their lives, if we start to look at the civilian and commercial applications of the new industrial revolution which we stand on the verge of, you can see that there are three areas today, which if we go into them mean scrapping the Club of Rome. These are laser technology in all its various aspects, thermonuclear fusion and biotechnology. If we master these three areas, we will have within a very short period of time an industrial revolution of dimensions compared to which the invention of the locomotive was rather small. We will have lasers of such high energy densities that we can go into totally new methods of production. We will have nonmetallic machine tools; we will have, through fusion, unlimited resources—through fusion torch methods we can transform garbage into new raw materials; we will have totally new factories, unmanned factories like those which are being built in Japan right now, where robots with optical sensors can recognize with the help of lasers the forms they work with, compare those with their own programs, and operate without the help of man. They can sort out parts, they can process them, they can cut materials, they will be able to produce new materials of a kind we haven't even seen yet. We will have lasers for chemical production; the areas of isotope separations will open up tremendous new possibilities. We will go into the production of biochemical products. We will have laser technology in medical applications, we will be able to do things in the field of medicine that we are not even dreaming of yet. In the field of communications and computers, we will enter totally new areas.

If we go in this direction, we can have a boom, a boom of new industrial revolution; we can have a new economic renaissance. Plus, we will have enough production to have the material conditions in order for the population in the developing sector to live properly. The *EIR* has made a study of the world economy which, without any doubt, proves that the collapse of world production has already reached the degree that, without the injection of new revolutionary technologies—like lasers, like biotechnology, so forth—we could not turn the situation around. But if we go into these areas, in-

deed we can, in a relatively short period of time—namely in one or two generations—have human conditions on this planet for all people. It is quite clear that this requires what Mr. LaRouche mentioned this morning. I want to pose it also as a challenge to the military to take this into account.

All of this is not possible with the International Monetary Fund system. The IMF system right now is the largest security risk for the Western alliance, because it worsens the conditions of chaos in the developing sector to such a degree that more crisis spots develop by the day. Furthermore, the U.S. is associated with supporting the IMF, which many of these countries experience as the murder of millions of their people: in Central America, in Latin America, the entire destabilization of southeast Asia, the murder of people in Africa—people identify the U.S. supporting the IMF. What is happening is that the U.S., because of this idiotic economic policy, is about to lose many of its allies. Many of its friends who would like to be part of the West, simply do not get the cooperation from the U.S. which they would like to have and which can only be economic, because what these countries need is not so much weapons; they want economic aid to improve the conditions of life for their country.

I want to come to one last point. That is, as I said, that we have to have a much more fundamental approach to politics. If you try at this stage of the game just to go along day-to-day, mankind probably will not make it. We have to go to something much more fundamental. We have to go to what Pope Paul VI called the “new word for peace has to be development,” because the only way we can solve the East-West conflict is in the context of a new North-South approach. What I mean by that is quite simple: only if there is an agreement between East and West based on the MAS doctrine, that both superpowers develop defensive beam weapons, would nuclear weapons then become obsolete. In that way, the immediate point of crisis and hostility between the superpowers is reversed, and only then the legitimate demand of the developing sector to divert resources which now go into the arms race and military spending into development can be met. Eventually, we have to have a world order in which superpowers are no longer using the Third World as a field for proxy wars; we must get to joint cooperation in the much larger task of developing the developing sector, to bring them up to the level of most European nations and the U.S. about 10 years ago.

If you think that this is not realistic, if you think that this is utopia, I will tell you quite simply: mankind has reached the point that we are about to blow ourselves up in a nuclear holocaust. If we continue with the present policy of MAD, that will happen, and there is no law in the universe that it cannot happen. Civilizations have gone under in the past, cultures have been wiped out

because of quite similar problems as today. The only difference is that today mankind is too interwoven, the interconnection between the world is too close, so that it would not only be Europe, it would not only be part of the world, it would be the world as a whole.

I want to end this saying that the alternative to nuclear destruction is nothing less than the old dream, and the old hope of the humanists of the past: that we have to establish a just, new world order. It is very easy, from the standpoint of Nicholas of Cusa who already in the 15th century developed a system of how this would be possible. According to Nicholas of Cusa, and in modern science it can be proven, that the laws of the universe are coherent; evolution of the physical universe is negentropic, it has an organic tendency to develop to ever-higher orders. Man is part of the physical universe, but he adds something, because, in the terminology of Nicholas of Cusa, he is the image of god, “*imagine dei*”. He continues the process of creation, and participates in this way in the divine. Between the macrocosm of the physical universe and the microcosm of human creativity, there is a *concordancia*, a cohesion. The creation of the human mind is efficient, because every production of the mind has an effect on the physical universe. So human freedom in this sense has to be defined as being in accordance with these laws, and changing these laws in a lawful order. Which means, taking this thought one step further, that *concordancia* in the universe can only exist if all parts develop their potentialities to the utmost; and on the other hand, a lack of development causes war and disorder. Nicholas of Cusa in the 15th century already proposed that every nation which makes a scientific discovery should give this science into a pool so that every other nation could profit from this new advancement, which in one sense is the legitimization of the argument for the need for technology transfer to the developing sector today.

If the Erice discussion succeeds, and if we can establish MAS, then indeed the conditions would be possible for this universal peace and justice in the way Nicholas of Cusa foresaw in the 15th century. I think that mankind is confronted with this choice: either in the next period to dramatically go through a new cultural renaissance on a worldwide scale, totally change the ways of thinking; or, we self-destruct. Either we grow up as Mankind, and we develop the age of reason, or we will have proven not to be morally fit to survive, which may not change the laws of the universe. The universe would probably continue to undergo its process of evolution, only we would not be around to contemplate it.

I think that if you confront the dimension of these two possibilities, all we can do is put the challenge to people and say: rise above your little squabbles, and think about larger issues than those in which these problems have been defined in the past.

DISCUSSION FORUM

Beam Weapons and the Military Security of Western Europe

Gen. (ret.) Volney Warner

I am very pleased to be here to participate in this forum for two reasons. First of all, personal. I was last in Rome some twenty-five years ago, serving as a Captain in the Trieste area, so it is a great opportunity for me and my wife to return again to Rome, to see what has changed, although many of the ruins are still the same. As for professional reasons, I submit that there can be no more important matter than to discuss those technologies which will permit us in a short time to build a ballistic missile defensive system for the United States, and also for Europe, against Soviet rocketry and Soviet systems. I must confess that my expertise in this area is confined to being airborne, not in a rocket, but in a parachute.

As far as nuclear systems are concerned, I must say that the scientists who got us into this must be able to get us out of it, and I would be happy to tell them now to discover those technologies and make them useful. Having said that, I believe that a beam weapon defensive system—and I hope many of you are protagonists in this—probably can not be deployed until the year 2000. We will do well to identify the technologies we need over the 1980s and 1990s; and I believe that one of the first things that must be done in the U.S. is to create an organization that will be able to manage the development of these technologies and be able to manage the systems for us to deploy them. Like it or not, things are done pretty much within the bureaucracy, so you must have organization, you must have someone in charge, you must have money for that purpose and that purpose alone. Then you have a great job to convince the world, and not only the United States, that the heavens are not the sole province of God. So it is not going to be easy, and a lot of work is going to have to be done before such systems are placed in the heavens. With respect to Europe and NATO, of course one thing that could be done here now is to make sure that NATO does not oppose these systems by creating an intra-ministerial committee of NATO to discuss the development of such systems. And mind you, it will take pressure from NATO, from Italy, from Europe, essentially to get the U.S. to move sharply and smartly on this issue, because you see more of this issue than does the United States.

I will try to explain the rationale for that very briefly as I go through. Since the end of World War II, the United States, in terms of its military capability, has had a military strategy that is essentially based on a one and one-half war strategy. The one war is NATO, and the half-war is any other place other than NATO. Certainly the reinforcement of Western Europe and NATO strategy has first priority in the United States, and is most important. It is scientists and military forces from the United States that shape the weaponry of the military forces in the United States. It is a system that is exercised in the handling of Reforger Exercises, and is supported by our allies in Europe. We have sea-lift and air-lift dedicated to that purpose; we have an existent, in-place chain-of-command for the execution of war plans for the defense of Western Europe.

In a very real sense, however, we are the least prepared for the least likely war, which is a war in Western Europe as far as the United States is concerned. I should say, however, that this is my view, and not the view of the U.S. Army or the United States. When I speak here, I speak for myself.

Certainly, a war in Western Europe would be the most catastrophic in its outcome, but it is not the most likely to occur. As far as the U.S. is concerned, the half-war that is most likely to occur, and for which the U.S. is least well-prepared, is the one which will not be addressed with nuclear weapons, by any particular number of nuclear carriers, or by the B-1 bomber, or the strategic systems. It is more likely to be addressed by sophisticated manpower. Of course, we have seen one instance of this in the last few weeks in Grenada, and other instances of this may well happen in our own hemisphere, it may well happen in South West Asia. But it is certainly a war for which we are not well-prepared; it is a question of manpower, and our forces are very, very small.

As far as the strategy of wanting to have wars in which both sides are executed simultaneously, I would submit that if you have to have war, not to have wars like that. We can execute one war, but we can only deter the other

with NATO. In all the wars we have had—Vietnam, Korea, and wherever they may happen in the future—we can only execute one, and we have to maintain deterrence in NATO as best we can, given the posture of U.S. forces, their over-commitment, and the expansion of the interests of the United States throughout the world since the end of World War II.

Now, in order to cope with the also-expanding threat of the Soviet Union, which is their new-found capability to project conventional forces world-wide, into our hemisphere as well as yours, and into South West Asia, with the strategic scene as it is, it is necessary to project conventional forces. We have to be able to do something about this.

If you look carefully at the budget of the United States, if you look at the plans of the United States articulated at the moment, we are on three very distinct, but very important courses of action. Roughly in priority, number one is to upgrade the strategic forces of the United States, and that includes nuclear. Number two, to modernize the conventional forces of the United States; that includes building Rapid Deployment Forces, light forces—and increasing them—capable of and targeted for land-force scenarios. Thirdly, but by no means least, is to pursue at the same time SALT, START, and now the new added dimension, to develop defensive systems that will preclude, obviate, hopefully rule out the possibility of nuclear wars in the rest of the world. Certainly not as a priority, but it is added as a complete program. How it competes as an organization is very difficult to put together. As far as the system is concerned, I mentioned what I thought had to be the organization and the allocation of the money.

You must realize now, if you go back to priority one, the upgrading of strategic nuclear systems, we still have roughly the strategic capability of the United States and the Soviet Union to destroy each other and the rest of the world with nuclear systems—that remains. We went “MAD”, if you will, some time ago, and it is unlikely that we will get sane tomorrow, or next year, or the year thereafter. We are likely to have to stay “MAD” and with Mutually Assured Destruction until such time as we complete the upgrading of the strategic nuclear forces, and that includes putting the Pershing II in Europe. Although we have somewhat of a standoff strategically between the U.S. and the Soviet Union, that standoff does not exist in Western Europe, because of the presence of the SS-20s and the ability of the Soviet Union, through its strategic systems. In addition to that, within Europe, the U.S. has no way to place at hostage second-echelon forces that now reside in Czechoslovakia and the rest of Eastern Europe. So, there is no balance in the theater in Europe at this moment between the conventional forces of the Soviet Union and those of the Western alliance, of NATO. The Soviet Union has a preponderance in its conventional forces, and the capability under the umbrella of their strategic forces and the SS-20s to launch a conventional attack without resort to nuclear forces. That is the present capability of the Soviet Union.

As far as the questions are concerned which have been

discussed—of whether the United States would destroy the Soviet Union and Western Europe along with it—those are questions everyone can ask, and no one wants to answer. Nevertheless, to upgrade and maintain that capability must be the first priority and remain that way until such time as the upgrading is accomplished. Secondly, the dimension of conventional forces; the Defense Department has now stated that they will develop five new light divisions in the United States forces, to be used half as Rapid Deployment Forces, and half for other necessary requirements. The equipment required to do that will include such numbers as \$13 billion for additional helicopters, to have one helicopter brigade in each of those five divisions. It took us 16 years to develop the M1 Ingram battle-tank, with the 120 mm gun; we can not afford to take the modernization program, that took us 20 years to get underway, and now scrap it on the hope that we can put in a beam defense system that will obviate the requirement for that conventional force. I just do not think that this is do-able in the United States because of our interests, and because of how long it takes to get a credible conventional force. Plus, as I mentioned, the half-war scenario requires that credible conventional force.

If the beam systems were in place today, that would make it no less likely that we would face the difficulties in El Salvador, or the problems in our own immediate part of the world. So I am saying that we certainly recognize our responsibility in Europe; but we also have other responsibilities, that are not addressed by nuclear systems, that can hurt just as much. If a man has terminal cancer and breaks his leg tomorrow, you would probably set the leg: what hurts most now is the immediate concern.

So the upgrading of nuclear forces, modernization of conventional forces, the change will come in terms of the last of those thrusts, in terms of what happens in Geneva; and what happens in Geneva can be very directly effected by what happens in terms of technological progress, finding those kinds of systems, and deciding which combination of them can be layered above the Earth to guarantee that there will not be a strategic nuclear exchange. To the extent the Soviets join us, it's great; if they don't, that really makes no difference because we have to do it ourselves.

What we need first of all is an organization in the States, second in NATO, and a lot of work and activity to spread the word in the world, followed by identification of the technologies somewhere in the mid-1980s, and at the earliest opportunity to get the funding, to make the changes significantly and address the future of the system ahead of us, sometime around the year 2000. All of the rest of the programs now are designed to run out in the year 2000—division restructuring, upgrading the tactical systems, as well as the strategic.

I thank you for the opportunity to be here. I do not intend to present an opposing view, although I have probably articulated more of what has occurred in the strategy of the U.S. than what is hoped for as a change in that strategy in terms of the result of being able to put a beam system in the sky.

Michael Liebig

1. Unfortunately, we can not entirely preclude the possibility of a general thermonuclear war between now and the end of the 1980s. Aside from that very real possibility, we can certainly expect that the United States will, by the end of this decade, have deployable endo/exo-atmospheric beam weapon anti-missile defense systems. The beam weapon defense systems will in any case give the United States the capability of defense against nuclear missiles of intercontinental and medium ranges. The various technological components of this system may not be perfected to the extent of providing an impenetrable anti-missile beam weapon defense, but this capability will have been brought into the realm of rapid realization.

This perspective has been indirectly confirmed by recent leaks in the American media concerning the so-called Thayer and Fletcher Reports. These confidential reports on the development planning for the American beam weapon ABM program, even from the standpoint of the order of magnitude of direct financing for beam weapons (not to speak of the indirect financing!), make it clear that *EIR's* projections for the tempo of development of beam weapons over the last several months have been quite accurate. The American election period up through the end of 1984 will not slow down the U.S. beam weapon program.

The presently escalating strategic confrontation between the U.S.A. and the Soviet Union, the cause of which is actually not the issue of NATO's INF stationing but rather the Russian answer to President Reagan's speech on March 23, 1983, has already resulted in a beam weapons ABM arms race. This beam weapons arms race is already in full swing, and it will become more intense; this is comparable, in a way, to the race for the development of ICBMs in the 1950s.

Beam weapon ABM development for the United States is a question of national security, indeed the primary and central issue. Without beam weapons, and with continuation of present trends, from the mid-1980s onward the United States will not only be militarily inferior to the Soviet Union, but completely overwhelmed.

2. The Soviet Union is working full-power and with far greater financial and material commitment than the U.S.A. to develop beam weapon ABM defenses. The Soviet beam weapon program has been dangerously miscalculated, qualitatively and quantitatively, in the U.S.A. and NATO from the beginning of the 1970s to the beginning of the 1980s. *Executive Intelligence Review* is among the few institutions which did not chime in with the dangerous chorus of playing down Soviet capabilities. In fact, one must expect that the Soviet Union will deploy a first demonstration of its beam weapon capabilities before the United States does.

It is terrifying to see to what degree political and military officials in the West have permitted themselves to be influenced by Soviet propaganda against beam weapons. Naturally, the Soviet's own program for development of beam weapons is not infringed upon in the slightest by Soviet propaganda against development of beam weapons by the United States. This propaganda, instead, has two aims: first, to slow down the U.S. beam weapon program, or, in the ideal case for the Soviet Union, to sabotage it entirely. On the other hand, Soviet propaganda against beam weapons, guided by the highest leadership of the Soviet state and party, is the equivalent of the Soviet refusal to accept the President Reagan's historic March 23, 1983 offer to create a new strategic regime of "Mutually Assured Survival" on the basis of mutual possession of beam weapon ABM systems by the Soviet Union and the U.S.A. The Soviet leadership has no interest in a beam weapon-based global strategic regime for a new strategic stability. The Soviets are interested in beam weapons solely as a means of strategic domination, and that is why they are forcing their own beam weapon development.

One evaluation of the Soviet beam weapon research, which is still cautious but which goes in the right direction, is to be found in the Pentagon Study "Soviet Military Power 1984" (page 75):

"Directed Energy: For well over a decade now, the Soviets have devoted substantial resources to those technologies applicable to directed energy weapons. Indications of Soviet interest in radio frequency technologies, particularly the capability to develop very high peak power microwave generators, indicate that the Soviets intend to develop such a weapon. There is also considerable research effort within the Soviet Union into technologies relevant to the development of particle-beam weapons.

"For many years, the Soviets have devoted significant resources to the development of laser-beam weapons. Their high energy laser program is three-to-five times the U.S. effort. They have built numerous classified facilities dedicated to the development of these weapons.

"The Soviet program began in the mid-1960s. They are pursuing chemical laser development and have continued to work on the earlier high energy laser candidates, the gas dynamic laser and the electric discharge laser. They are also pursuing related technologies such as the development of efficient electric power sources and the capability to produce high quality optical components in quantity. They have developed a rocket-driven magnetohydrodynamic (MHD) generator which produces 15 megawatts of short-term electric power—a device that has no counterpart in the West. The Soviets are committed to the development of specific laser

weapon systems. Soviet deployment of moderate-power weapons capable of short-range ground-based applications such as tactical air defense and anti-personnel weapons, may well be far enough along for such systems to be fielded in the mid-1980s. In the latter half of this decade, it is possible that the Soviets could produce laser weapons for several other ground, ship and aerospace applications."

3. Should the United States not have deployed beam weapon ABM defense systems before the end of this decade, the Soviet Union will have achieved a first-strike capability against the nuclear potential of the United States. If present trends continue, the current relative superiority enjoyed by the Soviet Union in strategic weapons will have been consolidated to such a degree that the surviving second-strike capability of the U.S.A. will represent merely a limited and calculable risk for the Soviet Union.

It is already the case today that the land-based American ICBMs are dangerously vulnerable to a first strike. The Soviet quantitative and qualitative superiority in high-precision and heavy land-based missiles of the types SS-17, SS-18, and SS-19, together with new land-based systems now being tested, will enable the Soviet Union to launch a successful first strike against U.S. land-based ICBMs. The submarine-based second-strike capabilities of the U.S.A., with about 5,000 nuclear warheads, is also far more vulnerable than usually assumed. These 5,000 warheads are distributed among a total of 32 (sic) nuclear-powered submarines, of which more than half are armed with missiles with a range considerably under 5,000 kilometers. The consequences of these facts are highly dangerous options for Soviet strategic anti-submarine warfare (ASW). Moreover, the penetration potential of the U.S. strategic bomber fleet is, as is commonly acknowledged, limited. The planned deployment of the MX missile from 1986 onward will not alleviate this Soviet first-strike danger, and the "window of vulnerability" will not be closed; on the contrary, it will widen further.

The danger of a Soviet first-strike against the strategic "Triad" of the U.S.A. makes deployment of endo/exo-atmospheric beam weapon ABM defenses a strategic *must*. The "balance of terror," retaliation-deterrence, or the regime of "Mutually Assured Destruction," stands today on the extremely shaky legs of the American strategic Triad, and its second-strike capability is crumbling rapidly.

4. The NATO doctrine of "flexible response," also no longer has any foundation in reality. The "bottom has fallen out of the bucket" of NATO doctrine, so to speak, with the first-strike vulnerability of the American strategic nuclear force. That same U.S. Triad is taken to be the foundation of the entire NATO doctrine, the oft-cited "strategic glue" which connects Western Europe with the security of the United States.

West European critics of the beam weapon ABM developments in the U.S.A. never tire of raising the spectre of a decoupling which would allegedly arise from American beam weapon ABM defense, since, as they

argue, the U.S. would be able to defend itself, but Europe naturally would not be able to do so. These critics obviously overlook the fact that, without beam weapons, very soon there will no credible U.S. Triad at all, that the Triad will become militarily useless.

We can leave aside the fact that no U.S. administration since Kennedy has ever seriously considered launching the American strategic potential in case of Soviet aggression against West Europe, thus risking a Soviet counter-strike. The military reality today, however, is that the U.S.A. is not threatened with a Soviet second-strike, but rather with a disarming first-strike against the strategic Triad.

That fact collapses the entire inner logic of NATO doctrine of "flexible response," based on the so-called NATO-Triad, consisting of: (1) the strategic U.S. Triad, (2) the American nuclear short- and medium-range systems in Europe, and (3) the combined conventional forces of the NATO partners. None of these three strategic factors can be dispensed with, or compensated by the others; only in combination (according to the postulates of "flexible response") can they provide a credible deterrence. If deterrence fails, then the "flexibility," "continuity," and "pre-conceived escalation" within the "NATO Triad" of "flexible response," are to confront the aggressor with incalculable risks and thus force a cessation of hostilities at *status quo ante*, according to the postulates of flexible response.

5. If deployment of beam weapons removes the danger of a first-strike against the American strategic Triad, this does not mean that the flexible response doctrine of the NATO Triad can or should be salvaged. This doctrine is simply too detached from military strategic realities to be maintained even under conditions relatively more favorable to NATO. Despite repeated oaths of loyalty by member governments and the NATO bureaucracy in favor of flexible response, the revision of this doctrine is already a decided fact.

Here there are two diametrically opposed tendencies toward a new NATO strategy. The one tendency, in which *EIR* and Lyndon LaRouche are not insignificant factors, demand a regeneration of NATO by means of the development of beam weapons not only in the U.S.A. but in NATO as a whole. The second tendency is led by designated NATO General Secretary Lord Peter Carrington, and is influential in the governments and military-establishments of all NATO member-states.

Public spokesmen for this latter tendency in addition to Carrington, who has held himself somewhat in the background up to now, include Henry Kissinger, Robert McNamara and Helmut Schmidt. This group represents the majority opinion of the New York Council on Foreign Relations, of the London International Institute for Strategic Studies (IISS) or the Trilateral Commission. The core point of their revision of NATO doctrine is to be the exclusion from NATO strategy of nuclear weapons of all categories, thus not only the strategic Triad of the United States, but also the short- and middle-range offensive potential of the United States.

Instead, NATO is to be comprehensively conventionally armed, in order to "deter" the far superior conventional forces of the Warsaw Pact in "direct defense." Thanks to the massive conventional armament of NATO, this strategy is to be anchored by treaty to the "non-first-use" of nuclear weapons. The nuclear weapons arsenals of the West are to be limited to purely "second strike" capability. By obviously and consciously leaving out of account progress in the ASW area and space-based sensor technology, the remaining nuclear weapons are to be restricted to mobile mini-missile and submarine-based missiles, which is why the Midgetman project is being pushed so much by this tendency.

6. Please pardon this short excursion into Western strategy esoterics, which is unfortunately as absurd as it is real. Let us turn to the military strategic realities of the Soviet threat against Western Europe. Here we leave aside the strategic nuclear weapons of the Soviet Union, as well as the entire dimension of naval warfare.

Soviet military strategy against Western Europe is that of the continental offensive, aiming for surprise assault in the totality and full depth of the territory of West Europe up to the coasts of the Atlantic. The first assault of the continental offensive is the launch of short- and medium-range nuclear missile systems of the Soviet Union, in order to knock out the entirety of the militarily relevant infrastructure of NATO within the first hours of war. In the first hours of the offensive, the nuclear short- and medium-range weapons of NATO, the command and leadership structures, air-fields, air-defense and logistical infrastructure must be destroyed. NATO forces would have to be deprived of all of those capabilities in order to make an organized resistance impossible. Then, the assault continues with the rapid penetration of Soviet conventional forces along the NATO central front, and with flanking assaults in the north and south of NATO territory.

The Soviet Union has built up in Europe a potential of nuclear short- and medium-range weapons, which permits them in fact to conduct such a first-strike. This is particularly the case for the missile systems SS-20, SS-21, SS-22, SS-23 and the Intermediate Range Bomber TU22, TU22M (Backfire) and SS-19/24 (Fencer). These missile systems in particular have extremely high precision and relatively small warheads. The Soviets do not want to totally annihilate Western Europe, but rather to knock out the military infrastructure. They are definitely interested in maintaining as much of the population and industrial potential as possible, to be able to make use of it. The conventional forces of the Soviets are to occupy Western Europe, and not to fight their way through Western Europe in a "gradual escalation" in the style of warfare of World War II. For the Soviets, a disarming first-strike is the only meaningful and decisive form of conducting war under the military strategic conditions prevailing in Western Europe.

7. Neither the NATO doctrine of "flexible response" nor the arming and training of NATO are presently capable of defending against the just-sketched Soviet continental offensive against Western Europe. This does

not mean that NATO forces are not capable of conducting conventional warfare, nor that they do not have materiel of high quality. But this holds good only under the condition that NATO forces are not deprived of their command structure, their air-support and logistics. The defense of Western Europe has as its prerequisite that the military infrastructure is capable of surviving a first-strike. The air-defense of NATO is dangerously insufficient, which makes questionable at present whether a defense could be conducted against the manned-aircraft component of a Soviet first-strike.

None of the prerequisites presently exist for a defense against a massed Soviet assault with short- and middle-range nuclear missiles. The only physically possible defense against missiles is beam weapons which operate with a velocity and fire-power orders of magnitude above that of offensive nuclear missiles. A new NATO strategy, which makes beam weapons the core of its war-fighting, represents not merely a desirable new military technology, but rather the only—and I stress, *the only*—chance for a realistic defense of Western Europe. Shortly after the Federal Republic of Germany became a member of NATO in the 1950s, the German scientist Eugen Saenger demanded that beam weapons be developed as the only option for the defense of Western Europe.

There are various threats to NATO arising from Soviet short- and medium-range potentials. Along the central front, i.e., the Federal Republic of Germany, the crucial task is to defend against the short-range missiles Frog, Scud and SS-21 (150 km) and SS-23 (350 km). As was already emphasized in earlier presentations, those pose particular technical problems which are similar to those posed by Cruise Missiles. A beam weapon defense system located relatively close to the borders would possibly be embedded in a hybrid-system of land-based lasers and airborne mirror focussing and targeting systems.

For Italy, France and England, the chief threat would consist of the Soviet missiles of the type Scaleboard SS-12, SS-22, and SS-20, with their ranges of about 1,000 km to 4,500 km, whereby their ballistic trajectories run deep into near-outer space, i.e., 250 to 1000 km from the earth. Thus, these missiles can be tracked and targetted by American space-based laser-ABM systems, and can be defended against from space.

Moreover, it will be necessary to defend the most important positions of the military infrastructure and population centers within the entirety of NATO territory with land-based point-defense-laser and/or particle weapon missile defense systems.

In summary, one can say that a realistic defense of Western Europe against short- and medium-range missiles, Cruise Missiles and medium-range bombers makes it necessary to develop a three-layered beam weapon anti-missile defense system:

- a) A near-border defense belt along the central front, particularly against short-range missiles and Cruise Missiles;
- b) A comprehensive network of point defense beam

weapon ABM defense facilities around the neuralgic points of military infrastructure and population centers;

c) The defense against missiles of ranges between 800 km and 5,000 km by means of American space-based beam weapon ABM anti-missile systems.

8. The realization of this program, which corresponds to the military strategic realities in Europe and which uniquely creates the preconditions for a defense of Western Europe, has already given rise to hefty political arguments in Western Europe. It is obvious that the NATO-revisionists of the character of Carrington, Genscher, Kissinger or Schmidt oppose the introduction of beam weapons into European defense of NATO. This appeasement tendency aims at a gradual dissolving of the ties between Western Europe and the U.S.A. and the crystalization of a new "modus vivendi" of an ultimately nuclear-free-zone Western Europe with the Soviet Union. On the basis of stronger conventional forces in the style of Switzerland or Sweden, this new Europe is to become "independent" of the two superpowers. The major problem these people have is that the American President is committed to the beam weapon ABM program. The entire direction of the debate about beam weapons is, of course, strongly influenced by this position of President Reagan in favor of beam weapon development. This is all the more the case, since the president, his defense minister and Reagan's close advisor on beam weapons, Dr. Edward Teller, have explicitly offered the NATO allies cooperation in the development of beam weapons. Dr. Teller has publically declared that the development of beam weapon ABM defenses must be a "joint NATO project." Furthermore, an American space-based laser-ABM system will be capable of defending the European allies against Soviet ICBM and medium-range missiles, just as President Reagan and Weinberger have also publically stated.

9. The major problem in the beam weapon debate in Western Europe are the persons in positions of political and military responsibility who "actually", i.e., on the basis of their strategic knowledge, favor the development of beam weapons, but who do not politically endorse beam weapon development for reasons of political pragmatism or cowardice. There is one group which advocates beam weapons, but wants to keep the development of these weapons secret. These people overlook the fact that President Reagan did not deliver his directive on the development of beam weapons in a small circle of high-clearance confidants, but rather delivered his address before the entire American nation and the world public. He acted in this way for good reasons, since he sensed, as everyone senses, who is following the *Zeitgeist*, that the people of the West are ever less willing to accept the currently held absurd military strategy of MAD and flexible response, which offers no realistic op-

tion for defense. This holds for Western Europe even more than it does for the U.S.A. Those of us who do not want to live in an Eastern police state require a credible strategy, one that can defend Western culture and the political institutions corresponding to that culture. The effects of the lack of such a strategy can be seen in highest military and political leadership as well as for the younger generation of soldiers. For that reason, a beam-weapon-based new NATO strategy can not be smuggled in through the back door.

10. Among those in Europe who are at least unprejudiced with respect to beam weapons, there is another argument which is very prevalent: that the deployment of beam weapons, which by and large remove the threat of nuclear weapons, would lead to increased pressure of the conventional superiority of the Warsaw Pact forces against Western Europe, or that it makes a Soviet conventional attack against Western Europe even more probable.

It is absolutely true that the almost unbelievable conventional strength of the Warsaw Pact represents an immense challenge even under conditions of a beam weapon-based NATO strategy. Defense against this conventional predominance, however, is impossible under conditions of present strategy and without deployment of beam weapons. Once a Soviet "decapitation" assault has deprived NATO forces of their leadership, air-support and logistics, one can forget about conventional defense. Under conditions of a beam weapon-based military strategy, the problem of Soviet conventional superiority becomes soluble in principle. It becomes soluble if we do not merely expand the conventional potential of NATO "in width", but rather if technological progress becomes the principal factor of conventional war-fighting capability. New technologies must qualitatively shape conventional war-fighting. The development of beam weapons for anti-missile defense will, so to speak, produce a revolution of conventional armaments as a side-effect. Conventional armaments will become very "unconventional," and that holds not only for qualitatively new weapons systems, but also for the methods of production for low-cost manufacture of weapons. Tanks will be produced with new materials and new technologies of production, much faster and cheaper, just to mention one example.

We from *EIR* are convinced that this problem of conventional superiority of the Warsaw Pact can be solved with technological progress, and only technological progress; but this can only be achieved if the petty pragmatism and cowardly appeasement mentality is overcome. For that reason, we will increase the pressure for beam weapons, and therefore for this dimension of technological progress, regardless of the feelings or tastes of certain people.

Gen. Giulio Macri

The series of "nyets" with which the Soviets refused Reagan's proposal on the beam weapons project on a mutual, controlled and parallel way impressed the whole world and particularly Europe, which is always looking for pretexts to delay installation of the U.S. missiles. Soviet behavior discourages and denies the optimism of those who still hope to reach an agreement and strengthens the opinion of those who think, on the contrary, that a beam weapon crash-program is inevitable. We have then to continue to pose to ourselves the problem of the Russian reactions to this operation of the U.S. Administration, that will have to be thoroughly supported politically, scientifically and militarily by Europe. Such reactions have been widely announced several times and at different levels; most recently, by the head of the Soviet armed forces, Marshal Ogarkov, an emerging character in the Soviet nomenclature. He stressed that the Soviet Union will answer the new beam weapons strategy of the United States with appropriate measures given the fact that "we do not intend to tolerate that the U.S. and its allies gain a margin of superiority." Although we should not undervalue these reactions and should study them, they are primarily intimidating propaganda.

The first consequence of the adoption of the beam weapons system would be (and the Soviets stressed it several times) the end of the Geneva negotiations on the Euromissiles. Given the fact that the European governments say that they are willing to negotiate under any and all conditions, the Soviets' negative move aims at scaring the European governments and European public opinion, making them believe that the beam weapons operation, once begun, would be irreversible and would constitute a definite break in talks with the East. This is a threat which is not to be taken seriously. In fact, we must remember that the "No" card was also played by Brezhnev in 1979 in the attempt to stop the NATO decisions on the Euromissiles, the so-called "double-track". But in spite of their denials, the Soviet delegation sat down at the negotiating table soon afterwards.

In reality, it is much more advantageous for the Soviets to begin negotiations on a new strategic doctrine of "Mutually Assured Survival" instead of "Mutually Assured Destruction" for several reasons, even if in 3-5 years they might lose their advantage in the beam weapons area. The Soviets may believe that, by their refusal to negotiate, they can divide the NATO allies. But if they go on with such a tactic, it might give the Americans the political and propagandistic — as well as military — advantage, because of the U.S. commitment to negotiate on defensive weapons systems to make the present offensive weapons systems obsolete. That would demonstrate that the Americans are working more concretely for peace than for the eventuality of a war of mass destruction. Besides this, the Soviet refusal to cooperate on the new physical principles, a cooperation offered both by top American leaders and at the Erice meeting in August 1983, will inevitably bring to a halt

the START negotiations which Moscow would like to continue and which Washington wants to drop as soon as the new defensive systems are made operational. Such denial would also mean the end, in the long term, of the implementation of the SALT II Treaty, which the U.S. Congress never ratified but which is de facto implemented. The SALT II Treaty is completely advantageous for the Soviets. It is then likely that, sooner or later, negotiations on cooperation on the beam weapons will start. We believe that when NATO also demonstrates concretely the desire to join the great effort of its trans-oceanic ally, the negotiations already begun with a low profile will enter a new phase.

A second threat that has been made several times on different occasions by Soviet spokesmen, is the increase of the missile potential in Europe, with the installation of more intermediate-range missiles nearer to our cities and positioned also in the territory of Soviet allies, before the new American defensive systems can be deployed. In a certain sense, this is an obvious threat of Moscow's offensive policies. But that should not impress us so much because once the threat is implemented, the situation would only slightly change the already long-existing imbalance which it seems cannot be corrected even with installation of the Pershing and Cruise missiles in Europe. The new Soviet measures would only make more urgent the strengthening of NATO defenses—not only for strictly military reasons, but in the eyes of Western public opinion.

There is a third threat that would really embody grave consequences, at least until the new defensive systems are deployed and operationally effective. The USSR leaks that as a retaliation to the new American beam weapons program, it will install middle-range missiles nearby the U.S.A., in countries that (even though never specified) might be Cuba, Nicaragua and maybe the extreme north of Siberia. The most important U.S. and Canadian centers would fall under the same danger presently hanging over Western European cities. They will in fact be vulnerable to a surprise first strike, with a pre-warning of only a few minutes, almost without a stage of pre-alert. It would be a situation identical to the one created by Khrushchev in 1962, that took the world to the brink of nuclear war. If the USSR were to try that same maneuver today, it would surpass the brinkmanship policy carried out by Khrushchev himself and by Brezhnev, who proceeded when they found weakness or appeasement, but who stopped when the risk became too large. It is clear that in 1962 Khrushchev stopped because the U.S. was militarily superior.

Now that the USSR has superiority (or at least so it seems), Andropov could try a foolish challenge. But that would be a grave mistake, because in so doing, it could provoke the most gigantic American rearmament effort, with all the huge resources of a nation feeling seriously endangered, unleashing an armament race in which Moscow, in the long run, would lose. Luckily, all this is hypothetical, very hypothetical. Also because Moscow,

even when launching all those threats never made them precise, so as to leave a certain way out and the possibility of changing positions. Even the latest declarations by General Ogarkov confirm a certain vagueness: we, he said, will not permit any American superiority, but this does not mean that we will compete with the U.S. in the military field or that we will copy their foolish rearmament rush... We will follow our own path to beef up our defense capabilities.

That is very different from the first threats of preventive nuclear war, of a surprise offensive, of first strike without warning, launched by Ogarkov himself and by *Literaturnaya Gazeta* spokesman Fyodor Burlatski between April and July of this year; that is, after President Reagan's March 23 speech that announced the new defensive strategy of the U.S., and before the Erice meeting. All the ways remain open for the choice of an answer, which the USSR wants to show as terrifying, in order to intimidate the hesitating European governments and to instigate the peace movement. But after all, the Soviet reaction could also end up with an increase of tensions with which, unfortunately, we are accustomed to live.

Facing such menaces, Europe can only not let itself be intimidated, and remain united and join the U.S.A., to reject with other countries such threats and similar things that might arise with the passing of time. It is necessary to convince the various peace movements, ranging from neutralism to unilateral disarmament, that, after the end of detente because of Soviet expansionist hegemonism, the deterrence era, the era of flexible response and massive retaliation, must also come to an end because now there are defensive weapons systems based on new principles of physics capable of making ballistic missiles inoffensive. This means to end the danger of nuclear Armageddon, the mutual holocaust implicit in the MAD doctrine; to be able, though the new doctrine of Mutually Assured Survival, to free humanity from being hostage to a foreseeable Dante's Inferno. This doctrine is based on solid, defensive principles, because the weapon systems that would be deployed both in the strategic and tactical fields, have no offensive capabilities of either first or second strike. For such reasons, these systems are particularly interesting not only for both the superpowers which have been working in that field for years, and but also for Atlantic Europe which still has some problems finding a way to unconditionally back the strategic policies of the U.S. president, to cooperate in the scientific and technological fields on directed-energy weapons systems, to plan research and development of weapons systems within the European capabilities, to implement more productive technologies through bigger investments, discarding of course the more backward or even obsolete technologies.

If anyone has doubts about the feasibility of this anti-missile defensive system capable of neutralizing even a general nuclear attack—believing in good faith that it is science fiction or it is simply not feasible within the 1980's as was announced by President Reagan and by

Democratic presidential candidate Lyndon LaRouche one year before—I can cite results obtained thus far both in the USSR and the U.S.A.

1. Already in 1972 within the Eight Card U.S. program, a gas laser (60 kW) ignited several pieces of wood 2 kilometers away; the same laser made a hole in a moving object of small dimensions (6 cm x 10 cm);

2. In 1976, a high energy laser (HEL) of the U.S. Army downed an unmanned plane from the earth at a distance of 2 km;

3. In 1978, the U.S. Navy destroyed a high-velocity TOW missile with a chemical laser (DF) with a 3.8 micrometer wavelength;

4. In 1981, the USSR used a chemical laser in an experiment and was capable of downing a ballistic missile after having rendered it inert;

5. In February 1983, a Soviet high-energy laser based on land irreversibly damaged an American satellite orbiting at 560 km from the Earth;

6. A photo was recently distributed to the press of the USSR battle cruiser Kirov, showing a laser apparatus used as an anti-missile weapon system;

7. More recently, the specialized press reported the news that the flying laboratory of the U.S. Air Force, a plane with a powerful laser, downed five air-to-air Sidewinder missiles flying at a velocity of Mach 3.

These facts and these results are coherent, at least in the USSR, with a strategic doctrine dominant since 1962-1963. In those years the book "Military Strategy" by Marshal Sokolovski was published, in which Sokolovski wrote: "We are studying the ways to use against missiles high-velocity particle beams that work as a detonator of the missile's nuclear warhead, and the use of electromagnetic energy to destroy the missile warhead in the descending phase of the trajectory or to deviate it from the target. We are also studying various systems that use anti-gravity, anti-matter; particular attention is dedicated to lasers. We estimate that in the future, any missile or satellite can be destroyed with powerful lasers." Also, Soviet expert N. Sobolev in his book "Lasers and Their Future," gave a complete description of ABM lasers. In the same 1968-1974 period when the translations of Sobolev's work were published, the American technical review "Satellite Situation Report" of April 1969 reported that between October 19 and November 1, 1968, the Soviets had made their first experiment using directed energy weapons in space with Kosmos 248, 249 and 252.

In this situation of threats coming from the East, of offers of cooperation between the superpowers coming from the West, of practical realizations both in the East and West, of well-defined doctrinal theories existing in USSR since 1962-63, it seems that a great power like Western Europe as a whole is already late in guaranteeing itself a proper defense, both in the tactical and strategic fields. Such defense, it seems to me, can be guaranteed by inserting the realities of each nation into the great NATO alliance, which can make up for the limitations implied by the small dimension of any single NATO member. The high costs of research and develop-

ment for advanced technologies and Europe's general backwardness in the defensive weapon systems field based on new physical principles, make more and more necessary a more strict connection of the West European NATO members with the economically stronger and technologically advanced United States. It is natural, in this regard, as the Spanish Air Force Commander said recently, that "the U.S. has the initiative power in the plans of cooperation to develop the new weapons. It is the United States that must be willing to negotiate with the governments of the allied countries their possible participation." Such governments must, in turn, believe in the forecasting on the most advanced technologies that seem to promise a total change in today's strategic and operational conceptions.

In this regard, I think that certain political and military circles are still not informed, or refuse to understand, the scientific significance and the military and economic consequences of a crash program for directed-energy weapons, unless they were taken by surprise when faced with such perspectives. Maybe the deterrent strategy and nuclear holocaust is still preferred by certain circles, in order to promote irrational forms of neutralism or even of unilateral disarmament, coherent with a certain pacifism, molded by the hegemonic interests of the Soviet Union. It is that hegemonic oriental power which has refused and which continues to refuse all the cooperation proposals in the directed-energy defensive systems field, and which continues to develop on its own beam weapons systems—maybe because it has been caught red-handed with the new physics principles, and maybe because it felt safe behind the 3 to 5 years of advantage acquired in this field.

For this reason, I believe that Western Europe as a whole must support—politically, scientifically, industrially and militarily—the project announced by President Reagan last March 23, in a way that without wasting further time, such project can be successfully supported in front of the American Congress to acquire appropriate financing. From a purely military standpoint, I would propose the necessity of a further step towards cooperation at all levels by the technical sections of the European armies with their U.S. counterparts. According to my information, I evaluate that Europe can make a major contribution in all the five directed-energy weapons systems known both in the U.S.A. and USSR: laser beams, particle beams, microwaves, plasma and electromagnetic pulses. The European countries can participate both singly and in joint ventures from the early phase of research in all the five different systems. Theoretically, each country is capable of generating the required power and energy to reach and disarm a missile or a warhead. The laser weapons systems (which are the most promising), particle beams or the electromagnetic pulses, must also have the same characteristics of use as any other anti-ballistic missile system.

A report of the U.S. Los Alamos National Laboratory specified in 1980 the problems to solve in

anti-ballistic defense and listed them in this order: pre-warning and preventive detection of the launch of adversary missiles; evaluation of the threat; derivation of the trajectories and forecasting of the targets to hit; discrimination between real warheads and decoys; aiming of the intercepting beam; delivery of the beam onto the missile to be neutralized; neutralization of the offensive missile. For more than fifteen years, both the U.S. and the USSR have been perfecting preventive detection techniques (so much so that today we can already speak of a launch-on-warning posture) using satellites. Both countries control the launching of all missiles from earth to space, as a matter of routine. More sophisticated controls are now employed using land-based lasers. Besides, there are several new technologies to determine the launch point, the speed and the direction of a missile with a parallel capability to discriminate the decoy missiles. The Los Alamos group declared that the best way to utilize such new technologies is to launch rocket probes in the trajectory segments beyond the atmosphere supplied with infra-red sensor telescopes, capable of detecting targets up to six thousand kilometers away, and computer and transmission systems capable of handling up to twenty thousand targets at the same time.

Once the necessary information coming from the given data is received and transmitted, the weapon system has to be aimed. To aim such a system at a distance of 3,500 miles is comparable to hitting a target as thin as a wool thread one hundred meters away and moving at three kilometers per second. At this point, we must have a sufficiently powerful beam and enough energy that can be absorbed by the target. These three problems — power, energy and absorption — are solved in different ways for each one of the five types of weapons systems under analysis here.

In brief, the problems to solve are several and I think that the European militaries and scientists should engage themselves in this challenge with all their creative capabilities. These capabilities of the European countries to cooperate with the U.S. to reach this goal will determine if European science and technology will still have a future, or if they will be inevitably destined to fall to inferior levels. As for the use of beam weapons not only from a strategic standpoint but also from an air, naval and land tactical standpoint, there are no doubts about its feasibility in the short- to middle-term. Presently, we cannot put the cart before the horse, and therefore from a strategic standpoint, we cannot go further in respect to those systems that have already been studied but not proven operationally. From the tactical land, naval and air standpoint, there is very little known concerning the results already obtained experimentally with laser weapons systems besides what has already been said in the various examples given before. We will be able to know much more when we break through the secrecy curtain that presently covers this matter.

From the previous examples, even though we don't know the operational and technical capabilities of the various systems developed by the two superpowers, we

can deduce the following: a) From a terrestrial standpoint, we will make operational laser weapons systems both for land-stationing and for mobile platforms (tanks or artillery) to be aimed against tanks, planes or missiles; b) from the aerial standpoint, we will have air-based laser weapons systems to be used in an air-to-air and air-to-surface way, or against missiles; c) from a naval standpoint, as the Russian Kirov ship shows, we will be able to have laser weapons systems based on warships for sea-to-air, sea-to-sea use, and against missiles. The proper placement of these beam weapons systems in land, air or naval units will depend on a complex

number of factors that, given the present state of knowledge, cannot yet be outlined.

We will not be able to know the technical and operational characteristics of these weapons systems, and especially their cost/efficiency ratio (which would for the moment seem to be very high and almost unbearable), until a new Manhattan Project develops the potential of these new technologies as quickly as possible for defense purposes. There must be a total mobilization of the technological ingenuity of America and of the free world to counterpose the Soviet progress in this sector in the immediate future.

Col. (ret.) Hans E. Seuberlich

The geostrategic situation of the Federal Republic of Germany is hardly comparable to that of other members of the Alliance. The following eight factors characterize that nation's unique situation:

1. The border-line between the NATO countries and the countries in the Warsaw Pact runs not only through the center of Europe, but rather right through the middle of Germany. This border thus cuts the fatherland of the Germans into two parts, of which only one part, the German Federal Republic, is a member of the Atlantic Alliance; the other part, the DDR, is subjected to the coercion-system of the Warsaw pact.

2. The border-line has a length, running north to south, in Central Europe, of more than 1000 kilometers, where the Federal Republic, at its thinnest point like the waist of a wasp, only has a depth of 200 kilometers.

3. 30% of the population of the Federal Republic lives in a strip of land 100 kilometers deep along the border to the Warsaw Pact. And, within this strip there is 25% of the industrial potential of the German Federal Republic.

4. In no other member country of the North Atlantic Alliance are there so many armed forces and weapons as there are in the Federal Republic—nearly 4 soldiers per square kilometer. Moreover, there is no other Western nation where there are so many military exercises in such a small, densely populated area. That goes for air space as well—nowhere else is the air space flown as densely as in the German Federal Republic, where two-thirds of the surface of the country is a low-flight area. Each of these facts entails pressures and stresses for the population, and there are others not so easily expressed in numbers.

5. In no other area of the world do the two superpowers, the U.S.A. and the Soviet Union, face each other in such an immediate way with such a concentration of forces as in Central Europe, and that is especially true for the two parts of Germany.

6. The military flanks of Central Europe, and thus also of the Federal Republic of Germany, extend through

sometimes sparsely populated areas without any strategic depth to the north over 2000 kilometers, and toward the south over 3000 kilometers, so that a cohesive defense with the potential for rapid deployment of forces is extraordinarily difficult.

7. The transport of transatlantic reserves of any significance is only possible over a distance 6 times that which the Soviet Union needs to deploy reserves in Central Europe.

8. Security and well-being for the German Federal Republic ultimately depend also upon growth of world trade and stability in the Third World, because the proportion of exports in the Gross National Product, and the dependence of the Federal Republic upon raw material imports, is so high. The position of the Federal Republic, number 2 behind the United States in world trade, characterizes the extent of this dependence with its inherent psycho-political effects.

These criteria, which distinguish the German Federal Republic from other Western countries, gain such additional weight in times of tension, that they provide excellent points of leverage from which to effectively influence at least parts of the German population through the media, etc.

By means of misuse of democratic freedoms, efforts can be launched to intimidate or induce insecurity, and thus contribute to the emergence of a psychological climate in which the free will to defend begins to become paralyzed, and gives way to fearful cowardice or indifference. Whoever has analyzed the masterful, subversive tactics and methods of long-term psycho-political Soviet strategies against free peoples during the last half-century, knows what the Soviet strategy is in this respect toward Central Europe:

— Hammer the notion of the Soviet Union as the European power of peace into the general political consciousness;

— Entice the German Federal Republic out of NATO;

— Wind down the will to defend and the preparedness

of the population of the German Federal Republic to zero, if possible.

Such an intermediate goal, achieved "non-violently," would, after the collapse of NATO, result in the unlimited predominance of the Soviet Union over Central Europe, and thus the gain of unscathed new technological and economic resources in an order of magnitude which itself would permit the Soviet Union to gain such an economic predominance, that in a short period of time none of the then still free West European countries would be spared the fate of Finlandization of whatever form.

How far developments in this direction have already proceeded can be seen from two developments in October, 1983:

1. The so-called peace movement in the German Federal Republic, directed primarily and firstly against NATO armaments in Europe, not only mobilized about one million people (some demonstrations in favor of NATO numbered only 15,000, in Munich for example), but they have also contributed to the impression given by a public opinion poll, that the majority of the population of the Federal Republic has already adopted the ideas of the peace movement, especially with respect to the unconditional rejection of NATO armaments measures.

2. The "White Book 1983—On the Security of the Federal Republic of Germany," which Defense Minister Manfred Woerner presented to the public at the end of October, contains a novelty of a unique kind. The book not only explains the strategy of NATO, as was the case up to now. No—in a section titled "The Strategy Under Criticism," the White Book takes up the swelling public discussion on the entirety of security and defense policy, which is under increasing criticism, and takes ten pages to systematically provide counter-arguments, particularly against:

- criticism of nuclear weapons;
- criticism of forward defense;
- alternative ideas of social defense;
- criticism of the NATO two-track resolution.

These are psycho-political alarm signals that can not be overlooked. In my opinion, they underscore the necessity of openly entertaining all options which would lead out of the just-sketched psychological dilemma.

The real dilemma is ultimately that which can be reduced to a brief formula: Capitulation, or Nuclear Apocalypse (if deterrence fails).

In the popular language of the fearful, the same thing is expressed in the slogan "Better Red Than Dead."

Although precisely the danger of a nuclear apocalypse is the decisive factor in the successful deterrence of the last three decades, and thus proved itself to be the guarantor of freedom for West Europe since the end of World War II, the agitation of various groups and groupings has succeeded in making it impossible for growing parts of the population to tolerate "living with the bomb."

The government of the German Federal Republic is still hesitating, for a number of reasons, to draw effective conclusions leading out of this situation. One of the ways out would consist in turning toward the U.S. project for beam weapons as defense against missiles, and to approach the

potentials entailed in beam weapon development with a scientifically open mind. In my opinion, the Federal Republic should become involved in these developments in time, and thus be able to deliberate even at an early stage of development so that the peculiarities of the geostrategic situation of the Federal Republic can be appropriately embedded in the design of the overall project.

The advantages which could result in numerous respects—and not only in the strategic area—for the German Federal Republic over the long-term, would with high probability far outweigh the disadvantages of a psychopolitical kind presently feared. Continued hesitation or official ignoring of these developments could lead to a similarly one-sided strategic "decoupling" from the U.S.A. which we experienced at the beginning of the 1960s. That was when the U.S.A., for the first time in its history, had become immediately attackable despite its sea power, and vulnerable to the Soviet Union; but NATO only hesitatingly (and even then only half-heartedly) adopted the new U.S. strategy of flexible-response in December, 1967. Even then, no one ever bothered (1) to explain this strategy to the population in a cogently plausible way, nor (2) to think it through in connection with Soviet strategy and prepare for developments implied by Soviet strategy.

Instead, there followed the well-known euphemistic decade called Detente, in which

- the population wanted to be increasingly lulled into a feeling of security,
- while the Soviet Union went ahead and extended her conventional superiority in Europe, at least balanced out her strategic inferiority, and firmed up her position as a world sea power in a way hardly suspected previously.

Deterrence only functions as long as it is credible. Credibility depends decisively upon the causal relationship of three mutually connected factors.

1. The basic prerequisite is the will to confront the potential opponent with a risk which is incalculable for him.

2. Such an incalculable risk exists for the adversary only if there actually exists the capability of one's own to cause the aggressor, with reasonable surety, intolerably high losses, which should be as high as possible over and above the spoils of war that the aggressor might expect to be able to claim even were he to be totally victorious. (Moreover, this is the heart of the French national nuclear strategy, and thus the full psycho-political justification for having its own, independent nuclear forces, which serve the purpose of a very specific deterrence.)

3. The capability solely to cause the aggressor intolerable losses loses its deterrence effectiveness, however, if the resolve is not evident, with no "ifs or buts," to make actual use of this capability at any time against the aggressor.

Therefore, the severely perforated nuclear umbrella of the United States, as Colonel Geneste demonstrated during his presentation in Bonn on October 5, and under which the NATO countries have basked for so long, will only be able once again to exert its protective function if the U.S.A. is successful in stopping the armaments-

extremism of the Soviet Union, such that the United States, by means of development and deployment of new weapons systems for defense against diverse forms of weapons of mass destruction, counters the Soviet Union, and gains the lead — God willing—in this race. To this end, it is my conviction that the best minds of NATO should, as soon as possible, design a joint working plan, and thus

— provide NATO a new and crucial impulse;

— give the people of the NATO countries once again a goal and confidence in the superiority and ability to perform of Western democracies;

— and take the fear of the spectre of war and subjection to the will of the Soviet Union from the shoulders of people everywhere in the free world.

Ladies and Gentlemen, I believe this must be our goal in the weeks and months ahead, in order to maintain and secure peace in freedom.

Col. (ret.) Marc Geneste

I must first apologize for my accent in English, but I am trying to be very short, and to speak the least possible. I have with me a few slides which I am going to use. They speak for themselves, without accent.

To begin with, it is naturally a priority to develop beam weapons against rockets. But let me remind you that in Europe we have not only a problem of rockets. We have all types of threats to cope with, more than confronting modern rockets: invasions through land forces and I would say this is my main nightmare. This is not the nightmare of America: they have 500 leagues of water between them and the Russian tanks. We have also to take care of blockades, of losing our ways of communications, while the Americans have everything at home: gas, fuel, oil. We have to take care about social subversion; you know, the Soviets have been very clever in these games. We also have to take care about economic warfare, the economic warfare that we fight not against the Soviets, but among ourselves, among allies; you know, the Japanese “invasion” of Latin America and Europe.

This is to point out, to begin with, a position which is the French position: we cannot fight this kind of economic warfare among ourselves, because it would give way to subversion. So, we cannot devote too much of our GNP to the military research sector; and this is why the French are not ready, not willing, to fight again a war with bayonettes. We are dead set against the idea currently put forth by certain Americans and many others, to go back to the mass armies of the past, trying to cope with the Russian tanks by building tanks and vehicles. It is too damned expensive. The French will not do that. Let me be specific on that problem. This is why we have invested in modern technologies for warfare, and I was very pleased to hear today, what I knew already, that the French are moving ahead with the development of beam weapons. Monsieur Charles Hernu just announced the news two days ago. So forget about French cooperation in building nuclear deterrence or conventional deterrence.

Now let's get on to the general picture in which those beam weapons have something to do.

Well, the strategic picture can be a glum one. The strategic picture, as you definitely know, was very fine years ago when MAD (Mutually Assured Destruction) was “assured destruction” of the enemy. Then everything

was fine. Everyone was sleeping under the American extended deterrence umbrella (Figure 1). You remember this epoch. Then actual destruction (AD) began to be mutual, MAD, when Sputnik arrived. Then we started to observe the first cracks in the American umbrella, and this when General De Gaulle and the French started to open our own small, little umbrella (Figure 2). At that time, you remember, it was 1960 and Kennedy and McNamara started a big arms race. They said we had to cope with these cracks in our umbrella by building a fantastic array of artillery—nuclear artillery, a big Navy, and things like that. As it happened, when the Americans launch a crash program, in five years the situation was reestablished (Figure 3). What did that mean for the balance of forces? You have big artillery on our side, big Navy, small Army. On the other side, you have a big army, that we knew, and a small Navy. Then many generals took the American offer of arms control to the Russians, who sat down.

I have no time to explain how this thing happened, but I am going to jump to the reason we are in the situation we are in today. Roughly, there is some parity in artillery, some parity in navy; but for us Europeans, you have this disparity in land forces. Worse than that, the so-called strategic parity has been and is evaluated in terms of numbers of weapons. It should not be numbers, but rather the effects of weapons that count. When I hear that on the one side, they have some civil defense and on our side nothing, strategic parity looks more or less like that (Figure 4). You may have the same club, but when one side has no big guns, it is no longer anything that I could call allied since it can be killed in five minutes. This is a fact.

After the SALT agreements the famous American umbrella looks more or less like that (Figure 5); and you see the French trying to go it alone, trying to convince the Germans, who do not know where to go. To make things worse and to finish the story of the umbrella I think that one very prominent American diplomat finished it in Brussels three years ago when he, Mr. Kissinger, said not to count on the Americans committing suicide to save your skins (Figure 6). He just said publically what everyone thinks in the back of his mind, including our German friends.

Let's now come back to our problem and try to find

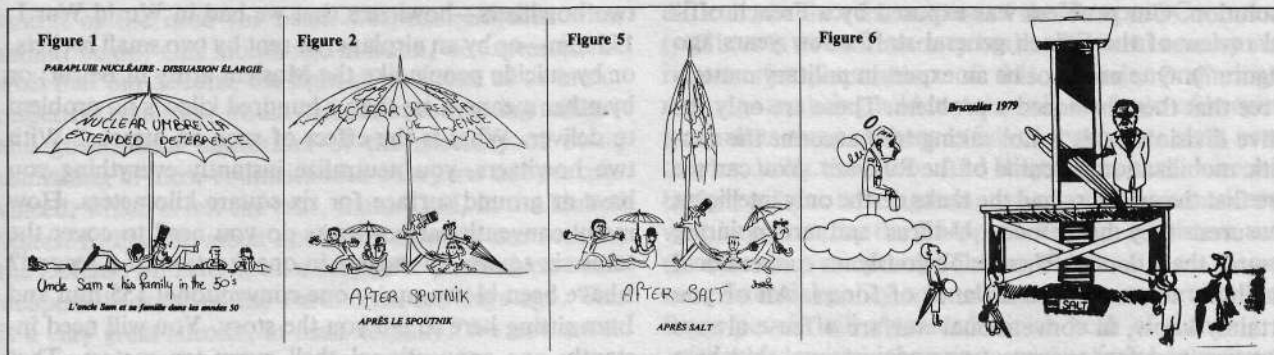
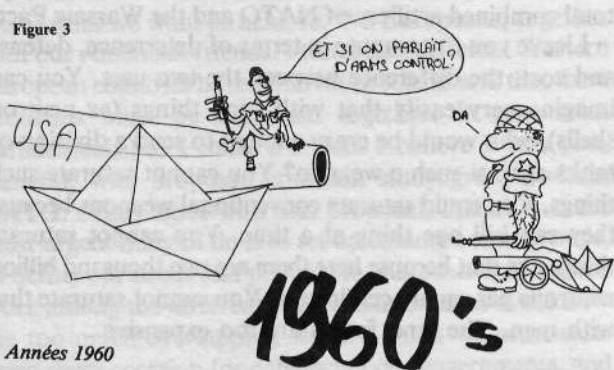


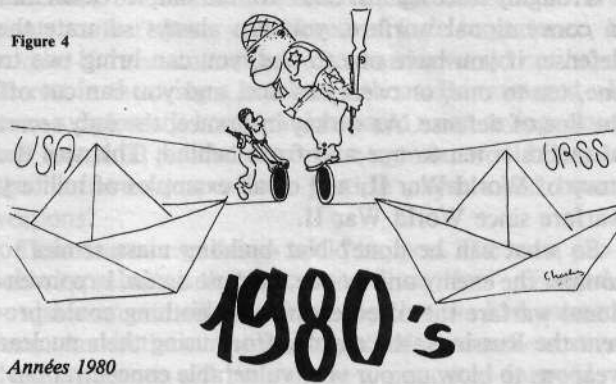
Figure 3



Années 1960

1960's

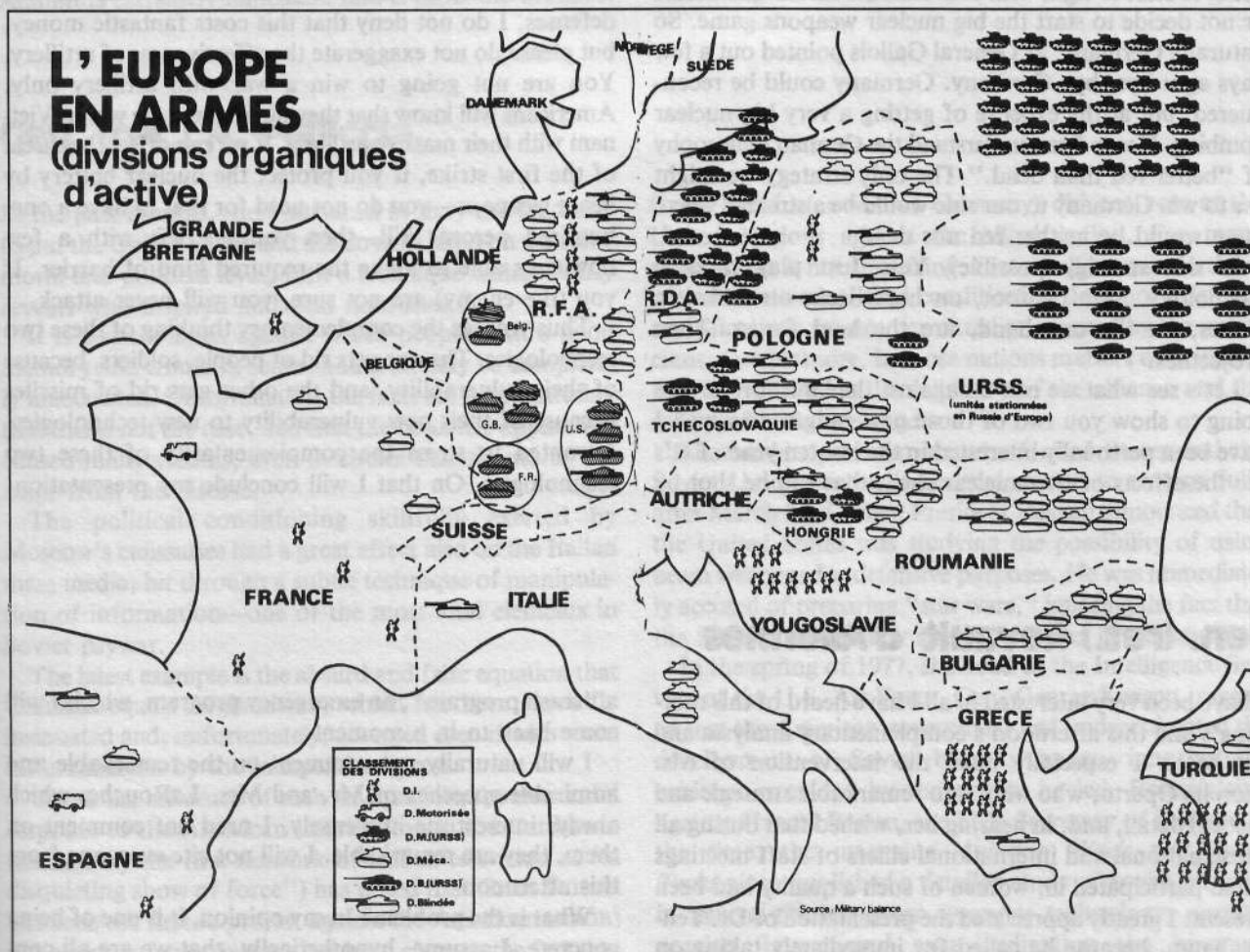
Figure 4



Années 1980

1980's

Figure 7



a solution. Our problem was exposed by a French official review of the French general staff a few years ago (Figure 7). One need not be an expert in military matters to see that there is indeed a problem. These are only the active divisions, this is not taking into account the fantastic mobilization potential of the Russians. You can see here that the artist has had the tanks do the only intelligent measures: they have made U-turns and are pointing towards the Atlantic! There is obviously no conventional possibility to stop this unbalance of forces. All of you certainly know, in conventional warfare offense always wins versus defense, even at one against one—but here it is roughly three against one—for the simple reason that in conventional warfare, you can always saturate the defense: if you have one to one, you can bring two to one, ten to one, or twenty to one, and you can cut off the line of defense. As we say in France, the only secret of tactics is ten to one and from behind. This was the story of World War II, and of all examples of military warfare since World War II.

So what can be done? Not building mass armies to counter the enemy one by one, because again, in conventional warfare the offense wins and nothing could prevent the Russians, the enemy, from using their nuclear weapons to blow up our very vulnerable concentrations. So what can be done? Here comes technology.

Here I want to show you what is indeed “flexible response.” Flexible response in 1960 implied that we were going to start to fight with conventional means and decide or not decide to start the big nuclear weapons game. So naturally Germany, as General Gallois pointed out a few days ago: bye, bye Germany. Germany could be reconquered, but at the expense of getting a very big nuclear bombing. Hence I can understand the German philosophy of “better red than dead.” The only strategy we might use to win Germany to our side would be a strategy where there would be neither red nor dead.

Is this strategy possible? Yes. Just play modern technology. Men on foot, on horseback, on tanks, in planes, on the one hand, are the land forces. Then projectiles.

Let's see what we can do against the land forces. I'm going to show you two of those new gadgets in which I have been personally interested in the last ten years. Let's see the effects of two nuclear shells that can be shot by

two howitzers—howitzers that we had in World War I, 155 mm—or by an airplane, or sent by two small rockets, or by suicide people like the Moslem army in Beirut; or by other means. Less than a hundred kilos is no problem to deliver. What is the effect of such an attack? With two howitzers, you neutralize instantly everything you have at ground surface for six square kilometers. How many conventional howitzers do you need to cover the same six square kilometers in one fraction of a second? I have been blown up by one conventional 155 mm and I am sitting here to tell you the story. You will need instantly one conventional shell every ten meters. That means 60 thousand conventional shells. That means the total combined artillery of NATO and the Warsaw Pact!

I leave you to compute in terms of deterrence, defense and cost, the difference between the two uses. You can imagine very easily that with such things (as neutron shells), who would be crazy enough to send a division of tanks against such a weapon? You cannot saturate such things. You could saturate conventional weapons because they can kill one thing at a time. You cannot saturate things like that because here there are two thousand billion neutrons per square centimeter. You cannot saturate that with men. The land forces are too expensive.

So what can be done to cope with the threat of the Soviet Union? Here we come with the big idea of these gentlemen here, and we know that we cannot avoid that. Otherwise, the Soviets are going to blow up all our defenses. I do not deny that this costs fantastic money, but please do not exaggerate the effectiveness of artillery. You are not going to win a war with artillery only. Americans will know that they did not win the war in Vietnam with their massive artillery. If we can offset the threat of the first strike, if you protect the nuclear battery by beam weapons—you do not need for that to have a one-hundred percent kill—then you are left with a few howitzers able to make the required kind of barrier. If you (the enemy) are not sure, you will never attack.

Thus you see the complementary thinking of these two technologies. The one gets rid of people, soldiers, because of their vulnerability, and the other gets rid of missiles because of their new vulnerability to new technologies. I wanted to stress the complementarity of these two technologies. On that I will conclude my presentation.

Gen. (ret.) Revault d'Allonnes

I have been very interested in all I have heard of this morning's and this afternoon's complementary analyses and syntheses. I especially liked the intervention of Ms. Fiorella Operto, who went into remarkable strategic and tactical detail, and, in hearing her, wished that during all those national and international chiefs of staff meetings I had participated in, women of such a quality had been present. I greatly appreciated the presentation of Dr. Tenenbaum, because he called for immediately taking on

a “crash program”, an emergency program, which I will come back to in a moment.

I will naturally not comment on the remarkable and admirable speeches of Mr. and Mrs. LaRouche, which always interest me immensely. I need not comment on them, they are remarkable. I will not cite everyone from this afternoon.

What is the problem? In my opinion, it is one of being concrete. I assume, hypothetically, that we are all con-

vinced of the need for beam weapons. So then what should we do? One month ago in Bonn, we expressed the wish that our actions, the fight of each one of us in our respective countries, would succeed in convincing military and government authorities of the necessity of doing something in those countries where they are not yet convinced, which is not the case, thank God, in the United States. In France, albeit not solely through our actions, the Defense Minister took a very clear position on beam weapons in front of the Parliament ten days ago. This is a very great success, at least verbally. We now await acts.

I believe we must define a method. We should first know what we want to achieve. We Europeans, together with our American friends. I think that different Western European countries have different problems and that these problems must be examined together. It may seem paradoxical, but I think it's true. I believe it was you, General, who proposed common study groups within NATO: I fully agree with that proposal. I think that the most urgent thing to do is to set up common workgroups, to define our needs and perhaps to share out the research work among the different countries in order to avoid having too much overlapping work. I think we must seize upon every occasion for convincing our governments, and I can now suggest to you one such occasion.

Next December 5 and 6, European heads of State and heads of Government will hold a summit in Athens. This summit is extremely important and is probably the most

difficult one since the creation of the European Community. There is no more money in the till. Great secrecy surrounds the preparation of this summit; preliminary meetings are being held in Athens in the hope of keeping journalists away. Athens is full of journalists right now, they're doing their job. And they tell us that there will be four points on the agenda, two of which are considered very important by the European Foreign Ministers, and the other two secondary. The important ones are a common financial policy and a common agricultural policy. Some people will try and diminish both of them.

The third point is about industrial policy and the fourth is the reform of certain community institutions. As for point number three, considered of little importance, I wonder if a certain number of countries would not have interest in throwing a bomb in Athens. Be reassured—I mean a diplomatic bomb, which would mean saying: since new industrial policies are on the agenda, wouldn't you like to have us speak on particle physics and beam weapons?

Then one of two things could happen. The most probable hypothesis is that everyone will say "no". Granted, but later on we will be able to say that we had warned them. And in the miraculous hypothesis that some answer "yes," then we will have made a great step forward.

To conclude, I would remind you that when you want to prove, when you want to demonstrate to an immobile audience that movement exists ... you begin to walk.

Thank you.

Gen. (ret.) A. Pelliccia

In the past months, there surfaced in Italy the tendency to put the United States and the Soviet Union on the same moral and political level, with a technique which clearly reveals who inspired and who nourishes it.

It is a crude hoax against which people with a good memory and common sense should already be completely inoculated. Unfortunately, the facts are demonstrating that this is not the case, and that the hoax has apparently caused many victims, even in circles that should be exempt from the disease.

The political conditioning skillfully exerted by Moscow's emissaries had a great effect also on the Italian mass media, hit through a subtle technique of manipulation of information—one of the most vital elements in Soviet psywar.

The latest example is the absurd and false equation that Grenada equals Afghanistan, which has been shrewdly insinuated and, unfortunately, accepted even if with some differentiation by the independent press.

Under the influence of such an equation, the emotional response to the American intervention in the Caribbean (defined by the first network of Italian television as "a disquieting show of force") has noted that Great Britain has been the first to protest against the American action; but afterward, no coverage has been given to the fact that

Great Britain (as well as Germany) did not vote at the United Nations against the allied nation. For many reasons this is not surprising, first of all because in those nations certain political conditioning does not exist and mystifications are not permitted or covered by the politicians. Furthermore, in those nations matters of principle are put aside when the solidarity of the alliance and the safety of all is in danger.

The tendency to consider the United States and the Soviet Union on the same level started to emerge fully after March 23rd, when President Reagan announced that the United States was studying the possibility of using beam weapons for defensive purposes. He was immediately accused of preparing "star wars," ignoring the fact that the Soviets are already six years ahead in that field.

In the spring of 1977, the head of the Intelligence Service of the U.S. Air Force, Gen. George Keegan, revealed that the American government had underestimated the development of Soviet beam weapons, ignoring the evidence provided by the service he led. Polemicizing against Harold Brown, the U.S. Secretary of Defense at the time, the magazine *Aviation Week and Space Technology* published a detailed study of Soviet progress in neutral-particle beam weapons technology, quoting precise figures and even indicating the location,

Semipalatinski, where the experiments were carried out.

The Italian press ignored both the event and the news on the new weapons, and *no one* even dreamed of accusing the Soviet Union of preparing for "star wars". No demonstrations of the pacifist movement were held, no political party protested. Such accusations and protests, only useful to make the work of the U.S. government more difficult, only take place every time the United States makes some progress in armaments or tries to make up the time lost to the Soviets in the same field.

Now that the new American president shows that he knows well the nature of the enemy he faces, and that he is determined to confront him with the necessary firmness, he is accused of having ended detente and having begun an arms race, confusing once again the effect with the cause.

On similar situations that took place in the past, Henry Kissinger wrote: "... the side that is most concerned with the good result of the negotiations will end up backing down to any new assault of the counterpart. In such circumstances, at least in the U.S., firmness is defamed and peddled as 'rigidity', 'stubbornness', 'lack of imagination'. No position must ever be the last: the opposition seeks an ever more pronounced ductility. Very soon they begin to circulate the idea that the United States has the moral duty to make concessions to overcome the block (in negotiations—ed.). The counterpart understands that we are cutting our own throats and therefore has every reason to keep calm and quiet, ready to discover what more concessions they can get from us."

President Reagan is demonstrating that he learned from the experience of his predecessors and that he is a real statesman who does not fear either the internal opposition or the matters of principle of the allies.

His Mutually Assured Survival strategy, which will replace Mutually Assured Destruction, is based on space defense with beam weapons. Apparently this kind of defensive policy did not meet the taste of the people who show humanitarian concerns and who, incoherently, prefer the former strategy that—as the English acronym MAD suggests—is madness.

This strategy consists of the attempt to dissuade the adversary through offensive forces capable of inflicting on the adversary an unbearable level of loss of life in the population. The MAD strategy is not only inhuman but also unrealistic, because if detente or deterrence fails, as in case of conventional or limited nuclear attack on Europe, it is irrational for the U.S. to consider extermination of the Soviet civilian population since it would also imply the extermination of its own population.

What President of the U.S. would take on himself such a responsibility? In theory, such a decision should be the last resort in case of impossibility to defend Europe with other means, or in the case of a direct conflict with the Soviet Union over Cuba or some other cause.

It is a big and dramatic responsibility that we are not understanding as we should, judging from our Machiavellian behavior.

We are not realizing that the kernel of the matter is the same as that indicated in the case of the flexible

response strategy: "the attempt to dissuade a conventional or nuclear attack limited to Europe with an arsenal which is controlled by a non-European power, and that is itself subject to nuclear retaliation, has never been an example of political and military rationality." It is even more so today, since we have a strategic parity between the two superpowers. But Europe, and we in particular, are ignoring this fact. Giving up on the construction of a European Defense Community, Europe lost the first opportunity to establish itself as an independent power capable of being an actor in foreign policy. Now, ignoring the two fundamental facts in military strategy of the future—nuclear energy and space—Europe risks missing the second opportunity to have her own means to dissuade the Soviet Union and to have a balancing role between the two superpowers.

We seem to prefer to be a subject of politics and to indulge in the delusion that the Soviet Union would attack us with conventional weapons to reach their aims when it considers it more useful and less risky. We are continuing to ignore Soviet military doctrine and the fact that it is evolving to fit with the conquest of space.

The Soviets—we repeat once more what is written very explicitly in their official texts—see nuclear war as an instrument of politics, nay, the *decisive* means of politics.

We spoke earlier of the development of their beam weapons. The news that they are placing in orbit a 100-ton space station with a crew of ten astronauts, in addition to the information we have on several interception tests that took place in space, which are the technological and operational precondition for the conquest of space, plus the news on the funds for civil defense (two billions of dollars per year), and the ongoing psywar offensive, should make us think, and force us to have a more serious attitude toward the defense of the country, similar to that which Lenin taught to the Russians. This will imply an in-depth study of the problems of defense in the nuclear and space age.

It is for this reason that for years I have supported the need to create a Center for Aeronautics Studies, as was first proposed by the forerunner of air power, Giulio Douhet, in the building that he left for this purpose.

It is time we decide to put an end to the nominalist confusion in matters of military strategy caused by the babel of languages, acronyms and pseudo-strategies. These are nothing but policies adapted to Soviet progress in the field of armaments, and, sometimes responding to some particular interest of a nation or even of an armed force. The strategy of flexible response is a classic example of this.

It is inadequate for the defense of the West and this has been acknowledged even by Gen. Rogers who, as is known, proposed another new strategy, the Air-Land Battle 2000, that appears to be another contribution to the jungle of definitions, and therefore to the confusion of ideas.

It is time, therefore, to abandon the paraphrases and euphemisms and to express openly strategic concepts in their classical terms.

It is time to study war in its forms and features as a function of scientific and technological progress.

Piers Wooley

It is a great privilege for me to be speaking with this very distinguished group of generals. My relative youth almost intimidates me, although I hope you will bear with me as I discuss the problems we are facing in Britain today.

Britain, historically since 1945, has attempted to change from being a major political power to that of a more minor European power, and this has led Britain to reconcile itself to a defense policy integral with other powers rather than as independent forces in their own right.

This has involved economic questions. It has led successive governments to underestimate the need for conventional defense and certain developments of new technology, mainly nuclear weapons and beam weapons. It is the case that the only time I have contact with people to discuss defense is when I come to mainland Europe. The situation in Britain with the journalists, many of whom were willing to discuss these questions, is that the proprietors of the newspapers feel very strongly that any continuation of the discussion surrounding defense raises the scares of the disarmament issues and the thing called "CND" (Committee for Nuclear Disarmament), and people say therefore that discussion should go no further.

Now this brings us to a particularly important point, because at the moment we have a Conservative government in Britain. Prime Minister Margaret Thatcher gives the impression of taking a very strong stand against the Soviet Union. For many of her speeches, she has been accused of carrying a grudge against the Soviets. Sometimes, it's been called megaphone diplomacy. But the problem with Mrs. Thatcher is that the economic policies are leading to a reduction in our conventional capabilities and also in our research and development capabilities, in such fields as E-Beams, as well as in fusion. This is very serious and the problem is that most people aren't aware of the problem, because they don't look any deeper than the speeches that Mrs. Thatcher makes from time to time. Now the difficulty is that we have much of the technology and scientists who could do work on this.

Development of fusion power, for example, started in Britain quite a long time before other countries. It started in fact in Harwell. But it was due to a lack of interest (conservative with a small "c" minds) that it was felt that somehow we were sufficient in the area of fission power and also fossil-fuel power and that anything that fell into new areas such as fusion was not necessary and was too expensive, and somehow wasn't going to "pay back" the investment for many years.

Our politicians and advisors to the Treasury of London are very, very conservative. They usually have horizons of about five years and that's extraordinary when it comes to planning for defense. This is tied into the fact that in 1963 Lord Plowden, who was to a large extent in control of broadcasting, published a government White Paper which looked into plans within the government sector that were particularly concerned about what is called "lead times" in the defense and civilian capital areas. In

Britain, in the planned lead times to take place in, for example, frigates, there is a dispute at the moment about what sort of frigates should replace the present type, two of which were destroyed in the Falklands conflict. Now, any decision about defense planning has to go through twenty separate commissions. Some of these committees overlap, but the net result is that from the inception of the project to its initial completion is between ten and twelve years. If we go back to what Lord Plowden said in his report, he said that defense planning should not be taken any further than five years, that was a long time as far as he was concerned.

You see from this that any investments in the areas of beam weapons are not straightforward. Civil servants are trying to protect their positions, so they create methods which effectively block any new progress.

The other side to the problem in research and development is that the amount of investment going to further education and research in the universities is part of a tradition from before the last war, and not until 1975 were budgetary problems allowed to arise. This is again part of the economic policies of the government, which believes that building for the future is not important.

If Britain is to participate in any E-Beam research and development, it is absolutely essential that the finances are provided for institutions such as Rutherford and Cavendish. If it is not done, we can forget about anything as far as these projects are concerned.

Now, sad to say, these are the facts.

The fact of the matter is that in the 1950s, Britain started with France toward development of fusion power. Now, the only substantial research being done on fusion is a joint project, at Culham, in Oxfordshire. I am afraid that there is a matter which intensifies the problems of E-Beam development: that any transnational and multinational parameter to the problem brings up a principal problem illustrated by the work in Tornado, which involved increased costs, bureaucratic problems, and lead times. The idea of Tornado back to the late 1950s initially involved more than six countries. But, for financial reasons, perhaps a lack of will to perform, certain governments, like the Canadian government, came to believe that we needed a much more advanced fighter-aircraft. The result of that is that planning went on so that the first variant, the GR-1, which is the ground-attack variant of Tornado, has only now come on stream. In fact these squadrons are not yet equipped with F-2, which is the interceptor version of the aircraft. Now, that is a fault: 25 years after the inception, the weapon finally had shortcomings.

One example is that of avionics. Originally, an organization was set up with the European partners to produce the avionics on this aircraft. The trouble is, again, that there is a lengthy lead time; many of the problems were with the British, some with the Germans, and also the Italians. Here was a European idea and Europe was incapable of carrying it out. It was 25 years on stream when it was realized that the F-2 variant interceptor ver-

sion was not adequate. It could not take on the Foxbat/Mig-25, was not effective.

For two years, Britain has been aware of these problems. But we have an extraordinary civil service which rivals mention anywhere in the world. It has its own rules, its own jobs, and is impotent when making planning decisions. It has no intention of changing.

As the result of defense cutbacks, there are problems in the area of flexible response. The fact is that, with all the admitted problems for Britain, Germany, and Italy to a lesser extent, without it, there would have been great difficulties. The CND is 25 years old, and 25 years ago, there was growing talk of a tripwire, and we ended up with flexible response. This was discussed in the late 1950s, up till 1960. The Labour government put Polaris into effect, and there was no split in views when it came to nuclear affairs. In 1979, at the meeting of the Nuclear Planning Group in Guadalupe, a British Labour government and a German Socialist government agreed on the double-track. Today, people no longer believe the existing system is attractive. This is not just the left-wing; I have worked on public opinion polls, and know the views. The

perception of the U.S. is changing.

Most would like to see the present arrangements continue. But we are small partners. We like to thank the Americans, especially for what was done through and after 1945. But the policies have not been projected well. There was the PD-59 memorandum, for limited nuclear war, and all the peace groups said that the U.S. President was actually thinking limited nuclear war was possible and could be successful. This met fierce resistance in Germany, since it treated German territory itself as a battlefield. The same with the Air-Land Battle (ALB) exercises, which was another example of the lack of awareness.

If we are to be successful, and try to get E-Beams acceptable, and make people understand it is survival, not destruction, we must consult with the Americans, otherwise CND will gain.

We could at some point soon have a Labour government in Britain. We could have an SPD government in Germany. We could have Berlinguer in power in Italy. We must realize this because time is running out. If we fail in that, we won't have any defense of Europe.

Thank you.

Dr. Giuseppe Filipponi

The discussion on beam weapons has been up to now focussed only on strategic defense; that is, on the potential of these weapons systems to provide an adequate defense against a general nuclear attack. But very little has been said on the tactical use of laser and particle beam weapons.

Particularly in Europe, on the borders with the Warsaw Pact, the use of the new defensive technologies in the context of a strategy based on defense will revolutionize the present conceptions of how to manage a battle.

One example suffices. In the battle scenarios according to the Mutually Assured Destruction (MAD) doctrine, we can say that any weapon is reduced to only one function: to launch explosives, as powerful as possible (nuclear) against the enemy.

Ships, submarines, aircraft, missiles and artillery are viewed and used only to this end. This strategy led the western armed forces to lose the true understanding of the purpose of a war: that is, in the final analysis, the occupation of the territory of the enemy. The Soviets, on the contrary, never forgot this concept. The USSR has accepted the verbal formulation, but not the substance, of the MAD doctrine. This is proven by the fact that the Soviet Union is the only country which has an effective civil defense program.

In the context of the Mutually Assured Survival doctrine, we must reconsider our air, naval, and land forces, since the armed forces would once more have a classical role as opposed to what they had under the MAD strategy.

We must immediately say that Soviet advantage over the West in the tactical applications of beam technologies is undoubtedly superior to the advantage they have in

strategic forces. Even though the U.S. increased their effort recently by 60 per cent, it is still inferior to that of the Soviets.

We must add that the particular strategic position of Italy in the Mediterranean on the southern flank of NATO poses to our country special responsibilities on the need for an accelerated development of such systems for the navy, the air force, and for the land forces.

I am not speaking of the future, but of the present; of what can and has to be done to enable our armed forces to fight on equal, and possibly superior, bases as the potential adversaries that are already developing these new weapons. We should not give to our soldiers the weapons used in the last war, but we must instead keep our feet on the ground and this means to think toward the future. Just one example.

During the Malvinas War, the extreme vulnerability of our naval units to attacks of seaskimmer missiles, like the Exocet or the Otomat, especially under a multiple attack became clear to everyone.

Traditional defensive systems, even the most sophisticated ones like the Dardo of the Elsig industries, are and will become ever more inadequate. The Dardo is a 40 mm cannon able to aim and shoot very quickly using projectiles that explode in a spray of fragments that will destroy a missile. The characteristic limitation in this kind of system is that the mass of the projectile takes a significant amount of time to go from the cannon to the target, especially if compared to the velocity of the missile. Given that the next generations of missiles will be more sophisticated, with the capability of changing their direction and velocity in the final phase of flight, we can say

that the already-high vulnerability of ships will increase even more. This will mean that, in the future, either this problem will be solved or naval forces will be composed only of submarines.

We already know that the Soviets have a cruiser of the Kirov class that is equipped with a laser of unknown power, probably in the 2-3 MW range, using infrared frequencies; therefore probably a chemical laser with a range of action of 10-14 km around the ship. The American navy must catch up, and is developing a 2.7 MW chemical laser (Miracl) to the same end.

These are well known lasers. Using the reaction $H + F = HF$ (Hydrogen + fluorine = hydrogen fluoride), it is possible to obtain a high power CW laser with a wavelength of 2.5-3 micrometers. This would be good in space, but the atmosphere exerts a strong absorption in this band of the spectrum. It is easy to change the wavelength by using deuterium instead of hydrogen in the chemical reaction that pumps the gas. The DF emits radiation of 3.5-4 micrometers, a region of the electromagnetic spectrum where the transparency, even with strong moisture, is very high. The functioning of the DF laser is analogous to the HF laser. The excitation energy is always provided by the synthesis reaction. A pump will be needed to extract the exhausted DF and special tanks to store it. Obviously the deuterium costs more than the hydrogen, but this is not a big problem.

In Italy, there is still no industry with the technology to develop such high-power lasers, but there are a lot of chemical industries that could be mobilized to this purpose, like the SNIA Viscosa and others.

Another laser that could be good for the defense of naval units is the CO_2 -laser with electric discharge. Also in this case the frequency of emission is in a region of high transparency, 10.6 micrometers. Another advantage is the very high efficiency of up to 30 per cent, while in the chemical lasers efficiency is around 5-10 per cent. The only problem is that the power needed to drive the laser is very high. To illustrate the problem, American laboratories made a cartoon some years ago showing a very small laser connected to a big cable and a gigantic generator.

This problem would be easily solved by ships using nuclear propulsion.

It is useful to recall at this point the project of the mid-sixties to build an Italian naval vessel powered with nuclear propulsion. The project has been sabotaged, like all the nuclear programs in Italy.

This sabotage is still continuing and is destroying the Italian economy. The application of high-power lasers in industries in Italy is today also blocked for the same reasons, and by the lack of power on the Italian grids due to the decades-long sabotage of Italian nuclear plants. Within the new strategic conceptions it will be necessary not only to resume and complete the project of the nuclear-propelled ship, but also to finally implement the electro-nuclear program.

Having adequate power supply it could also be possible to develop more sophisticated lasers like the eximer,

the krypton fluoride or others. They are pumped by an electric discharge and produce radiation of shorter wavelength in the blue-green up to the UV band of the spectrum.

Blue-green lasers able to penetrate seawater could be used in antisubmarine applications. It is difficult to say if submarines could be attacked in this way, but they surely could be identified. I can say that on March 12, professor Edward Teller announced in a conference at the Lawrence Livermore Laboratory that the era of invulnerability of submarine-launched missiles was over.

Less powerful lasers, in the hundreds of KW range, have already been used in antimissile tests for defense of aircraft. At this point, it may already be possible to create squads of bombers accompanied by one or more aircraft used for electronic jamming, and by a couple of aircraft equipped with lasers for antimissile defense. Such a squad would be de facto unassailable if the counterpart does not have in its turn a beam weapon defense system. The same concept can be applied for groups of tanks and other land forces.

I would like to make a last observation for the defense of a territory like Italy, that is only a few minutes away from the launch of short- and intermediate-range Soviet missiles. In this case, point defense will have to be specially developed. We will need very high-power chemical lasers of at least 10 MW; if we want to be sure we can down the enemy nuclear warheads, 100 MW would be better. To build 10 MW lasers is possible with present technologies, since lasers of 2-3 MW already exist. To reach the 100 MW level, an amplifier is necessary. To this end the free electron laser will be especially important. It has already been realized in one French and one American laboratory. The Frascati lab in Italy is working on an FEL, since they can already use a relatively intense electron beam generator. In the coming year we could have the first results. This is a very important project and has to be adequately supported.

The devices for the acceleration of particle beams have a special importance in this context. Italy has a good tradition in this field. A new and very sophisticated machine is under construction at the University of Padua while another is underway at the University of Reggio Calabria; this will place Italy in the first ranks of international scientific research in this field. It is now believed that area defense of cities and industrial areas will be accomplished by big particle accelerators.

These are complex and expensive systems. In Texas the Americans are building the Desertron project, an accelerator of 100 km diameter that will provide to the accelerated particles an energy of 10 trillions electron-volts. It will cost some billions of dollars. Four or five of these systems would give the U.S. an almost perfect antimissile defense.

We could say the same thing for Europe. One of these accelerator rings could be built in Italy. In fact, the idea suggested by many to support with an international effort the construction of one of these accelerators in Italy, has a special importance in this context.

EXECUTIVE INTELLIGENCE REVIEW TRANSLATION

"Izvestia," November 15, 1983

"Sabbath at the Hotel Majestic"

"Outwardly, they in no way looked like cavemen. They were well-dressed, clean-shaven and their manners were courteous and polite. And the conference hall in the chic Roman Hotel Majestic where they assembled in no way resembled a cave. But all it took was to turn up in that hall and listen to the speeches, and no doubt remained: you were among the troglodites. They came to Rome from various countries, on invitation from a certain Lyndon LaRouche. In the United States, this economist by profession sought to advance his presidential candidacy in the last presidential elections, but burned out in the very first steps. Now he is once again trying to run. As the hobby-horse of his electoral campaign, LaRouche has chosen space weaponry. He was delighted with the proposals Reagan made on March 23 of this year, to fill near-earth space with lasers and other types of 'total weaponry,' and now he is sparing no effort in the propaganda of this misanthropic idea. The get-together at the Hotel Majestic showed that both Reagan and LaRouche have followers in the old world.

"...The first to come up to the microphone was the proper-looking Signora Fiorella Operto. On the program of the speakers, she was identified as a member of the 'Club of Life,' financed by the same LaRouche. The theme of her presentation sounded like this: 'Why Western Europe should join in the production of space weaponry.'

"Why indeed? In order, proclaimed Fiorella Operto, to counter the 'Soviet threat.' As for the nuclear 'Persings' and 'Tomahawks,' which Washington is bestowing upon the western Europeans, they—so she said—can help the West only partially.

"'You should get space weaponry'—that was the leitmotif of the presentation of the American Paratroop General V. Warner. But something else, too: 'alongside the creation of space weaponry, it is necessary in the future to increase the production of nuclear missiles and all types of conventional arms.' He finished his presentation amid the applause of those present, among whom were several high-ranking

representatives of the Italian Defense Ministry. The elderly Italian General G. Macri, who used to serve in special units of the American Army in the Federal Republic of Germany, spoke in the same vein. 'We will answer the Soviets with space weaponry,' he appealed to the audience. Of what deadly sins the enraged orator did not accuse our country!—including that the Soviet Union has outstripped the West in the creation of space weaponry. The general, naturally, kept quiet about the fact that it is precisely the Soviet Union that is coming out against the militarization of space, and at the last 38th session of the United Nations General Assembly introduced a draft treaty to ban the use of force in space and from space against the Earth.

"It was shameful and horrifying to listen to the French Col. M. Geneste. This warrior was presented as the 'father of the French neutron bomb.' He talked breathlessly about how his offspring kills, accompanying his story with slides. 'It is necessary immediately to supplement neutron weapons on earth with laser weapons in space'—this was the conclusion of Geneste. He was supported by Bundeswehr Col. H. Seuberlich and other speakers—military men, pseudo-scientists, and journalists who have put their pens to the service of military business.

"In Rome, LaRouche and his supporters held already their second sabbath of recent weeks. Setting aside the personal ambitions of this unsuccessful aspirant for the presidential office, then the aim of these get-togethers is to propagandize among the Western European public the 'advantages' of the Reagan proposal to spread lethal types of weapons in space. Understanding that naked propaganda will not accomplish anything, Western European industrialists are being asked to join in the creation of 'global space weaponry.' They are being seduced by tens and thousands of billions of dollars, which the U.S. is not skimping on allocating for the militarization of space. The Reagan Administration wants to bind Western Europe even more closely to its criminal policy in the area of nuclear and space armaments."