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FYI

CHRONOLOGY OF EVENTS IN THE U.S.-ISRAEL
COOPERATION ON S.D.I.

March 26, 1985 Secretary of Defense Weinberger issues letter of invitation for participation in the SDI to the NATO allies, Japan, Australia and Israel.

April 17, 1985 In an interview in the Hebrew magazine "Bamahane", Prime Minister Shimon Peres lauds the American invitation for foreign involvement in the research effort - comparing the offer for participation to Columbus asking an Israeli to join his expedition to the New World.

August 15, 1985 The Institute for Advanced Strategic and Political Studies at Tel Aviv University holds a one-day seminar on the SDI. Speakers include: Edward Teller, Hebrew University physicist Shaul Yatziv, Tel Aviv Univ. Prof. Micha Sharir, and Member of Knesset and physics professor Yuval Ne'eman.

August 19, 1985 U.S. and Israeli officials conclude an agreement to apply SDI research to the area of cardiac medicine. The agreement was

reached between Edward Teller and Israeli Health Minister Mordechai Gur. The research was to be coordinated on the Israeli side by Prof. Dani Gur, a heart surgeon at Tel Hashomer Hospital.

December 1985 A large delegation of Israeli industrialists arrives in the U.S. for two weeks of talks on SDI. The delegation is headed by Dr. Ben-Zion Naveh.

December 1985 The Jaffe Center for Strategic Studies of Tel Aviv University issues a lengthy report encouraging Israeli participation in SDI. The report, "SDI: The U.S. Strategic Defense Initiative and the Implications of Israel's Participation" was prepared by Dore Gold.

January 30, 1986 Representatives of the American Israel Public Affairs Committee testify before the Senate Armed Services Subcommittee on Strategic and Theater Nuclear Forces supporting research into tactical missile defenses.

February 18-23,
1986 Director of the Strategic Defense Initiative Organization, General James Abrahamsom, visits Israel for high-level consultations

on Israel's potential contribution to the SDI program.

April 12-20,
1986

A study mission headed by Joyce Starr of the Center for Strategic and International Studies at Georgetown University visits Israel for meetings with Government and private sector officials on U.S.-Israeli cooperation on SDI. 20 U.S. companies were represented at the meetings including: Boeing Aerospace, Grumman Corp., Martin Marietta and General Electric. Among the 16 Israeli companies participating in the discussions were IAI, Rafael, El-Op and some smaller firms. The first SDI contract was signed between an undisclosed U.S. firm and Ben Gurion University in Beersheba.

May 6, 1986

In an official Pentagon ceremony, Israeli Defense Minister Yitzhak Rabin and Secretary of Defense Caspar Weinberger sign an official Memorandum Of Understanding setting out the specifications for Israel's involvement in the SDI research effort.

(50)

PUBLIC OPINION, ARMS CONTROL AND STRATEGIC DEFENSE ISSUES
An Overview of 1986

Introduction

In a democracy, effective national security policy formation requires an understanding of public opinion that often constrains one's policy options and political maneuverability. This overview focuses on those public opinion variables that, during 1986, affected the environment for national security decision-making in the areas of arms control and strategic defense.

The report integrates, synthesizes and interprets quantified public attitudinal data and professionally authored research reports, papers, journal articles, and media reports pertinent to U.S. public opinion toward U.S.-Soviet relations, arms control, SDI, and general defense issues.

Key conclusions come from polls conducted in March, June, September, and November of 1986 wherein the questions were developed after consultation with NSC staff responsible for these issues. Particular effort was made to address issues not included in the media and syndicated polls, which are also considered in the analysis where appropriate.

The key findings of this analysis are:

- Efforts in SDI*
- An over-arching public opinion consensus is not possible for a foreign policy in the 1980s, no matter how credible and consistent the policy;
 - Public opinion support must be generated for each foreign policy issue separately and different coalitions of support will form from issue to issue;
 - Americans distrust the Soviet Union, more for their behavior than for their ideology, and understand the need to deal "realistically" with them, but feel that some resolution of differences can be achieved through dialogue; *63% say the U.S. should speak to the Soviets*
 - Interest exists for both the substance and process of arms control negotiations, which puts conflicting pressures on the administration to be tough and to reach an agreement; *63% say the U.S. should speak to the Soviets*
 - While concerned with the broad areas of arms control (i.e., negotiations, verification, and agreements), the American public is ignorant of specific arms control proposals and which side suggests them;

- publ's opinion*
- — • Reykjavik invigorated public support for SDI;

US public thinks we're ahead in conventional, SDI etc.
glad since more willing to deal with it

US public more in favor of SDI - very pro. now - US for defense
(con. to the U.S.) *US public - but USN believes SDI is workable. - this concern is*

- . Cuts in defense spending are preferred to any other means of reducing the budget deficit; and
- . Support for the U.S. defense commitments to Western Europe is strong.

This report is divided into seven sections: a brief discussion of U.S. foreign policy attitudinal cleavages; an overview of American attitudes toward the Soviet Union; opinions on summitry; knowledge of arms control proposals; attitudes toward SDI; a presentation of a variety of related defense issues; and a conclusion.

Foreign Policy Consensus

In the U.S., various attitudinal cleavages exist that make national security and foreign policy consensus-building difficult. Prior to Vietnam, Americans generally oscillated between attitudes favoring internationalism or isolationism. The U.S. was either involved in international affairs or it was not, and the public left the policy particulars up to the decision-makers.

Since Vietnam, a new dimension has been added to American foreign policy attitudes: the desired level of militant or cooperative activism. Americans now have opinions not only on whether or not the U.S. should be involved in world affairs, but how it should be involved. Particular policy decisions, including arms control and strategic defense issues are not accepted at face value by the public.

Americans can be classified into one of four foreign policy opinion groupings, which are roughly equal in size:

- . Isolationists (about 30%) believe that the best way for the U.S. to handle its national security interests is to avoid becoming involved with other nations. They are, in general, the less-well educated, the poor, women, and minorities. When the use of U.S. military forces is a foreign policy option, they separate into "belligerent" (those who favor such use) and "timid" groups.

Isolationists tend to fear nuclear war, feel things are going too slowly in arms control negotiations, oppose SDI, and favor a cautious approach to dealing with the Soviet Union. An arms control agreement is more important than the substance of that agreement for these Americans, who prefer that policy focus be domestic and socially constructive in nature.

- . Accommodationists (about 20%) believe the U.S. should be involved in world affairs, but they believe this effort should be largely cooperative with other nations and eschew the use of U.S. military forces abroad. This group has a high female component, is well educated and extremely liberal.

Accommodationists have some attitudes similar to the ones listed above for isolationists, but they are also politically more active and better informed, push for "real" arms control progress at summit talks, favor allowing Soviet spokesmen on U.S. television, and have more trust in the Soviet Union than do other Americans.

- . Internationalists (about 25%) share a commitment for U.S. involvement in foreign affairs with accommodationists, but they are more aggressive in their beliefs on using military forces abroad. They are most likely to be men, well educated, and somewhat conservative.

The greater aggressiveness of internationalists manifests itself in attitudes of distrust toward the Soviet Union, wanting the U.S. to get more than it gives in arms control talks, and support for SDI. This group does favor some form of cooperation, however, and seeks "real" arms control progress at summit talks and permitting Soviet spokesmen to make their point to American media audiences.

- . Unilateralists (about 25%) believe that the U.S. should pursue its national security interests regardless of the interests of other nations. They are likely to be men, of moderate education, white, and conservative. Some ("hard" unilateralists) are strong proponents of the use of U.S. military power abroad, while a smaller group ("soft" unilateralists) fear that reliance on U.S. military power abroad can impinge on rather than enhance U.S. freedom of action.

Unilateralists generally support the Reagan administration on most issues, particularly in dealing with the Soviet Union and strategic defense issues. This is the group most likely to oppose an arms control agreement if it gives up any perceived U.S. advantage.

The public consensus-building dilemma should be apparent. Accommodationists and most isolationists are natural partners opposing military activism, but they diverge on international involvement. On involvement, internationalists and accommodationists share similar attitudes, but they diverge on military activism. Most unilateralists and internationalists agree on military activism,

but they differ on the type of international involvement preferred.

This means that the nature of the specific foreign policy issue determines public consensus. If the issue does not require aggressive U.S. action, then a coalition of internationalists and accommodationists can be formed. However, if military or political activism is a key ingredient in the policy, then the coalitions are likely to be between unilateralists and internationalists (the Reagan coalition) with accommodationists and isolationists in opposition.

This strongly suggests that an over-arching public opinion consensus is not possible for strategic defense policy in the 1980s. Rather, public support must be carefully hammered out on each specific policy point. The reasons for this will become clear as attitudes towards specific issues are discussed below.

Attitudes Toward the Soviet Union

American attitudes toward strategic defense issues such as arms control or SDI can best be understood within the context of American opinions toward the Soviet Union. Given impetus by the successful conclusion of the Geneva summit in November 1985, U.S.-Soviet relations became a major foreign policy focus in 1986.

Americans are extremely suspicious of and have no illusions about Soviet international behavior. American distrust is not strongly based on ideological differences, but relates more to the dislike for a perceived Soviet aggressive international behavior and its threat to the U.S.

Large majorities believe the Soviet Union wants to be the dominant strategic nuclear power in the world in the 1990s, will deliberately use false or misleading information (disinformation) to deceive other nations, engages in arms control talks solely to buy time to build up its military, and exploits journalists.

Given these feelings, it is not surprising to find that most Americans feel the U.S. "should tell it like it is even if it means offending" the Soviet Union, which might "increase tension." Also, it is no surprise that people prefer that the U.S. try to "get more than it gives" in arms control talks with the Soviets.

This helps explain the public's favorable response to President Reagan's saying "no" at Reykjavik and to rather low public concerns expressed throughout 1986 that a second summit would not take place.

Americans do not, however, fear Soviet spokesmen airing their views of U.S.-Soviet relations on U.S. television. They did not support Reagan administration officials who said Soviet officials should not be given "air" time to speak out on American policy toward the Soviet Union.

Americans are not totally pessimistic about the chances of improving relations between the two countries. A majority believes that the differences between the two superpowers are not so great that a permanent peace can't be achieved.

In presenting its position to the American people on U.S.-Soviet relations, the administration should focus on three mutually reinforcing concepts: strength, realism, and dialogue. The U.S. needs a strong defense because, in reality, the Soviet Union cannot be trusted, but through negotiations and dialogue it might be possible to reach arms control and other agreements to reduce the risk of conflict between the superpowers.

Summitry

Throughout 1986, the public expected a second summit meeting between Reagan and Gorbachev. However, they were never too concerned about whether or not it would actually take place. Expectations were that a second summit would be generally useful but would not produce any significant results.

For most Americans, a second summit was not important enough to warrant the U.S. to make preliminary concessions in arms control talks or on regional issues to induce the Soviets to the table for the second summit. However, dialogue with the Soviet Union was deemed important enough that most Americans felt some talks should go on even in the face of the Danilooff affair. Soviet human rights abuses are not sufficient reason to halt talks in other critical areas such as arms control.

In the event that a second summit would not occur, the public was predisposed to blame the Soviet Union for the failure to meet. In fact, when the Reykjavik mini-summit broke up without an agreement, most Americans held Gorbachev responsible for the failure to reach an agreement.

While Reykjavik was viewed as a failure because it did not produce a specific arms control agreement, Americans feel that the discussions held in Iceland will eventually lead to some agreement. The public believes that the U.S. stance at Reykjavik is a "reasonable bargaining position that may produce results but won't overly risk US security."

Arms Control

In general, Americans are skeptical of the benefits of arms control negotiations and prefer to be tough at the bargaining table. However, Americans believe in the process of compromise, negotiations, and agreements, and some feel that the president has not proceeded fast enough in this area. This is a "catch 22," for the public is wary of the outcome of negotiations with the Soviets, but believe in the process and want it to move forward.

This explains the public furor over the announcement that the U.S. might not comply with SALT II. While Americans believe the Soviets violate arms treaties, they also believe the Soviets do not gain substantially by these violations. Hence, the public opposes U.S. withdrawal from such treaties. The competing forces at play in American public opinion sometimes place more emphasis on the arms control process and agreements than on the substance of and compliance with those agreements.

Americans seem to have a broad understanding of the arms control process and take stands on major issues such as verification, which they overwhelmingly support. However, there is no evidence that Americans have even a moderate level of sophisticated knowledge of specific arms control issues. The majority of people have not heard of nor can they accurately identify the sponsor of elementary U.S. and Soviet arms control proposals.

Although Soviet arms control proposals are more familiar to Americans than are U.S. proposals, there is no evidence that the Soviet public diplomacy offensive has produced any significant public opinion gains for the Soviets. Americans cannot associate these more familiar proposals with the Soviet Union.

This same lack of understanding of specific issues is further revealed in the public's lack of comprehension of the post-Reykjavik controversy over eliminating strategic nuclear forces or ballistic missiles. Most Americans think they are the same thing. Few truly understand what the U.S. position is in this area.

SDI

The president's stance on SDI at Reykjavik received overwhelming public support and invigorated attitudes towards it. While a "defense" against nuclear weapons has traditionally been well received by the American public, support for SDI had begun to decline by September 1986. The Soviet's continued efforts to eliminate it and the president's resistance to this effort brought back the wavering supporters.

In fact, one of the most convincing arguments in favor of SDI for many Americans is that the Soviets believe it will work. It appears that Soviet anti-SDI efforts have been counter-productive with the American public. Americans do not believe the anti-SDI argument that "it simply won't work" in part because of Soviet efforts to stop SDI.

The public selects SDI as the preferable nuclear war deterrence option to either deterrence by mutual assured destruction or the total elimination of nuclear weapons. Most would prefer some combination of a reduction in offensive nuclear weapons and a viable strategic defense.

The "bargaining chip" argument for SDI is popular with about half the public because they believe SDI keeps the Soviets at the negotiating table and that it can ultimately be traded for an arms control agreement. The price many Americans want to receive for giving up SDI appears to be high, however, for they supported the president's position at Reykjavik when he did not cash in the "chip."

Americans believe the Soviets are conducting anti-missile defense research. Most believe the Soviets trail the U.S. research effort, which differs from 1985 findings. This belief in American superiority appears in other areas such as conventional forces.

The strongest argument against SDI is its cost. People are aware of and convinced by the argument that it is too expensive. Also, they are concerned that Congress will not appropriate sufficient funds to see the work to completion. Given the public's overall concern over the deficit and opposition to more defense spending, SDI's most serious public opinion challenge will come in the area of its cost.

Defense Issues

There is a belief that if all strategic nuclear forces were eliminated, the U.S. would have conventional military superiority over the Soviet Union. When people are informed that the Soviet Union would have conventional superiority, most favor the retention of some nuclear weapons for deterrence purposes.

To reduce the deficit, most Americans prefer that only defense spending be cut instead of cutting domestic spending, cutting both equally, or raising taxes. American concern over defense spending is so strong that faced with both the elimination of nuclear weapons and the emergence of Soviet conventional superiority, most would reject increasing military spending to reach conventional parity with the Soviets.

Americans recognize Europeans' fears that the U.S. might waver in its commitment to Europe's defense. This fear seems to be unfounded as throughout 1986 large majorities indicated they favored sending troops to defend Western Europe should the Soviets invade. This was true whether or not the U.S. might become involved in a nuclear conflict or whether or not European nations support U.S. anti-terrorism measures.

Conclusion

Recently published research indicates that Americans are not preoccupied with the threat of nuclear war, as many scientific and political leaders suggest. Rather, Americans tend to believe that "nuclear war is not going to happen at all, or that if it does happen it will be too far in the distant future to be of pressing concern to them personally."¹

This superficial concern with nuclear war and the previously mentioned suspicion Americans have of the Soviet Union underlie the basic attitudes toward strategic defense issues found throughout 1986. There is a broad understanding and approval of the general principles of arms control negotiations and active defenses against nuclear weapons, but there is a significant lack of a sophisticated comprehension of the specific details of arms control issues and proposals, the status of strategic defense against nuclear weapons, and the difference between U.S. and Soviet conventional and nuclear military capabilities.

Hence, public diplomacy efforts with the American public strike responsive chords when they deal with the basic issues of negotiations (dialogue), verification (trust), and self-defense (strength). When the discussion becomes more specific, the public tunes out. Any effort to explain the nuances of specific policy positions must be couched in terms of the broad attitudes held by most Americans.

For example, Americans do not differentiate between strategic nuclear forces and intercontinental ballistic missiles, much less who proposed eliminating which at Reykjavik. An explanation to the public must not only present the American position, but explain why that position is held in terms of whether or not it is more or less verifiable and provides more or less defense against the Soviets. The public may never understand the specific position, but they will appreciate why it is held and be able to remember that.

¹Howard Schuman, Jacob Ludwig, and Jon A. Krosnick, "The Perceived Threat of Nuclear War, Salience, and Open Questions," Public Opinion Quarterly (Winter 1986), p. 519.

Underlying all of this is the fact that the president's public image has been seriously damaged by the Iran arms-transfer, Contra funds-diversion controversy. This political strife has been the major media focus for nearly three months and the side effects have begun to show. Criticism of how Reagan is handling other issues is increasing.

For example, the immediate post-Reykjavik support for the president's refusal to trade SDI for significant reductions in Soviet and U.S. nuclear weapons (62% in a 10/14/86 CBS/NYTIMES poll) has fallen off by one-fourth (47% in a 1/21/87 CBS/NYTIMES poll). Opposition to the president's stance has nearly doubled (from 22% to 40%).

This alone means that maintaining public support for the president's arms control and strategic defense programs will be more difficult. This is further compounded by the recent shift in focus from research to the possibility of early deployment. There is little data available on this new development, but given the general depression in the president's popularity, it could well backfire and erode the support for SDI that has been developed over the past few years.

Iran sales undermining J-pot for other stuff.

Domestic Circulation in Europe,

was dull after Lybia bombing.

Brits were fed Germans were the France.
(except 500)

POLICY . . . CONTINUED

military R&D has only recently exceeded the level in real terms that it reached in the mid-1960s, and it is still much smaller relative to GNP than it was then, despite the existence of a much larger technical community to spend the funds. However, there are still significant costs in diverting some of the most capable talent away from civilian-related innovation. Not only is such talent diverted by military spending, but the costs of R&D are bid up throughout the whole economy, so that many industrial R&D projects appear less attractive than they would otherwise have been.⁸ At present, the SDI is only in its early stages, and if spending plans are realized, military R&D spending by the 1990s is likely to rise well above the levels of the 1960s even as a fraction of GNP. This is especially true when one takes into account the probability that, for the reasons stated earlier, present cost projections are gross underestimates. Many economists today believe that a part of the explanation of today's poor competitive performance of the U.S. economy is a consequence of the high levels of military R&D spending and procurement in the 1950s and 1960s, and we cannot afford to gamble today that they are not correct.

Before the President's speech, there were already substantial U.S. and Soviet research efforts to explore a wide range of technologies of potential value for ballistic missile defense (BMD). One can make a strong case that the United States ought to maintain such an effort in order to avoid the possibility of technological surprise. As long as both the superpowers maintain such large military R&D establishments, neither can afford not to remain abreast of basic technological developments, to be at least in a position to accurately assess their possible military implications. However, this kind of assessment is probably better carried out in a low-key environment that avoids premature identification with specific systems concepts, if only to avoid the creation of unstoppable political momentum which interferes with rational decision-making. The level of spending needed to maintain such an ongoing technology assessment is almost certainly no larger, and may be considerably less, than that which was already under way prior to the President's March 1983 initiative. Apart from that, the risks to the strength of the U.S. economy of presently projected levels of spending may far outweigh any possible military threat, although this is a judgment that lies outside the scope of this article.

8. Harvey Brooks, "What's Happening to the U.S. Lead in Technology?," *Harvard Business Review*, May/June 1972; and J. Herbert Hollomon and Alan E. Harger, "America's Technological Dilemma," *Technology Review*, July/August 1971.

POLICY ... CONTINUED

through diplomatic means, and that will continually exacerbate internal political divisions in the United States over the wisdom of the program. Such divisions run a serious risk of spilling over into public attitudes towards science and technology more generally as happened to some extent in connection with the Vietnam War.

As spending for SDI has grown, a justification increasingly put forward for the program has been the importance of the "spin-off" for civilian innovation and, by implication, for the competitiveness of the U.S. economy in the world. This justification has found reinforcement from the apparent concern in Europe that such spin-off will indeed occur and put Europe even further behind in the race for the high-tech frontier. Nobody doubts that there will be some spin-off. Indeed, just because SDI includes a large exploratory element, the spin-off is likely to be considerably greater than that from other recent military programs aimed at the development of better specified weapons systems. Many of the constituent technologies, such as high-power lasers and advances in computer programming, are of a generic nature and may have many applications outside the military. Two points must be made about this, however. First, much of the generic technology work was going forward anyway in various previous programs scattered throughout the defense establishment. Following the President's speech, there were perhaps \$2 billion of previous annual R&D expenditures that were simply collected in a single budgetary category and relabeled with little change in technical content or in the identity of the performing organizations. What will be added in future expansion will be a great deal of testing and hardware with little additional potential spin-off.

Second, while it is true that the attempt to elicit ideas from a broader technical community via the so-called IST program may produce some additional spin-off benefits, the benefit of this may be largely offset by segregating so much R&D effort in the military, where it tends to be more isolated from potential civilian users. This problem will be further exacerbated by a stringent budgetary climate in which new money for SDI is likely to be increasingly allocated at the expense of civilian R&D supported by the federal government.

The spin-off argument is hard to pin down because, in order to answer it, one has to ask the question, compared to what? To the extent that military R&D increases the total volume of R&D, military and civilian, there is no doubt increased civilian benefit, but this may be minimal compared with what would occur if the same R&D investment were made in other ways,

including incentives for expansion of R&D investment by industry. There are those who argue that, if it were not for SDI, the money would not be spent or would be spent on income transfer programs that do not generate new wealth. There are others who argue that a focused objective like SDI helps to ensure that R&D funds are spent more efficiently than if they are dispersed over many smaller projects dealing separately with the various building block technologies. This is a debate that has gone on inconclusively ever since the 1950s and will probably not be settled soon.

In my opinion, there is no evidence that megaprojects produce more results per dollar of expenditure than more dispersed expenditures, especially if the dispersed support helps to educate a wider community and to diffuse technical sophistication more widely through industry and universities. The focus on a single non-economic objective may, in fact, tend to discourage researchers from thinking of other potential applications of their work and from interacting with potential users of their results other than their military clients. There is good reason to believe that, if economic spin-off is what is desired, it is better to stimulate it directly than to try to derive it indirectly from military spending. The only argument against this is a political one: it may be easier to garner support for defense R&D than for other forms of R&D.⁶ Therefore, we should reconcile ourselves to the fact that any viable U.S. industrial policy is likely to derive from military policy for many years to come if only because of the traditional reluctance of Americans to accept government intervention in the market economy. Certainly this argument would have had some merit in the 1950s when even the National Science Foundation was forced to justify its basic research budgets by their contribution to improving U.S. military capability relative to the Soviets.⁷ But the American polity is considerably more sophisticated today, and we ought to be able to do better than that.

Usually neglected in the spin-off debate are the opportunity costs involved in alternative uses of technical resources. It is true that, even with SDI,

6. Richard R. Nelson, *High-Technology Policies: A Five-Nation Comparison* (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1984), especially chapter 7. Nelson's view is captured in the following quotation: "Policies strongly favoring certain classes of industry and providing considerable if broad-gauged industry guidance, however, simply will not be accepted in the United States unless they are tied, in a real or a symbolic way, to national security" (p. 85).

7. J. Merton England, *A Patron of Pure Science: The National Science Foundation's Formative Years, 1945-57*, NSF 82-24 (Washington, D.C.: National Science Foundation, 1982), especially Part III, Cold War Growth, 1954-57, pp. 211-345.

POLICY . . . CONTINUED

with the elements of complete secrecy and surprise, guaranteed that possible countermeasures did not have to be considered in the weapon design. The challenge in the development came completely from nature and not at all from the possible actions of an enemy. The only race was against time.³

By contrast, SDI is not a single weapon but a concept for a complete system, albeit with many novel and poorly specified components. If successful, it would have to be deployed on a global scale, with each step along the way to an effective final system being highly visible politically, and with every element of the system dependent on every other element in real time. For example, the malfunction of any one phase of the three-phase defense could seriously compromise the other phases.⁴ At the same time, critical potential vulnerabilities arise from myriad possibilities for enemy countermeasures, not the least of which might be the use by an enemy of some of the same component technologies as those developed for SDI, reconfigured to destroy the defense system before it could go into operation.

Another possible parallel for SDI is the Apollo program. Here, however, the scientific and technological base was much better established at the time of the decision to go ahead with the project. Like SDI, Apollo was a highly articulated and interdependent system whose parts had to work together in real time, but it was less complex and had far fewer components. Moreover, the final goal was much simpler and easier to explain and make understandable to the general public. Its goals did not mean different things to different participants to the same degree as is true for SDI. More importantly, there were no reactions of an opponent to influence the technical design; the only respect in which the opponent affected planning was through the challenge of time-urgency, defined by the fact that the project was a race with an opponent who appeared to be ahead at the beginning of the project.

Perhaps a closer parallel, because it was a purely military program, was the Polaris program beginning in the late 1950s. Polaris was probably similar in technical readiness to Apollo, and it was also an integrated system with a relatively simple and understandable goal—the creation of an invulnerable capability. Its logistics were somewhat more complex than Apollo; even more pieces had to work together, but most of the components of the system were at the “proof-of-concept” stage, and having all pieces work together in real time on a critical timetable was less of a problem. Not every piece of the

system had to work perfectly the first time, and the critical components could be tested separately. Like Apollo, Polaris was able to command virtually unlimited budgetary resources in a period when the tax system was configured to produce a rising “fiscal dividend” from economic growth. It was a highly classified project whose technical problems could be somewhat shielded from public view—a great political advantage compared to Apollo, which as a matter of policy had to be carried out in a goldfish bowl. Furthermore, Polaris did not much engage a broader scientific community beyond the military scientists and engineers in defense laboratories and defense contractor establishments. By contrast, in the case of SDI, an explicit effort has been made to engage the broader technical community, including university faculty and graduate students, in consonance with President Reagan’s original presentation of SDI as a challenge to the entire U.S. technical community. With respect to engagement of the broad technical community, Apollo was a somewhat intermediate case. The involvement of university scientists in Apollo itself was small because it was mainly an engineering task which, unlike SDI, did not require much new science. Only in the final few missions were scientific payloads designed by outside scientists a significant part of the mission as a whole. Nevertheless, an increasing number of university faculty and students participated in space science experiments using unmanned satellites and space vehicles, thus engaging a large scientific community indirectly. SDI is unique in the degree to which it has attempted to involve such a broad national technical community in a military enterprise whose goals are so politically controversial. Not even during the Vietnam War were so many defense-supported scientists in universities made to feel so much in complicity with unpopular goals.

The Shuttle was also probably comparable in technical readiness to Apollo at the time that the first major budgetary commitment to it was made, although this is less clear than for Apollo because the Shuttle was much more of a multipurpose program and its different purposes were somewhat in conflict with each other. In particular, the rationale for the Shuttle included economic or quasi-commercial criteria which affected the vehicle design, the operational planning, and the mission scheduling to a degree that had not been present in previous manned space ventures. As in the case of Apollo, however, the primary challenge to the Shuttle’s designers came from nature, not from the possible responses or actions of an opponent or even of a commercial competitor. Although the Shuttle did not have the aspects of a race that Apollo did, its development occurred in a much more constricted fiscal environment than earlier space and military projects, a situation likely

3. Herbert F. York, “Nuclear Deterrence and the Military Uses of Space,” in *ibid.*, pp. 17–32.

4. Harold Brown, “Is SDI Technically Feasible?,” *Foreign Affairs*, Vol. 64, No. 3 (1986), pp. 435–454.

POLICY . . . CONTINUED

to obtain even more strongly with SDI. This had the effect not only of inducing design compromises, some of which may compromise safety and reliability, but also of mobilizing greater opposition from within a technical community interested in scientifically more rewarding projects for which the Shuttle was seen as a severe competitor for funds. This is likely to be even more true for SDI not only in terms of scientific projects but also in terms of military projects related to conventional warfare, which will have a broad military and engineering constituency.

Another unique element of SDI is its sheer magnitude. The cost of the exploratory phases alone—which are the only parts so far authorized—is comparable in magnitude to the entire cost of Apollo, including its fifteen missions. Given the many technical unknowns, not to mention likely Soviet countermeasures, the estimated costs of an ultimate deployed SDI system, both capital and annual operating, have a much less firm technical basis than the cost estimates that President Kennedy had available when he made a somewhat analogous public commitment to Apollo. Even with this reduced technical uncertainty, the Apollo estimates proved to be low by, perhaps, a factor of five. Not only is the likely ultimate cost of SDI less certain, but I would hazard a guess that the scope of the research, development, testing, and evaluation (RDT&E) effort involved in bringing SDI to initial operating capability would be between ten and a hundred times greater than any major military or civilian project undertaken by the United States in the past. In this sense, it is truly without historical parallel. Hence the history of other “megaprojects” provides little basis for predicting either its technical or political evolution in the next few decades.

It is true that our industrial capabilities and the size of our science and engineering community are several times larger than what was available for Apollo, Polaris, or even the Shuttle. In the meantime, we have also learned a good deal about managing such large projects. Nevertheless, I suspect that the ratio of the magnitude of the RDT&E effort to the capacity of the existing industrial and science/engineering infrastructure necessary to undergird it will prove to be far larger than for any previous technical megaproject. This fact raises many troubling questions. Not the least of these is the problem of political sustainability over a sufficient span of time to convert technical plans into an operational capability. Even the Apollo program came close to foundering after the Apollo capsule fire in 1965, and it was only the high personal commitment, charismatic personality, and political skill of James Webb that carried it through that crisis of public confidence. In the case of

the recent Shuttle disaster, it is too early to say what its ultimate impact will be on the long-term public commitment to manned space flight in the United States. It could prove much more significant than is now thought. There are ample historical examples of the difficulty in maintaining public support for a complex technical program in the face of inevitable setbacks or disasters, especially if they are well publicized. One can anticipate many such in connection with SDI.

The size and duration of the SDI effort imply the creation of enormous vested interests against program changes and the necessity for a continuous political selling job on the part of several successive administrations. The possible effects of this high-pressure salesmanship on the American political process are troubling. Recent worries about the political influence of the military-industrial complex may pale beside what will be generated by SDI. Will the American public and Congress be constantly bombarded by scare tactics about Soviet intentions and achievements in order to maintain support for the effort? Can such intellectual integrity as still exists in the U.S. government bureaucracy and in industrial leadership survive the pressures of the constant need for selling the program to the American public and to our allies? It is a program likely to stretch much further forward in time between conception and initial operating capability than any prior public military or civil megaproject. That it could survive several changes in administration and in the political mood of the American public seems inconceivable, but in the meantime the potential for corruption of the American political process seems great.

Or, conversely, can the integrity and credibility of the U.S. technical community survive the politicization of such a large fraction of the scientific and technical effort of the country as sustaining the R&D for SDI may require? Many of the more responsible discussions of the appropriate R&D program have stressed the dangers of premature commitments to hardware and systems, and particularly to large-scale tests that would undermine the credibility of the ABM treaty before we even know whether SDI could achieve its goals.⁵ Yet the very size of even the early phases of the exploratory effort will tend to create enormous pressures to demonstrate concrete results with great public fanfare—demonstrations that are bound to have unfortunate repercussions on concurrent efforts to reach a *modus vivendi* with the Soviets

5. See Hafner, “Assessing the President’s Vision”; Zraket, “Strategic Defense”; and Brown, “Is SDI Technically Feasible?”

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Countermeasures to SDI

The excerpts below are from *The Large-Scale Anti-Missile System and International Security*, an 80-page abridged report published in February 1986 in English. The report was prepared by a Working Group of the Committee of Soviet Scientists for Peace, Against the Nuclear Threat, led by Academician R.Z. Sagdeyev, Director of the Institute for Space Research of the USSR Academy of Sciences and A.A. Kokoshin, a Deputy Director of the Institute of USA and Canada Studies of the USSR Academy of Sciences. There have been several earlier versions of this group's report published since 1983 under different titles (see *Strategic Review*, Fall 1984, for translated excerpts from the 1984 report).

The Soviets claim that this report, as did the earlier one, presents a scientific and political-strategic underpinning for Soviet analysis and criticism of the U.S. Strategic Defense Initiative program. While the report attempts to provide a comprehensive analysis of anti-missile defense systems, their problems, limitations and potential vulnerabilities, of particular interest is the discussion of various possible countermeasures which the Soviet Union may invoke to destroy or penetrate U.S. defenses.

The present report includes a number of new potential countermeasures that were not discussed in earlier editions. The list should be viewed with considerable skepticism. Some suggested measures would be of only limited utility, others would give warning of a Soviet strike and thereby negate the advantage of surprise, while still others are either technically difficult, may downgrade the performance of Soviet ICBMs or prove very costly to implement.

The abridged version of the Report by the Committee of Soviet Scientists for Peace, Against the Nuclear Threat presents the results of a comprehensive study of the scientific and technological aspects of the development of combat components of attack space-based weapons and subsystems supporting the functioning of these components, as well as measures and

means of countering strike space weapons, and the military, strategic and legal implications of the development of a large-scale anti-missile system, including the development of limited versions of such a system. . . .

The SDI concept implies the destruction of intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) **all along their trajectory**. This is the main difference between SDI and the ABMs designed and deployed in the late 1960s—early 1970s and intended only as defense systems at the terminal phase of a missile trajectory.

The missile trajectory may be tentatively subdivided into four phases:

- a boost phase during which the missile velocity reaches its terminal value (6–7 km/s);
- a post-boost phase where independently targeted warheads are separated and decoys are released;
- a midcourse phase during which all released bodies travel in space on their ballistic trajectories;
- a terminal phase (end of the trajectory) where warheads and decoys enter the dense atmosphere. . . .

The boost phase is characterized by two parameters: the time the missile reaches its nominal velocity and respective altitude.

The first parameter imposes stringent restrictions on how quickly the ABM system reaches its state of readiness and also determines the firing rate the ABM system should have to suppress the massive attack. Now the characteristic time of ICBMs and SLBMs is 200–300 s; however, it is much shorter for medium-range missiles or missiles of future generations. The altitude, the second parameter at which the terminal velocity is achieved, specifies which means should be chosen to “kill” attacking missiles. Of prime importance for neutralization of some types of weapons is whether this altitude is within the atmosphere (the effective height of the atmosphere is assumed to be 100 km in all estimates made below) or beyond it. At present the boost phase ends beyond the atmosphere; in the future it may end at 80–90 km. . . .

The midcourse phase has two typical features: it is the longest with the largest number of targets, true and false. . . .

Some American authors emphasize that depressed trajectories with short flight-time

SDI ... CONTINUED

may be typical for SLBMs and IRBMs (intermediate-range ballistic missiles). In this case, the midcourse will partially be in the atmosphere while its duration will be considerably shorter.

The number of targets may exceed that of launched missiles several tens of times if the defense fails to be sufficiently effective during the boost phase; on an average, each launched missile carries ten warheads, with many decoys released on the midcourse, including (per each warhead) a single specific decoy which imitates a warhead at terminal phase, and also ten (or more) decoys to saturate the midcourse layer or defense system

During the terminal phase, the number of targets decreases because the lighter decoys lag behind the true ones in the dense atmosphere. A warhead covers the trajectory phase quite rapidly, in not more than a minute.

A terminal ABM system ensures only point defense, whereas in the case of the boost phase and midcourse layers, it should shield the whole territory of the side attacked. . . .

Laser beams may effectively destroy thin walls via heat or impact action (the latter is typical of pulsed lasers): walls of fuel tanks, bodies of aircraft and helicopters, walls of oil-and-gas storage tanks, etc. This mere enumeration of potential targets indicates that laser weapons may be used at the boost phase and also to attack ground-based objects from space. . . .

Laser radiation is absorbed in a comparatively thin layer of the material. . . .

In other words, the thermal kill threshold can be made considerably higher by protecting the surface of the wall by a layer of material with a sufficiently low coefficient of thermal diffusion (the so-called ablative coating) so that the energy hitting the surface can be absorbed within that thin layer and then warm and evaporate it, the surface itself remaining intact. Thermal diffusivity of ablative coatings made on the basis of carbon-filled plastics is by about three orders of magnitude lower than that of aluminum. Hence an ablative coating layer with an effective thickness 0.5 g/cm^2 (about 3 mm) can preserve its heat-reflecting properties for about a minute if exposed to radiation flux. (The value 0.5 g/cm^2 is chosen not to increase considerably the weight of fuel tanks.) Such a thermal insulating layer may withstand heat loads of about 30 KJ/cm^2 . Practically, this seems to be the limit of heat shielding.

Note again that laser weapons are most effective for destroying fuel tanks. Warheads' thermal insulation is much better since they are designed for thermal loads due to decelerating in the dense atmosphere. Real-world heat resistance values of warheads are obviously within 10 KJ/cm^2 – 100 MJ/cm^2

Many hundreds of missiles may start concurrently from a limited area which imposes the following demands on a battle station:

- munitions reserve for up to 1,000 targets;
- firing rate of up to 10 shots per second for destruction duration at the boost phase of about 100 sec. . . .

The problem of vulnerability of the battle management subsystem. . . . A centralized subsystem of battle management is highly vulnerable in its key, "dispatcher" link, because the control station, even if placed far from the Earth (e.g., in one of the points of libration), is not guaranteed against destruction by different kinds of anti-satellite weapons. In this case, the entire system of space-based anti-missile defense will be in jeopardy. The dependence of the whole subsystem of battle management on a single center makes it a highly attractive target, giving an additional impulse to the development of new generations of anti-satellite systems. The problem of lessening the vulnerability of this kind can be solved, according to some American sources, by duplicating the control center, by camouflaging it, by creating dummy centers, etc.

At the same time, even extreme decentralization of processing data on missile launches and on targeting anti-missile weapons does not remove the necessity of having a center coordinating the whole functioning of the anti-missile system — i.e., there are certain limits of decentralization. But in this case, information exchange between tracking stations and the center of management will be within the framework of already processed and prepared data, which will considerably lessen the resistance to interference (unprocessed data, due to a great excess of information, are more resistant to interference). . . .

The main difficulty of ensuring the effective functioning of the detection system is the correct identification of the target (starting missile) and its differentiation from decoys and from accidental or specially devised interference. Really reliable target recognition can be achieved only

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when the object is identified not by a single characteristic (size, speed or the temperature of the exhaust flame) but by a complex of characteristics, the signals from sensors of different types being processed simultaneously or together, producing a coherent image of the object. But the existing means of defense and jamming can affect the ABM tracking system and produce a situation where one or several channels of data processing are blocked, fail to function or give a contradicting signal. Here a very difficult question arises of how to make the decision to destroy the target. Is the failure of one channel of the identification system enough for cancelling the decision to destroy the target? Or can two or more channels malfunction?

The high technological level of jamming makes this issue one of the most crucial in constructing an ABM system. Too low a threshold of triggering the identification system will lead to the initiation of the system in response to signals irrelevant to a nuclear-missile attack and will cause the exhaustion of its resources in technical terms, and in military-political terms it will result in nervousness and, in the final count, a lower level of stability . . .

The problem of building a management system, taking into account the difficulties of creating an operational system, analyzed by the Committee of Soviet Scientists, could be tackled by creating a hierarchy of managing stations. In this case, there would not be a single central station with a managing processor but a system of intermediate stations, each managing 20 to 30 stations directly monitoring the situation. But a central station, managing intermediate ones, is also necessary. Since it is necessary to maintain constant surveillance of the territory from which missiles may be launched in order to ensure the impenetrability of outer-space echelons, the overall number of monitoring stations should be at least 200-300 and, accordingly, the number of intermediate management stations about 10. Such an architecture of the management system is likely to lead to a greater vulnerability of the outer-space echelons of the anti-missile system, because the destruction of several intermediate stations, even though all the elements of this system may be "overlapping," will create a "window" in the ABM system and make it vulnerable as a whole . . .

It is obvious that the picture of potential countermeasures can be made complete when the

concept of a large-scale ABM is finally formed; but today we can already include in them some local measures which can be used to destroy such vital but quite vulnerable elements of it as:

- outer-space communication which can be disrupted;
- the management system, the most vulnerable link of which are the central control computers which, even if duplicated, will be deployed in limited numbers because of their complexity and high cost;
- various energy sources and energy systems (nuclear power plants, explosives, combustibles, etc.) . . .

Active measures of this kind include various ground-, sea-, air- and space-based means using for destructive effect kinetic energy (of missiles and shells), laser and other kinds of high-energy radiation. Active countermeasures are especially effective against elements of the outer-space echelons of anti-missile defense, that are in the orbits with known characteristics for a long time, which greatly simplifies the task of their neutralization, suppression and even complete physical elimination.

For example, a system of outer-space battle stations seems very vulnerable to a wide range of active countermeasures. Since outer-space stations, in accordance with their primary goal, will be designed to destroy *strategic ballistic missiles, specially designed small missiles of different types of basing*, the use of which could be combined with diverse means of disguise, may prove an effective means of their destruction. Such missiles must obviously have powerful propulsion for the rapid passage through the atmosphere and for shortening to the minimum the boost phase. They must also be protected against laser radiation. Analogous types of such means already exist . . .

So-called "space mines" — satellites launched into orbits close to the orbits of the other side's battle stations and carrying powerful explosive charges activated by command from the Earth, could be an effective means of active counteraction to destroy simultaneously a great number of space battle stations. Such "mines" can be equipped with detonators of different types — e.g., reacting to heat or mechanical action.

Ground-based lasers of great power can be used as an active countermeasure. The creation of such lasers is much simpler than that of lasers for outer-space battle stations aimed at destroy-

ing ballistic missiles in flight. In the contest of "laser versus missile" and "laser versus outer-space platform," the advantage may be with the latter....

Obstacles in the orbits of battle stations, created by clouds of small objects — "shrapnel" — moving in such a way that their speed relative to that of the station is high enough, can be a very effective means of counteraction....

In the case of weapons employing ground-based excimer lasers with mirrors in geostationary and low orbits, the spraying of light substances with large absorption of laser radiation directly in the base area of the mirror or laser can also be an effective countermeasure, *besides destroying a ground-based laser*....

The system of acquisition and targeting of outer-space weapons will be quite vulnerable. The task of "blinding" them can be achieved by means of a nuclear explosion in the upper layers of the atmosphere. Finally, the traditional measures of radio-electronic warfare used against space echelons of a large-scale BMD can significantly affect its effectiveness.

A brief review of the possible means of neutralization and suppression of a large-scale BMD with space-deployed echelons of strike weapons shows that it is not at all necessary to set the task of completely destroying it. It is enough to weaken such a BMD system by crippling its most vulnerable elements, making a "breach" in the so-called defense, in order to maintain the power of a retaliatory strike unacceptable to the aggressor.

Among the hypothetical counteraction measures we should single out the buildup of a "retaliatory" arsenal of strategic nuclear weapons, first of all, of ICBMs and so-called *dummy missiles*....

... The quantitative buildup of ICBMs and, consequently, the appearance of greater capabilities of the other side of using its ICBMs massively in a retaliatory strike will create additional difficulties for the acquisition systems of the space-based anti-missile defense and will cause a drastic decline in the effectiveness of its systems of interception and targeting strike weapons. All this will enhance the "penetrating" capacity of ICBMs and reduce the reliability of an "outer-space shield."

The *increased number of warheads* on ballistic missiles will lead to similar results. This measure can compensate to a great extent for missile losses during the boost phase of their

flight because of greater difficulties of intercepting them at the next phases.

Further "saturation" of the anti-missile system can be achieved by additional deployment of relatively inexpensive "dummy missiles," equipped with a simplified guidance system and without warheads. The deployment of such *dummies*, which cannot be reliably identified by the existing technical means, will be a simple and economically effective measure (if we compare their costs with the cost of ABM systems), which will complicate the operation of the ABM system, and during an exchange of blows, it will cause it to fire uselessly.

The tactics of *launching ICBMs*, which are aimed at "exhausting" the outer-space anti-missile defense by its early activation by means of a specially arranged order of a retaliatory strike, can also be an effective countermeasure. It may include combined launches of ICBMs and "dummy missiles," ICBM launches with a wide range of depressed and steep trajectories, ICBM launches in different azimuth directions, etc....

A possible buildup of an *arsenal of weapons*, for which no satisfactory means of interception have been devised, should be mentioned as a measure for maintaining the capability to effect an adequate retaliatory strike. These may include submarine-launched ballistic missiles (SLBMs) launched on depressed trajectories. A great part of the trajectory of these missiles is within the limits of stratospheric altitudes, where the effectiveness of some ABM systems is sharply reduced. *The massive development of cruise missiles of different basing modes* can be another such measure....

A shortened boost phase is an effective means of passive counteraction against the enemy's ABM system, increasing the survivability of ICBMs in the process of its penetration....

All other countermeasures at boost phase can be divided into two main groups: measures complicating the targeting of anti-missile weapons, and measures strengthening the protection of the missile shell. The first group of such measures includes *changing the brightness and shape of the missile exhaust flame*. The target is not the exhaust flame itself, but the missile, which is a certain distance away from it, and any infrared guidance system must use an algorithm, calculating the position of the missile in respect to its exhaust flame. Besides, a laser beam must be fixed for several seconds on a certain portion

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of the missile shell. This makes it possible to complicate the problem of guiding and fixing the beam by changing the brightness of the exhaust flame and its shape, because the changes of the flame, registered by infrared sensors, will cause the shift of the laser beam itself, in accordance with the standard algorithm used. Such an unstable burning of the exhaust flame can be achieved mainly by introducing different additives to the missile fuel.

Concealment of missile launches can also be included in this group of countermeasures. It can be achieved by means of smoke screens over the launching areas or by different ways of camouflaging the missile in flight, e.g., fitting it with disguising screens. . . . For example, a screen with a graphite coating one centimeter thick is enough to absorb a heat energy of 200 MJ/m². The dispersion of various substances in the atmosphere to produce smoke or aerosols, i.e., screens absorbing laser radiation, can be a promising countermeasure. . . .

As has already been confirmed more than once, one of the most effective means of such counteraction are different decoys. For example, during the deployment of warheads, *a cloud of very small and light metal objects* can be created around them, which would not only absorb and reflect radio waves, but also disperse the radar radiation reflected from the warheads. Spraying of an *aerosol cloud* around warheads, which is a source of infrared radiation, can also be a countermeasure against infrared detection facilities. The infrared radiation of such an aerosol cloud can be used to camouflage warheads' own infrared radiation. All these countermeasures may be quite effective and, most important, available for wide application.

The serviceability of space ABM sensors can be significantly decreased by the use of different kinds of *jamming, suppression or distortion of signals* by the other side, and equipping decoys with *devices which imitate the reflection of laser, radar and visual signals from warheads*. Several studies have described the concealment of warheads inside light, multilayer metallized reflection balloons. For each warhead inside such a balloon, ten empty balloons can be deployed. It is important here that, besides the unidentifiability of "filled" and "empty" balloons by their reflected signals, it is also possible to achieve their identity by ballistic parameters. . . .

During the terminal phase (after reentry),

warheads and decoys can be selected by the acquisition sensors of the anti-missile system due to the difference in weight and aerodynamics. But this phase of trajectory does not exceed sixty seconds, and this requires very fast interceptors. One way of countering such interceptors is the use of maneuvering and high-speed warheads. It is also possible to increase the yield of warheads and to use detonators which will fire the warhead before it would be destroyed by the interceptor. Calculations show that in this case, even if warheads explode at an altitude of more than ten kilometers above the Earth, the destructive effect would be significant. The use of these countermeasures will certainly create additional problems for the retaliatory forces, such as increasing the weight of missiles and decreasing their payload. But the quantitative buildup of ICBMs can, to some extent, compensate [for] such losses.

Military "Parity" — Extant and Projected

The excerpts below are from "Military-Strategic Parity and the Realities of the Nuclear Space Age," an article by Major General Yu. Lebedev, published in the *Mezhdunarodnaya Zhizn'* (International Affairs), No. 6, June 1986.

The adduction of a "rough military parity" at East-West strategic, theater-nuclear and conventional levels is by now a familiar Soviet theme, which serves the branding of all U.S. and NATO armament increases as efforts to upset the "existing balance" in quest of superiority. Of interest, however, are General Lebedev's gross calculations of such a "parity" in light of East-West force asymmetries, as well as the obvious reflections for Soviet strategy in the arms negotiations.

The core of the military and strategic parity is the rough balance in Soviet and U.S. strategic armaments, as well as in medium-range nuclear systems and conventional arms of the Warsaw Treaty Organization and NATO. It stands to reason that the military equilibrium does not imply a mathematical identity in the quantitative and structural aspects of the opposing armed forces. Each of them is known for

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its own historically established priorities and peculiarities. Therefore, the parity can be objectively defined only if the totality of all specific disproportions in armaments is evaluated, taking into account the historically shaped structure of the military forces and some other factors determining the strategic situation. In other words, in dealing with the issue, one should be guided by the principle of equality and equal security.

It should immediately be stressed that the Soviet Union believes that a rough parity is sufficient for defensive needs. It has never set for itself the goal of upsetting the existing equilibrium and gaining military superiority over the other side. Moreover, the Soviet Union holds the view that maintenance of the military and strategic parity is exactly what is needed to ensure implementation of the principle of equality and equal security, and lays the groundwork for preserving and strengthening peace for everyone which, taken as a whole, is termed international stability. . . .

The Soviet Union has been forced to respond to the growing military threat by strengthening its own defense capabilities. Pooling their efforts, the USSR and other socialist countries have demonstrated their ability to parry the inroads of any aggressor. Let us recall that the measures taken by the CPSU and the Soviet Government permitted, back in the early 1970s, the doing away of U.S. preponderance in strategic armaments. Washington has had to acknowledge formally the existence of a balance in strategic nuclear forces. . . .

At present, the United States has fielded 300 medium-range missiles in Western Europe; taking into account the British and French systems, there are, in all, 478 such missiles. The USSR has 243 SS-20s in the European zone, with the number of warheads on them no greater than [those] on the NATO missiles. Taking into account the aircraft of both sides, the ratio of nuclear warheads is approximately 3,000 to 2,000 in NATO's favor. Notwithstanding some differences in the mix of the respective nuclear armaments and the corresponding measures taken by the USSR, there is every ground to speak of a rough balance in those weapons as well.

It is more difficult to determine a balance of forces in conventional armaments between the Warsaw Treaty Organization and NATO. The West often uses that fact to its advantage

while giving reality-distorting data. This is done in various ways: namely by providing higher-than-actual figures regarding the Warsaw Treaty Organization's armed forces or lower-than-actual figures for NATO troops, disregarding their respective reserve formations or prestored arms and discounting the armies of Spain and France. Often, only armaments whose comparison would be to NATO's benefit are selected from the overall mixes of weapons. Yet, even the booklet, *Soviet Military Power*, published by the Pentagon, admits that the manpower strength of NATO forces is 5.6 million, while that of the Warsaw Treaty Organization is only 4.9 million. While enjoying a 94 to 78 edge in combat-ready divisions, an advantage in anti-tank weapons and a roughly equal number of artillery pieces and tanks, NATO is slightly behind the Warsaw Treaty Organization in the number of tactical aircraft. As for the naval forces, NATO's advantage in major warships (aircraft carriers, aircraft-carrying ships, battleships, etc.) is offset by a larger number of the Warsaw Treaty Organization's submarines and small surface vessels. All in all, there is a rough balance of forces in conventional weapons as well. . . .

Thus, the military and strategic parity between the USSR and the United States, and between the Warsaw Treaty Organization and NATO, objectively does exist. The Soviet Union and the Warsaw Treaty countries proceed from the belief that the rough parity in military forces is sufficient to meet the needs of defense. All their actions in the military field are taken as reciprocal steps in the interest of ensuring their defense capabilities. As has been stated by Mikhail Gorbachev at the 27th CPSU Congress, "naturally, like any other country, we attach considerable importance to the security of our frontiers, on land and at sea."

Today's realities are such that the economic, scientific, technological and other capabilities of industrialized states do not permit any single country or group of states to count on gaining military superiority. It is fortuitous that the U.S. nuclear policy, i.e., the position-of-strength policy, has now wound up in a deadlock. But the main thing is probably that, because of the inevitability of a nuclear retaliatory strike, all of Washington's hopes of winning a nuclear war also become pointless.

Under those conditions, the United States

and some of its NATO allies, unwilling to comprehend the realities of the nuclear and space age, attempt to find a way out of the "nuclear impasse" through outer space. The masters of the White House are fooling themselves with a belief that through "Star Wars" they would allegedly be able to rush ahead militarily and to dictate their will to the Soviet Union. Yet, Washington's exertions are to no avail. Reliance on outer space and on space weapons based on new physical principles is utterly groundless. The Soviet Union possesses the necessary material and intellectual capabilities to foil U.S. attempts at acquiring military supremacy. The military and strategic parity has been and continues to be an objective factor of containment.

The Soviet Union is strongly opposed to a test of strength in developing new types and systems of weapons. As long as there is a balance of forces and outer space is free of weapons, it is necessary to work toward a joint understanding regarding a minimum level of armaments on each side that could be considered sufficient in terms of its defensive needs. Despite the existing asymmetry in the armed forces' structure of the two sides, the Soviet Union has believed that there is a mutual approach and goodwill on the part of the negotiating partners. Naturally, such decisions should be worked out at the negotiating table, proceeding from the principle of equality and equal security.

Treating the destinies of humankind with a high sense of responsibility, the Soviet Union has advanced large-scale and extremely important initiatives aimed at lowering the level of the existing military balance, both in the nuclear field and in conventional arms and armed forces.

The basis of those initiatives is provided by the program for eliminating nuclear weapons on Earth by the year 2000. Through the three stages which will take, all in all, fifteen years, it is scheduled to carry out a reduction of nuclear weapons, balanced in terms of their volume and categories, all the way down to their complete elimination. The realism of the program lies in the fact that it is constructive and does not impinge on the security interests of either side. It provides for reductions in nuclear weapons to be done in a manner that would ensure an approximate balance of forces from the first to the last phase.

Deception During the Offensive

The excerpts below are from "The Attainment of Deception," an article by Colonel P.M. Simchenkov, published in *Voyenno-Istoricheskiy Zhurnal* (Military-Historical Journal), No. 6, June 1986. In World War II the author was Chief of Reconnaissance and on the staff of the 60th Army.

The article is based on Soviet experiences in deception of the enemy during that war. The reader should keep in mind, however, as Soviet military writings never tire of repeating, that the lessons of World War II in large measure are deemed abidingly valid and applicable to modern-day Soviet operational planning.

During the years of the Great Fatherland War [World War II], Soviet troops acquired a rich experience in assuring concealment during the preparation and conduct of offensives. The ways and means of achieving it were quite varied. . . . From that time onward [the second half of the war], measures to ensure concealment became an inseparable part of the task [of commanders and staffs]. They were carried out in a complex manner in accordance with carefully developed plans, closely related in their objectives, place and time to the actions of the troops. . . .

I know from personal experience that ensuring the total deception of the enemy concerning our surprise actions is not easy. This required dynamic and purposeful action on the part of commanders, staffs and of the entire troop personnel, and the skillful use of concealment on the terrain, of nighttime and conditions of reduced visibility, the effective employment of engineering and other means of concealment [*maskirovka*], as well as of smoke and diversionary actions. It was also essential to know well the enemy, the deployment of his forces, and the strong and weak aspects of his defenses. It was also important to foresee the enemy's intentions and his plan of action to repulse our strikes. . . .

The decisive condition for achieving concealment is, first of all, the maintenance of the intentions and plans of the operation and battle, and also of the practical measures of their preparation in the strictest secrecy.

[The author cites the example of the 13th Army during the Voronezh-Kastopnensk operation in early 1943.] All essential documents were prepared by hand in one copy. Those

directly charged with the execution were given instructions which concerned only their activities within the framework of their responsibilities. In order to prepare the command staff for the offensive, a war game was held, in the course of which the division commanders familiarized themselves with the general idea of the operation's intention and plan only to the extent necessary to conduct the game. . . .

Copying the questions dealing with the preparation of the operation was forbidden even in coded form. The missions of the division commanders were assigned by the army commander on the map [and conveyed] verbally by a specially organized army staff. . . . The practical organization of the battle was decided on the terrain in discussions between the commanders and staff officers. Reconnaissance was carried out by small groups of commanders dressed in the uniforms of infantry privates and sergeants.

In order fully to ensure concealment of the preparation for the offensive, all rear echelon organs were excluded from receiving [directly] operational copies of questions of supplies. All requests for shells, fuel and food passed through the operations section of the army staff. Troops arriving for incorporation into the army had their strength and equipment lists taken away. . . .

Particular attention was paid to ensuring the concealment of the troops' command and control. . . . Among all staffs, a firm order was established on how to conduct conversations using technical means of communications. In order to exclude the possibility of the enemy's listening in on the conversations, all telephone lines in the forward position of the divisions' first echelon, over a three-kilometer zone from the forward line, were duplicated and placed in communication trenches. Radio communication operated only for receiving. In the artillery units, radio communication was authorized only with the start of the artillery preparations, and in other units only with the start of the attack. . . .

An important role in the concealment of the operation's intention was given to disinformation for the purpose of misleading the enemy about the direction of the main blow and the areas of concentration of the assault groups. [Among the measures cited by the author are: providing the enemy with false information; deceptive deployment of forces; the fabrication and use of large numbers of decoy tanks, trucks and

artillery pieces; creation of the illusion of units with their own radio net and the preparation of decoy troop concentration areas; the use of smoke to suggest a possible attack in a sector of the lines different from the actual attack point; diversionary attacks, etc.]

During the war, commanders and staffs at all levels paid particular attention to keeping the movement of troops strictly secret. . . .

During the war years, as important a problem as the concealment of the deployment of the assault troop groupings in the jump-off areas for the offensive was successfully solved. In order to conceal the deployment of large numbers of personnel, equipment and ammunitions in a limited area, it was necessary to carry out considerable engineering work to prepare and hide the positions; wide use was made of natural cover, . . . and there was a strict maintenance of concealment of light and sound. I remember that at the front we often resorted to a simple but effective method of *maskirovka*: never to deploy subunits near sharply distinctive orientation features. . . . [According to the author, troop movements in forward areas were carried out at night.]

A great deal was done to conceal the start of the attack. During the first period of the war, the enemy would often determine when our troops would launch the attack because of the concept of attack adopted at that time — which, as a rule, began after an artillery preparation which often ended five or ten minutes off the hour (for example, 55 minutes or 70 minutes) and terminated with a powerful strike by the rocket artillery. . . . Subsequently, the attack was launched during the artillery preparation and in each case at a new time so that the enemy could not adapt himself to a [fixed] regime of fire and attack. And usually the attack was initiated during the most powerful phase of the artillery preparations. . . .

The war has shown that the best time for the start of the artillery preparations is in the pre-dawn hours. It is then that the enemy often replaced the night shift with the day shift and had not fully changed his system of night fire to the daytime regime. . . .

In order to achieve maximum concealment of the offensive, great attention was paid, in the course of the war, to active struggle against enemy reconnaissance. . . .

In conclusion, one must say that the experience gained during the Great Fatherland

War in the attainment of the offensive is of great value also today. Under present conditions, when the enemy possesses effective means of reconnaissance and high-precision weapons, the significance of concealment as a most important factor to assure surprise and maintenance of the troops' viability has greatly increased, while the measures to carry it out have become much more difficult. However, much of what our commanders and staffs have learned about the attainment of concealment of the offensive can be employed in the practice of operational and combat preparation of troops, while taking into account the new means of armed combat.

Combat Activism

The excerpts below are from "Combat Activism," an article by Major General P. Kunitzky, published in *Voyenny Vestnik* (Military Herald), No. 7, July 1986.

The article deals with the problem of instilling among the Ground Forces a readiness for constant combat activism as a means of holding the initiative, keeping pressure on the enemy and achieving his earliest destruction. The author complains about excessive passivity among some officers and the tendency of others (especially young ones) to launch headlong attacks even against superior enemy forces. He argues that the best method of instilling combat activism is during complex exercises that approximate as closely as possible real combat situations with the use of live ammunition.

Combat activism has not lost its significance in our times either. This is demonstrated in various military exercises, in the course of which the majority of the units and subunits of the Ground Forces show their ability to carry out long marches in difficult ground and air situations and to conduct meeting engagements, to attack at high speed, to force water barriers while on the move, to execute decisive maneuvers on the ground and by air, to perform airborne and amphibious landings, and firmly to hold forward lines. . . .

It is gratifying that the majority of the commanders and political workers of the Ground Forces skillfully train and educate the personnel and maintain their subordinates' combat readiness at a level that ensures their entry

into combat and the destruction of the enemy at the Motherland's first call. . . .

During exercises, they [commanders of various battalions] acted decisively and with initiative, seeking to achieve psychological superiority over the enemy, to impose their will upon him, and harass him day and night. As is known, the commander's activism elevates the combat spirit of the subordinates, increases confidence in their strength and mobilizes their will.

Unfortunately, things are not this way everywhere. One sometimes meets officers who, while waiting for orders from superior commanders, remain passive, are unable to make an in-depth assessment of existing situations and to foresee the development of events and introduce in timely manner corrections into decisions adopted earlier. All of this can result in combat in a loss of initiative and unjustified casualties.

Also, one cannot accept as normal a situation when some young officers, especially those recently assigned to the command of a company or battalion, demonstrate combat activism only by an intensification of actions, with a readiness [that lacks] due consideration to joint battle, even with a superior enemy. . . .

During the training of the officer corps, it is essential to instill in each one the understanding that combat activism is not a blind drive to advance, no matter what, to headlong attack. It is based, first of all, on a sober assessment of the correlation of the forces of the two sides engaged in combat, of the conditions of the terrain, the time of the year and day, of the radiation and chemical situation in the combat area, and other factors. . . .

The commander must always have available to him fresh forces (second echelon, reserve), and skillfully introduce them into combat, must remain concerned about the reconstitution of the forces, allow the subunits to rest, ensure the timely resupply of ammunition, fuel, and so on. Without this, it is difficult to sustain combat activism; the troops may become exhausted. . . .

The most effective way of instilling the necessary qualities, including also a drive to constant activism, is, without a doubt, tactical exercises. In the regiment, it is sought that they be carried out under conditions of maximum approximation to actual combat. For this purpose, it is the practice to alter sharply the situation: complex, near-critical situations are created; the trainees are forced to carry out bold maneuvers,

to carry out decisive and active combat operations. . . .

Combat activism is also based on the knowledge of the enemy. . . . Knowledge of the enemy facing one, his strong and weak traits, his preferred modes and forms of action, habits and attitudes are a strong weapon in the commander's hands, giving him the possibility of choosing the best option, time and place for action.

The commander must seek information about the enemy by using his own forces and means and not wait to receive it from higher up. Unfortunately, during exercises it sometimes occurs that the commander receives information about the situation not from the reconnaissance he has sent out, but from the leadership and in a complete form. Such a simplification causes much harm. . . .

Quite useful in the plan of psychological preparation of the soldiers is the "overrunning" of the subunit's positions by tanks, the use during exercises of hand grenades, the overflying of the troops with combat aircraft, bombing in close proximity to the troops, and the firing of artillery, mortars and tanks in the intervals between the troop dispositions and over the troops' heads.

On Guard Against Spies and Subversion

The excerpts below are from "Political Vigilance — A Requirement of the Times," an article by the First Deputy Chairman of the KGB, F. Bobkov, published in *Politicheskoye Samoobrazovaniye* (Political Self-Education), No. 6, June 1986.

Bobkov goes beyond the standard fare of Soviet "vigilance campaigns" in painting a particularly comprehensive picture of alleged Western subversive intrigues against the Soviet Union, linking those with cultural exchanges, the human rights campaign, religious activities of various sorts, and even feminist stirrings. Salient also is his warning of the dire fate that awaits defectors to the West. The picture presents a relevant background for the subsequent Daniloff-Zakharov affair.

U.S. reactionary forces fan anti-Sovietism and anti-communism with unprecedented cynicism and refinement, slander our country, resort to

forgeries and threats, distort obvious facts, and so on. Their concentrated onslaught is aimed at undermining socialism, all but leaving it on the "scrapheap of history." This scheme is, of course, hopeless from all viewpoints and, like many previous attempts of this kind, will inevitably fail. But one must not ignore the actions that the class enemy is taking against us.

The policy of imperialist circles of exacerbating the international situation is accompanied by a *sharp intensification of all forms of subversive activities against our country, the Socialist Community as a whole, and against all the world's progressive forces. . . .*

Attempts by special services to persuade Soviet citizens not to return home have been particularly unceremonious lately. In 1982 a government directive was adopted in the United States instructing the CIA and the FBI to plan special operations so that citizens of socialist countries did not return home. The CIA has developed a so-called Program to Organize Escapes to the West, with recommendations to its staff to use propaganda, bribery, flattery, intimidation and blackmail for these purposes and, under certain conditions, to resort to violence.

The fate of persons caught in the enemy's net is well known — either they are eliminated, in due course, for certain reasons, or they eke out a miserable existence. The American journal *Newsweek* cited the words of H. Sonnenfeldt, a well-known expert and former adviser to President Nixon, who stated that defectors "are simply squeezed dry and then thrown out like dead fish." . . .

Our enemies try to paralyze the activities of Soviet establishments [abroad] through a massive campaign of spy mania, including unwarranted arrests and expulsions of their workers. More and more often, increasingly audacious attempts are made to persuade Soviet citizens to cooperate with foreign intelligence services. Not relying on "persuasion," Western special services resort to various kinds of technical, pharmacological and other means without balking even at such methods as terrorism and kidnapping. . . .

The U.S. and its NATO allies are seeking to gather intelligence information on an extremely wide range of issues associated with the status of and prospects for the development of the Soviet state. Specifically, interest in collecting data to analyze and assess the USSR's military and economic capabilities and the state of its

defense and mobilization readiness has grown. There are increasing attempts to gain access to military facilities, state institutions and scientific research institutes, where problems of the USSR's economic and social development are being worked out. Processes that impact on the strengthening of our society and the enhancement of its defense capability and that hamper its gradual movement forward are being thoroughly studied.

Western special services are seeking to infiltrate the system of the Soviet Union's foreign economic relations and use them not only for intelligence purposes, but also to undermine the Soviet economy and to create an obstacle for its successful development. For this, long-term plans are being developed that pool the efforts of various components of the state apparatus of capitalist countries. Certain foreign firms and companies and individual businessmen, scientists and experts who visit the USSR through the channels of scientific-technological and trade-economic cooperation are involved in sabotage. Our Western partners have frequently tried to sell the USSR equipment that is of poor quality, incomplete or with hidden defects, and to drag out the period for its delivery and installation.

... In recent years, a number of responsible officials of Soviet foreign trade departments have been held criminally liable for forsaking the Motherland for bribes, which caused the country harm amounting to millions. Essentially, they were the targets of purposeful bribery and actions by special services aimed at morally and politically demoralizing individual Soviet citizens susceptible to temptation.

As was noted at the 27th CPSU Congress, the Soviet Union advocates the strengthening of and quests for new forms of cooperation between states in the sphere of culture, art, science, education and medicine. Unfortunately, imperialist secret services are also trying to use this important sphere of international contacts for subversive, anti-Soviet purposes. A broad network of specialized organizations has been created in the West that work under the control of special services and study issues of scientific-pedagogic ties with our country on the basis of exchanges of trainees, post-graduate students and teachers. The largest among them are "IREX" (U.S. Bureau for International Scientific Research and Exchange) and the "Service for Cooperation" (France). The "British Council" and the

"Council for Teaching Exchange" are generally a cover for a special section of the British intelligence service known as "Bin-skolyar." Representatives of anti-Soviet centers, who are entrusted with holding "special courses" on our country for future trainees, are being increasingly involved in preparing personnel for visits to the Soviet Union.

Of course, the overwhelming proportion of foreign scientists and representatives of creative and scientific-pedagogic circles cooperate honestly and conscientiously with Soviet colleagues. At the same time, one must not ignore the fact that certain foreign scientific workers who visit us as part of exchanges devote themselves to activities that are far from scientific by fulfilling the functions of emissaries and go-betweens for anti-Soviet centers and engaging in espionage.

The secret services of imperialist states are not only intelligence and espionage organs: *they are conducting subversive work against socialism in all directions, including the sphere of ideology.* There are hundreds of anti-Soviet ideological organizations, "Sovietological" centers, scientific research institutes, and so on, operating under the aegis of the CIA, whose efforts are focused on developing the strategic directions of "psychological warfare" and methods and tactical ploys to carry out ideological sabotage against the USSR and other Socialist Community countries. ... "Radio Liberty-Radio Free Europe" is also an important center of political intelligence against the USSR. The activities of this radio station's leadership are aimed at organizing various hostile acts, including illegal infiltration of the country, collecting biased information, and coordinating subversive work against the USSR.

The propaganda concepts of "Radio Liberty-Radio Free Europe" reflect the increased aggressiveness of international reaction. The slogans "democratization," "improving" socialism along the Western model, and other ideas of camouflaged anti-Sovietism are now being replaced by open appeals to eliminate the socialist system in the USSR, to instigate anti-Soviet and anti-social action, and to commit state crimes.

There has been an increase in the number of attempts to bring illegally into our country the printed matter of numerous "Sovietological" centers, books with an anti-communist and anti-Soviet content, religious literature, and porno-

graphic and hostile technical video products. They profane and desecrate all spheres of our country's life — politics, economics, morality, the Soviet people's way of life, culture, tradition, the historical past, and so on....

The provocative anti-Soviet campaign that is supposedly being conducted in defense of human rights in the USSR is an example of this demagoguery. Reality thoroughly exposes the falsehood and hypocrisy of the "defense of rights" intrigues of ideological saboteurs, as well as the true face of a handful of renegades from among Soviet citizens who have tried to use the principles of detente and the Helsinki accords to distort them and slander their own people. It is easy to see that the so-called struggle for human rights in the USSR is nothing more than an attempt to defend Soviet law-breakers and those who have embarked on the path of treason and hostile acts against socialism....

In 1983 U.S. reactionary circles instigated the creation of the so-called International Interparliamentary Group on Human Rights in the USSR (IIP), headquartered in London. The anti-Soviet orientation of its work received widespread support from the U.S. Administration and certain West European statesmen. The IIP has sent its active members into the Soviet Union to make contact with various kinds of antisocial elements, to give them moral and material support, and to collect slanderous information. From an international-legal viewpoint, the activities of this "interparliamentary group" represent crude interference in the USSR's internal affairs and, from the viewpoint of the principles that determine the role of parliamentarians, in interstate relations it is an impermissible use of the prestige of elected legislative organs to conduct hostile acts regarding our country....

A number of years ago, four hostile-minded Leningrad residents who were prompted by the West proclaimed the creation of a so-called feminist movement against the supposed lack of rights of women and children in the USSR. They organized the illegal production and transfer abroad, through the Consulate General of France in Leningrad, of a slanderous concoction called the "Women and Russia" journal, which Western "voices" immediately began actively to disseminate. The provocation by the newly appeared "feminists" naturally failed. It turned out that the hostile activities of this group were

directed by CIA agents — representatives of the National Workers' Union in Austria and staff members of the so-called Society of Contemporary Russian Culture in the United States.

In subversive work against the USSR, the class enemy does not miss an opportunity to try to *weaken unity and friendship among our multinational society and to instigate national dissension and separatist dispositions*. In this the specifics of each Soviet republic, its history and features of development are taken into account, and a kind of "catalyst" is sought that could provoke anti-Soviet or chauvinist disposition. In this regard, the network of subversive radio broadcasting is being expanded, and the duration of broadcasts in languages of the various peoples of the USSR is increasing significantly. The radio corporation "Radio Liberty-Radio Free Europe" is strengthening the existing national editorial offices and creating new ones designed for specific regions of the country. Iranian authorities have commissioned a new installation on Kish Island in the Persian Gulf designed to conduct "pan-Islamic propaganda" in Central Asian republics and Kazakhstan, a recently built radio center in the city of Banderre-Torkemen has been renovated in order to increase its capacity, and other measures in this direction are being carried out....

A characteristic feature of imperialism's ideological sabotage is the *intensification of subversive acts with regard to the USSR by the use of religion*.

A desire to use illegal forms of activity has recently been observed in the tactics of the Vatican and other clerical organizations. Specifically, there are attempts to create in our country various "groups" and "communities" among the reactionary Catholic clergy and "secular" persons and to galvanize members of the Uniat Church, who could serve as a basis for subsequent religious confrontation with the state. Naturally this is not a question of issues of faith, but of efforts under the flag of religion to infiltrate the territory of the Soviet Union and to use religion as a screen for subversive work. Foreign nationalist centers which pass off the church as the single repository of national traditions are taking an active part in this in harmony and unity with clerical organizations.

Religious-mystical ideas and dogmas are being intensively instilled in the consciousness of Soviet citizens, particularly young people, and attempts are made to encourage the emergence

of groups of followers of the so-called nontraditional religions — sects and societies of religious-mystical groups that operate in the West ("Church of the Prophet," "White Brotherhood," "Society of Krishna Consciousness," and so on). Their participants profess mysticism and pseudo-philosophical views. Imperialism's propaganda of such "teachings" is oriented toward reducing the socio-political vigor of the individual, developing social parasitism, a withdrawal from reality and class assessments of the phenomena of contemporary life, and it is a means of shaping anti-socialist views.

The "International Society of Krishna Consciousness," which is headquartered in the United States and whose emissaries periodically head for the USSR, displays significant vigor. Mass printing of special "Krishna" literature in Russian is made in the West for illegal delivery to our country. . . .

Vigilance is inseparable from lofty political culture, which is alien to a philistine savoring of negative phenomena produced by an unprincipled trust in those who slip into hostile propaganda. The carriers of these phenomena, as a rule, turn into money-grubbers, accumulators and carefree consumers trying to take more from the state than they deserve. . . .

Enhancement of political vigilance presupposes the strengthening of state discipline, organization, and law and order and strict observance of Soviet laws. All our experience shows that, as a result of violations of discipline and law and order and a disregard for civic duty and obligations by individual persons, a situation is created which the class enemy uses to damage the interests of the Soviet state.

Peace and Patriotism

The excerpts below are from "Defense of Socialism and Military-Patriotic Education," an article by Doctor of Philosophical Sciences, Professor Colonel-General D. Volkogonov, published in *Pravda*, August 15, 1986. Volkogonov is a well known senior officer of the Main Political Administration of the Soviet Armed Forces and has written widely on political-military topics.

In this article, he examines the role and objectives of the Soviet military-patriotic education program, particularly as it applies to prepa-

ration of youth for military service. Noteworthy is his injunction against the equation of peace with "vegetarian pacifism."

Peace, whose fruits we have been savoring now for more than four decades, is not simply a gift of fate. It is the result of the political will of our state, based on economic and defense might, as well as the ability and determination of the people to defend its material and spiritual treasures. This is why it is noted in the CPSU Program that an important task of the party "continues to be the military-patriotic education, the instilling of readiness to defend the socialist Fatherland." The significance of this conclusion reached at the 27th Congress is especially notable in the light of the present military-political situation in the world. . . .

In these conditions [i.e., the U.S. arms buildup], the capability of socialism to respond to the most threatening provocations, to be ready to defend its social, economic and spiritual gains, is of special significance. The law discovered by V.I. Lenin concerning the dependence of the fate of the revolution, of its future, on the ability to defend itself is even more relevant in the present situation. In this connection, one should note a number of new peculiarities of its expression.

First of all, today the ability of socialism to defend its right to the present and future is of importance for humanity as a whole. The point is that the defense of socialism has objectively merged with the defense of peace in the widest sense. . . .

Second, the defense of the new peace itself in conditions of nuclear confrontation is expressed in large measure in socialism's ability to maintain the military-strategic parity, the attainment of which was assessed by the Party Congress to be an historic achievement. . . .

And, finally, third, the struggle to preserve military-strategic parity demonstrates our spiritual superiority over those who only think in terms of nuclear war, ways to militarize space, of the mirage of a "decisive victory". . . . This includes also the moral capability of the Soviet people. . . to give to the defense of the Fatherland all their strength up to self-sacrifice, if this should become necessary.

As one can see, the new conditions of the operation of the law on the dependence of the revolution. . . for the ability of society to assure its defense is largely determined by the maturity of the human factor. . . . An important part of

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it is the military-patriotic education of the Soviet people, first of all of the coming generation. . . .

A person has but one motherland. . . . For the Soviet people, patriotism has long ago become an organic part of their outlook, a profound moral feeling and motive for action. . . .

Another peculiarity of Soviet patriotism consists of its internationalist character. . . . In the process of military-patriotic education, there is the especially accelerated formation of many general Soviet traits: collectivism, high social responsibility, a profound consciousness of one's duty, the readiness at any moment to stand in defense of the Fatherland. . . .

Military-patriotic education, being a purposeful system to form the readiness and ability to defend socialism, embraces the family, school, army and production. A particular place in this system is held by the Armed Forces. . . .

Today, also, one cannot fail to note that significant changes have occurred, and continue to do so, in the main target of the military-patriotic education: namely, the coming generation. . . . About the war and its trials they only know from stories, books and films. In a number of cases, young people are impatient; they display "*maksimalism*" which is not always backed by a growth in social activism. . . .

In the military-patriotic education, whose aim is to prepare conscientious defenders of the Fatherland, a special place is occupied by the formation of "heroic consciousness". . . .

Military-patriotic education which creates the "heroic consciousness" is carried out in a number of closely interconnected directions. Naturally, the main one among them is the preparation of the youth of pre-conscription and conscription ages for actual military service in the Armed Forces. . . . The key criteria which today determine the quality of military-patriotic work with the youth are reflected in the degrees of spiritual readiness for possible trials, the firm knowledge of the fundamentals of military affairs, the high organizational qualities and discipline of every one who prepares to put on the uniform of a Soviet soldier or sailor. . . .

The military-patriotic education of the next generation cannot be effective today without a precise perception of the source of the threat of war, an understanding of the fundamental causes of military tension. People are tired of living in the shadow of the "Damocles' sword" of the threat of a nuclear cataclysm. Therefore, the

protest and anger against war and the damning and loathing of it are understandable. However, one thinks that, first of all, what is needed is not an abstract general condemnation of war as such; [rather] the principal thing is the condemnation of those responsible for the nuclear threat, those for whom socialism is but an "accidental page of history," those who have learned nothing from the last war. Apparently one cannot equate the struggle for peace with vegetarian pacifism.

Onward with Civil Defense

The excerpts below are from "Civil Defense," an editorial published in *Krasnaya Zvezda* (Red Star), July 15, 1985.

Its publication is interesting in light of the Chernobyl nuclear power reactor accident, in the aftermath of which the Soviet civil defense system appears to have played at best a marginal role in protecting the population and dealing with radioactive contamination.

As is emphasized in the new edition of the CPSU Program adopted at the 27th Party Congress, it is the duty of every communist, of every Soviet person, to do everything that depends on him to maintain the country's defense capability at the appropriate level. At the present time, when the overseas lovers of military adventures continue to intensify the arms race and to accelerate militaristic preparations, this demand by the Party is especially timely.

One of the important factors strengthening the country's defense capability is the perfecting of the training of the population in civil defense. The objective of civil defense is humanitarian; its mission is a responsible one. In the event of the initiation of war by the aggressors, the civil defense formations will ensure the protection of the population against mass destruction, will carry out measures to raise the stability [i.e., survivability] of installations of the national economy, and will carry out rescue work in centers of destruction.

USSR Civil Defense has an all-people character; its strengthening and perfecting have become the vital concern of all Soviet people. Under the leadership of party committees, it is being constantly worked on by soviet [councils] and economic organs and civil defense staffs. . . .

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SDI . . . CONTINUED

[The editorial praises a number of economic organizations for their civil defense work.] Unfortunately, this situation is far from the same everywhere. At some installations of the national economy, the level of work in organizing civil defense as a whole does not meet the requirements of the times. . . . Often instructions and exercises are conducted at a low organizational and methodological level, and the necessary material-technological base is not provided. Naturally, one cannot expect the desired results from such instruction.

A serious shortcoming in civil defense measures at enterprises, organizations and agencies is that they do not always pay the necessary attention to the development of practical skills, the mastering of methods of protection from modern weapons, the instilling of actions in response to civil defense signals. Such weaknesses are unacceptable.

Current civil defense is one of the most important areas of activities of military councils, political organs and staffs of the military districts and fleets. Working in close contact with local party and soviet organs, they are required to show constant concern for increasing the effectiveness and quality of all measures carried out in this area, to struggle for the further improvement of the local organs' readiness, amelioration in the coordination of the staffs and the training of nonmilitary [civil defense] formations. Particular attention should be paid to the perfecting of their joint actions with units and

subunits of [military] civil defense. . . .

The effectiveness and quality of all defense measures being carried out depend first of all on the installation's civil defense staffs. Working in close contact with military commissariates and DOSAAF [Voluntary Society for Assistance to the Army, Navy and Air Force] organizations, they are required to instill persistently into the practice of instruction the most advanced methods, and to carry out most of the instruction directly at the enterprises in the shelters and training sites with maximum use of the technical means of instruction. The task consists in developing in the fighters of nonmilitary formations, and in all workers and employees, not only specific practical know-how in defense, but also to prepare them for action in complex situations. It is precisely these qualities which were clearly demonstrated, for example, during the actions of the personnel of [military] civil defense formations which participated in the liquidation of the consequences of the accident at the Chernobyl AES [Atomic Electric Power Station]. . . .

One of the decisive conditions for ensuring the readiness of civil defense formations to carry out their assigned tasks is political work that is concrete, purposeful and varied in form. . . .

To constantly and persistently improve civil defense knowledge and skills is to actively contribute to the further strengthening of the Motherland's defense capability.



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NASA

NASA Emphasis on Shuttle, Station To Continue Under New Goals

By Theresa M. Foley

Washington—National Aeronautics and Space Administration this week will issue revised internal goals that will continue the space program's heavy emphasis on operational programs such as the space shuttle and space station, and also will begin to reorient NASA's mission more toward science and exploration.

Administrator James C. Fletcher is expected to adopt three primary goals, directing NASA to work toward expanding human presence beyond Earth, strengthening aeronautics research, and increasing scientific knowledge of the Earth, the solar system and the universe. Two supporting goals call for the development of new technology for space transportation systems and other civilian purposes.

Noel Hinners, chairman of the executive committee of NASA's Strategic Planning Council, which developed the goals, said they will provide top-level guidance to senior managers for daily decision making and budget planning. NASA's previ-

ous goals were based on a very short-term viewpoint and did not help managers do "a good job tying individual programs together," Hinners said.

Returning the shuttle safely to flight status will be among the new goals. They are more general and substantially different than those set in 1983, which called for making the shuttle "fully operational and cost effective in providing routine access to space," and establishing a permanent presence in space. The new goals will omit objectives set in 1983 that called for NASA to provide commercial launch services, and will place less emphasis on expanding opportunities for private sector investment in space.

Criticized Focus

Since the Challenger accident, members of Congress, scientists and others have criticized NASA for focusing its goals on operations, instead of science and exploration.

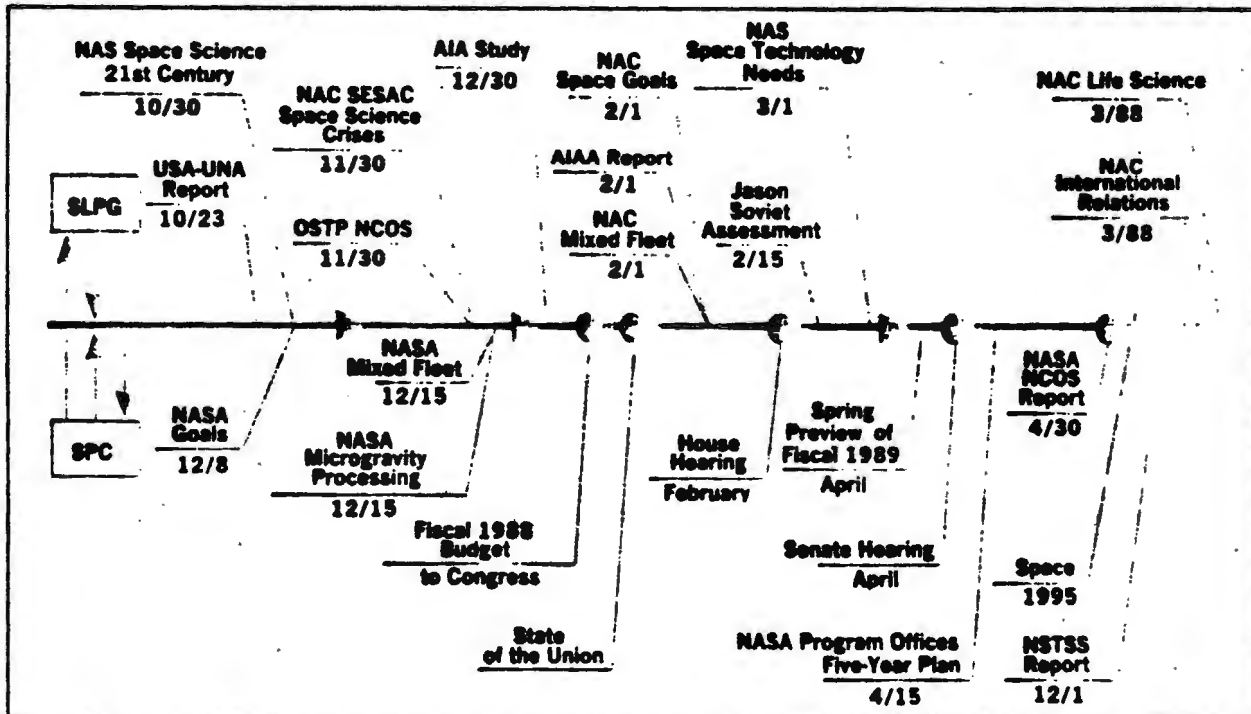
Critics believe pressure to achieve routine shuttle operations, called for in the

1983 goals, was a factor underlying the Challenger accident. Hinners said achieving the proper balance of operational and research programs remains a chief concern of top NASA managers. The new goals are a "public reiteration of NASA's basic mission," Hinners said, and will be further explained in objectives laying out specific program details and priorities that will be issued next summer.

NASA officials have begun to devise a 10-year strategic plan that will provide direction for the space program and respond to concerns that the U.S. has lost its leadership in space.

The White House response to the National Commission on Space report, which is being written by the Office of Science and Technology Policy, is expected to play a key role in influencing the strategic plan. The commission, chaired by Thomas Paine, recommended civilian space goals for the 21st century, including manned exploration of Mars and establishment of a manned lunar base.

The White House response to the Paine

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More than a dozen groups will contribute to the NASA 10-year strategic planning effort, headed by astronaut Sally Ride. The chart shows external advisory groups above the timeline, and advisory groups inside NASA and other Administration branches below. Other events that will be influenced by long-range planning also are included, such as submitting the Fiscal 1988 budget to Congress. Ride will use recommendations from the above sources in forming the long-range plan, called Space 1995. Groups participating in the ef-

fort include the NASA Space Leadership Planning Group (SLPG); NASA Strategic Planning Council (SPC); United Nations Assn. of the USA (USA-UNA); White House Office of Science and Technology Policy (OSTP); National Commission on Space (NCOS); NASA Advisory Council (NAC); Space and Earth Sciences Advisory Committee (SESAC); Aerospace Industries Assn. (AIA); American Institute of Aeronautics and Astronautics (AIAA); National Space Transportation Systems Study (NSTSS), and National Academy of Sciences (NAS).

Research and the Strategic Defense Initiative

Gerold Yonas

The Strategic Defense Initiative (SDI) is a research program initiated by the President with the objective of determining whether the threat of ballistic missiles can be eliminated using primarily nonnuclear techniques. The program's emphasis and timing are set by the intention of providing the information required for an informed decision on Full Scale Engineering Development (FSED) by the early 1990s. Obviously, the main consideration in conducting the research program and the FSED that might follow is the safety and security of the United States and its allies. Here, however, we address primarily the benefits, generalized costs, and economic and social policy implications related to the current research program.

For about the next five years, the SDI research program efforts will be concentrated in several areas of investigation:

- Directed energy anti-weapons technology, to explore the feasibility of lasers and particle beams;
- Kinetic energy anti-weapons technology, to investigate interceptions using the lethality inherent in the kinetic energy of rockets and high-speed projectiles;
- Technologies associated with launch detection, surveillance, acquisition, and tracking of attacking missiles and with battle assessment;
- Technologies associated with the lethality of the intercept devices, their survivability if attacked, and other critical requirements such as low cost space transportation and materials properties;
- Battle management and control techniques and system architecture issues; and
- Technology associated with potential countermeasures intended to overwhelm or defeat future defenses.

The objective of this research is to determine the fundamental technology and the technical and cost-scaling issues associated with system-level performance. It is in this phase of the program, where innovation and creativity are most needed, highly valued, and most likely to occur, that the greatest contribution to a broad base of technology is likely to occur.

Gerold Yonas is Chief Scientist of the Strategic Defense Initiative Organization, U.S. Department of Defense.

RESEARCH . . . CONTINUED

Funding in Fiscal Years 1985 and 1986 was \$1.7 billion and \$2.7 billion, in each case considerably less than the amounts requested by the Strategic Defense Initiative Office (SDIO) and recommended for a technology-limited program by the 1983 Defense Technologies Study Team. In FY 1987, the budget request is \$4.7 billion, and for the next several years, funding requests at the \$5-7 billion level are anticipated, an amount equal to 2 percent or less of the overall defense budget. In keeping with the research nature of the program, about one-third of these funds will be spent to develop the technology base. A significant portion of the other two-thirds will result, indirectly, in further contributions to the technology base.

At this point in the research program, estimates of possible deployment costs are very speculative. Even if the cost were to be several hundred billion dollars spent over decades, as some have estimated, the annual expenditure rate would be little different from that required for the current program to modernize our strategic offensive forces.

Most concerns about the economic and social value of SDI and defense research are usually related to the following themes: that its value resides not in itself but in the hardware that stems from it; that it is not valuable to the civilian sector; that if there were no SDI, the resources allocated to it would go to the private "research" sector; and that a diffuse and less urgent approach would yield the same results.

One important value of scientific research lies in the applications that stem from it. If civilian research leading to applications that create jobs and keep the United States economically competitive is important, so is the research applied to the defense of the society that permits such freedoms. Indeed, one can argue that the former is impossible without the latter. Additionally, one must consider a more stable aspect of defense research: that it could establish the basis for real progress in arms control and for moving towards a more stable strategic relationship—a transformation of considerable potential value. In these comments, we take for granted that there is great intellectual and personal satisfaction in research of any kind, and it is the freedom to pursue such challenges that underlies the high level of creativity in civilian and defense research.

Many familiar examples of applications important to the civilian market originated with or were strongly supported by defense research. It is not clear that the advances in these technologies would have occurred as rapidly without defense support. That resources committed to SDI would instead be transferred to private sector research in the absence of SDI is an illusion not

consistent with the reality of the concern for such matters as deficit reduction. Resource allocations at the national level are too strongly competed for to permit such a simplistic conclusion. It seems more likely that reductions in SDI funding would be applied to reducing deficits or to other national defense programs.

In a free society, citizens choose their work circumstances rather than having them imposed from above. The experience gained by major industries that perform both military and civilian research indicates that many top scientists prefer civilian sector research even if it means a smaller salary. The freedom of research direction and publication offered by academia is, for some, even more appealing than government work and possibly even less financially rewarding. The technical disciplines required for SDI tend to be very specialized; those with such expertise are likely already to be part of existing related research efforts. The number of highly qualified persons required is not an excessive portion of the national resource. In two specific areas, optics and software, there may be at present a shortage of qualified persons—a situation likely to be ameliorated eventually by the needs of the SDI research program. The research tools and the infrastructure created and accented by the SDI will leave a legacy that would otherwise not exist.

It is conventional wisdom to say that breakthroughs in science cannot be scheduled and that diffuse funding on a long-term basis is the best investment strategy to use for the promotion of broad-based progress in basic science. However, when specific nationally compelling issues are being addressed for which the basic science is largely appreciated, when advances in *technology* are sought, the focus provided by directed research programs offers a distinct advantage. The development of radar, nuclear energy, jet aircraft, satellite communications, and large-scale integrated circuitry are all examples of necessity being the mother of invention. Doubtlessly, there was concern over the effects of diversion and concentration of resources in these projects; the rapidity of their development and their benefits to society are, however, well appreciated today. There is ample evidence that a widely accepted technical challenge provides an acceptable basis for making rapid advances.

Benefits from SDI research can be expected in arms control, military, and civilian sector programs. For military programs other than the SDI itself, SDI-stimulated and sponsored research can be expected to benefit efforts to modernize our conventional forces and extend the defense technology base and the national resources associated with it. For example, high-power-directed and kinetic energy devices have considerable potential for applica-

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RESEARCH . . . CONTINUED

tion to tactical defense; advanced sensors, data processing, and programming methods can enhance U.S. arms control monitoring capabilities and greatly increase the effectiveness of high-leverage "smart" tactical weapons, battle-field management, and surveillance and real-time display of highly distilled information; increased capabilities with radar, laser, and large computer programs can enhance air defense capability; SDI lethality and vulnerability research can lead to hardened sensors and components for a broad variety of military applications; and research in ground-launched rockets and engagement techniques for high endo- and exo-atmospheric intercept of ICBMs will surely benefit the anti-tactical ballistic missile programs of such great importance to our allies. For the civilian economy, there are reasonable expectations that SDI research in lasers, particle beams, sensors, computer systems and software, and hardening will find applications in high strength, high temperature and wear-resistant materials, non-destructive testing, optics and holography, pattern recognition and artificial vision, faster and more sophisticated computers, improved national commercial air traffic management, and automated methods for manufacturing high technology components at low cost.

In a broader sense, SDI and defense-related research can enhance our economic competitiveness. In part, that competitiveness depends on a strong science and technology base that is well integrated with an industry that is sensitive to the needs of the future. There will always be some benefit from defense-related research, and strength in that activity benefits the entire technology base. Additionally, people often move from the defense research field to the civilian sector, where their experience and skills in defense project research and management are deemed quite valuable.

The social and economic issues may be summarized as follows:

CLASSIFICATION OF RESEARCH. Classification is the mechanism by which the dissemination of sensitive information is controlled. Some SDI-related research results must be classified for obvious reasons, but a considerable amount need not be. The strength and creativity of the unclassified research activity on the university campus—a critical national resource—will be enhanced if relevant federal policy and its implementation result in the maximum access to defense-related research results and facilities consistent with national security.

DEVELOPMENT OF HUMAN RESOURCES. Many agree that competitiveness and effectiveness in defense and civilian science and technology are essential to the national interest. It is also possible that the number of well-trained

scientists and engineers in some disciplines is inadequate to maintain a high level of future economic competitiveness. Where shortages exist, means to relieve them should be found in ways other than, for example, constraining SDI research. The federal government is seeking a catalytic involvement with the educational process and with academia and industry that will enhance the attractiveness of careers in science and technology, that will increase the human resources in those fields where prudence so indicates, and that will encourage the participation of well-qualified scientists at decision-making levels in the government defense community. The objective of increasing the resource base in certain disciplines of long-term interest to SDI has already been adopted as a goal of the SDI organization.

INCREASE THE EFFECTIVENESS OF TECHNOLOGY TRANSFER. The benefits of SDI and defense-related research can be increased if more effective methods can be devised for transferring science and technology results between the creation-oriented community typical of the university campus and the utilization community typically found in industry. To some extent, the engineering research centers on university campuses sponsored by the National Science Foundation serve that purpose for product-oriented development. The federal government is seeking ways to increase the transfer of basic *multi-disciplinary* research experience with close involvement of both academia and industry.

Expanding our human resources and facilitating the widespread use of the technology advances that arise from defense research will not be the major orientation of the SDI. Indeed, we cannot afford to lose sight of the vital necessity to resolve the critical technical issues we face in the SDI in the most timely, cost-effective, and efficient manner. Nevertheless, the broader implications of SDI research are inescapable and with prudent attention to these other issues, we hope to contribute to material success in the broader sense. We seek to provide the basis for a more safe, stable, and secure future—a future that will allow our technical community to enjoy the freedom that is indispensable to economic prosperity.

**International
Security**

**The SDI and American
R&D**

Bernard J. O'Keefe

At the end of World War II, there was a pent-up demand for civilian goods and services caused by a four-year hiatus while the economy was completely on a war footing. Not only was there a U.S. demand but also a worldwide demand because of extensive industrial devastation and even longer periods of wartime economy. Furthermore, the wartime developments in aviation, radar, automobiles, and various material sciences were directly applicable to the civilian economy and were adapted almost immediately. This history of technology transfer is often cited in justification of the application of research and development (R&D) resources to the Strategic Defense Initiative. However, the situation could hardly be more different today.

The fundamental reason for not proceeding with a large-scale program is that the objectives are not well thought out and can probably not be met, certainly not in this millenium, and most likely never. (Why, for example, X-ray laser development is given a significant role in what is supposed to be a nonnuclear defense is beyond me.) There is a rule of thumb in industrial R&D that says if a project is within an order of magnitude of fruition, a pilot R&D program is justified. Most of these programs are several orders of magnitude away in precision and performance from reliable application in the hostile environment of outer space and are nowhere near ready for serious consideration in U.S. national security plans.

A second reason is that even if we had a working system, it would not be accepted in our society. In the boost phase application, the heart of the program, it will be necessary to detect multiple targets, identify them as hostile, and execute the defensive action in a time that is short with respect to sixty seconds. This would mean turning over the decision on the probable future of civilization to a massive and untestable software program. I believe that a rational democratic society would reject the system once the choices were understood.

A third question that should be faced is the probable cost. I have not seen an exact estimate yet, but there are some clues. In the past four years, we have spent a trillion dollars over and above normal operating expenditures

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The SDI and American Research and Development

Tonic or Toxin?

Among other criticisms, opponents of the Strategic Defense Initiative (SDI) have warned that it will distort American military research and development programs by soaking up vital resources that are needed by other projects, leaving them starved of talent and infrastructure. Advocates of SDI have answered that investment in SDI R&D will produce spinoff discoveries that will significantly enrich other civilian and military research and development projects, leaving them with a net benefit.

To illuminate this dispute, the editors of International Security have asked three distinguished experts to comment on the following questions: (1) What will be the scope of the R&D effort that the SDI will require, if it comes to fruition? (2) What negative effects will this R&D effort have on other American military and civilian R&D? Will other R&D be drained or distorted? (3) What positive effects will SDI R&D have on other types of military and civilian R&D? What beneficial spinoffs could it generate? We invited them to focus on any of these questions or on others they believed important. We are pleased to present their replies.

—The Editors

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The Strategic Defense Initiative as Science Policy

Harvey Brooks

Considered as an example of American science policy, the Strategic Defense Initiative (SDI) seems virtually unique. There is no parallel from the rich and diverse menu of the past that can provide a plausible model for the probable evolution and fate of SDI as a piece of "big science." It is best described as a large scale, exploratory technology assessment, with very vague and open-ended technical goals, and considerable debate and disagreement as to its true strategic purpose. Despite the clarity and simplicity of the President's speech of March 1983,¹ his goals have not been accepted as technically feasible even by many participants in the program,² and there appears to be no general consensus on the research and development (R&D) strategy required for progress to whatever goals there are. One goal is advertised to the public—rendering nuclear weapons "impotent and obsolete"; but a much more modest and less clear-cut goal is set for the technical community—that of assessing the outer limits of a defensive technology against ICBMs. This incongruity is necessitated, in part, by the discontinuity in strategic significance between a good defense and an almost perfect defense, a defense of military-strategic targets and a defense of population centers.

Compared to the Manhattan Project of World War II, the scientific and technological basis for an SDI may be somewhat better understood than was the military exploitation of nuclear fission in 1941, but the nature of the ultimate goal differs in crucial respects that make this better technical understanding largely irrelevant. The Manhattan Project aimed at a specific "ultimate weapon," whose general characteristics could be pretty well defined in advance, at least in qualitative terms. In essence, the aim was a demonstration of a single weapon that was not part of an elaborately articulated weapons system, where many different elements had to work in harmony simultaneously. Moreover, the nature of the weapon, combined

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1. President Reagan's speech, March 23, 1983.

2. Donald L. Hafner, "Assessing the President's Vision: The Fletcher, Miller, and Hoffman Panels" and Charles A. Zraket, "Strategic Defense: A Systems Perspective," in *Weapons in Space*, Vol. 1, *Daedalus*, Spring 1985, pp. 91-126. The following quotation from Zraket summarizes the situation: "... we should begin with the premise that a perfect defense against all nuclear threats is feasible neither technically nor economically, at least not in the foreseeable future. On this there now seems to be general agreement throughout the defense community" (p. 109).

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STATEMENT ON SURVIVABILITY BY DR. EDWARD GERRY WITH DR. JASTROW

Survivability refers to the problem of making sure that the Soviet Union does not nullify the U.S. defenses in space by destroying our satellites before the Soviet attack starts.

These defenses are located on satellites orbiting over the Soviet Union. The satellites are of two kinds. One is the weapons-carrier satellite, which holds the "smart bullets" that home in on and destroy the Soviet missiles as they rise from their silos. The other kind is the sensor satellite, which holds the instruments that detect the initial launch of the Soviet missiles, signalling the start of the Soviet attack. After the launch the sensor satellite continues to track the Soviet missiles, calculating their trajectories and passing this information on to the weapons-carrier satellites. The weapons-carrying satellites use the information acquired from the sensor satellites to direct their smart bullets toward the targets.

Now, satellites are usually thought of as fragile and easily destroyed, and in the past they have indeed been built that way to save weight. But that is because no one has been shooting at them. In the future, U.S. satellites -- especially the military and space defense satellites -- will be built very differently.

The situation is similar to that for airplanes in World War I. They were used initially for reconnaissance over enemy lines, and were unarmed, unarmored, and not very maneuverable. Sometimes they were even painted bright colors; as witness the famous German ace, the Red Baron, who took his name from the color of his aircraft.

But then the enemy found that these airplanes were causing them a great deal of damage, so they started to shoot at them, from the ground and from other airplanes. So the aircraft began to put on armor, they mounted machine guns and cannons for self-defense, and they became more maneuverable. Later, when radar came in, they threw out bits of tinsel as decoys to confuse the enemy's radars. They gradually became less visible, culminating in the Stealth aircraft of today. And they added tricks, like sending back spurious "radar pulses" that confuse the radar by signalling, "Hey, I'm not here, I'm there." These electronic tricks, which are called electronic countermeasures or ECM, are very effective.

Some of these stratagems of defense are being considered for the new military satellites now being designed, and all will be present on the satellites for the U.S. missile defense. These stratagems are 7 in number: armor, self-defense or "shootback," maneuverability or getting out of the way, invisibility or "stealth," confusing the adversary with ECM, proliferation, and decoys. All are used effectively in air defense, except proliferation.

The meaning of most of these stratagems is clear, but what is proliferation? It means dividing your assets into a great many small pieces, so that the enemy doesn't hurt your defense much if he shoots down one piece.

How do we put all these stratagems together to make our space defenses survivable?

The first step is proliferation of our space assets. The space-based layer of the defense is expected to have about 10,000 "smart bullets" or homing interceptors -- usually called, in this context, "Kinetic Kill Vehicles," or KKV's for short--stored in pods on weapons-carrying satellites orbiting over the Soviet Union. We can put 100 KKV's on each of 100 large satellites; or 10 KKV's on each of 1000 satellites; or 5 KKV's on each of 2000 small satellites. The last is the way we will go: for proliferation, we will have as many as a few thousand small satellites, with a handful of KKV's on each.

(If proliferation is useful, why not one KKV per satellite. The answer is that then the total cost of the satellite platforms becomes very great compared to the cost of the KKV's, and the whole system becomes extremely expensive.)

The value of proliferation in space is, first, that if any single U.S. satellite is destroyed, the effectiveness of the defense is only diminished by a small amount; and second, that the Soviets must use a relatively expensive rocket to destroy each satellite, and if the satellites are small and therefore relatively inexpensive, it can cost the Soviets far more to destroy one of our satellites than it costs us to build it. That makes it very costly for them to try to overwhelm the U.S. defense.

Proliferation is one key to space survivability. Now for the other stratagems.

One of the main threats to our space-based defenses between now and the end of the 1990s will be a Soviet rocket launched from the ground within the USSR. The Soviet rocket could resemble the Galosh, now in place around Moscow as a part of the Soviet ABM defense. The Galosh has a nuclear warhead. The warhead is not a homing interceptor, but if it gets within a few miles of a U.S. satellite, the force of the nuclear explosion will destroy the satellite.

It is also possible that the Soviets will have homing interceptors -- smart bullets of their own -- which could be launched, for example, on the SS-20. These would carry heat detectors or radar detectors to home in on the U. S. satellites. The interceptor could destroy the the target by the force of the impact, or by releasing a cloud of pellets. Or it could destroy it by the explosion of a small nuclear warhead.

The U.S. satellites will have a plan of defense against

this threat. As soon as the sensor satellites detect the launch of a large number of Soviet rockets headed in the direction of our space defenses, they will initiate a series of responses.

(If only a few Soviet rockets are launched, that may mean that the Soviets are just feeling out our defenses, finding out how we would respond to a mass attack. In that case it would be best to sacrifice one or two small satellites, if necessary, rather than reveal our complete bag of tricks.)

The first response will be to maneuver. If a Soviet rocket is headed on a course that brings it within a lethal distance of one of our weapons satellites, the sensor satellite informs the endangered weapons satellite, which fires a small onboard rocket to get out of the way. That is, it kicks itself into a slightly different orbit.

Being able to do this is called maneuverability. It is an extremely important survivability measure, which will be present on nearly all military satellites in the future.

After the maneuver, the sensor satellite observes the ascending Soviet warheads to see if they shift course to follow the quarry. If they do not, they are dumb warheads, and the maneuver is probably going to be successful. If the warheads shift course, they are smart, and the next response comes into play.

This is the deployment of decoys -- lightweight, balloon-like objects that can deceive the Soviet radars by looking like the real satellites to them, and are constructed also to deceive the heat-sensitive detectors that may be on the Soviet homing interceptors.

If the U.S. satellite throws out several decoys capable of a credible deception, the Soviet interceptor is as likely to chase after a decoy as it is after a real weapons-carrying satellite. In fact, if we throw out 9 or 10 decoys, which is a quite feasible number, the chance of the Soviet warhead going after the actual weapons carrier is only about 1 in 10.

That means the Soviets have to use 10 interceptors to have a reasonable expectation of killing the satellite. In fact, a statistical analysis shows that if the Soviets want to be very confident of achieving a kill -- if they want to have, say, a 95 percent probability of killing the satellite -- they must use at least 40 interceptors.

Now the question of costs enters. Sending up 40 interceptors will require 3 or 4 SS-20s. An SS-20 costs about \$40 million, so the Soviets must spend \$120 million to \$160 million to kill one U.S. weapons-carrying satellite. If the weapons-carrying satellites have 5 KKV's aboard, they cost the U.S. about \$30 million. This cost ratio is quite discouraging from the Soviet point of view.

And other U.S. survivability measures are still available and waiting to be brought into play. ECM can further diminish the Soviet probability of a successful kill based on radar homing, and "flares" -- decoys that deceive the heat-sensitive detectors without worrying about deceiving the radars -- will lower the probability of a kill by heat-seeking interceptors.

When the full suite of survivability techniques is employed, the number of Soviet interceptors needed to ensure a high probability of killing one satellite can become very large, and their cost prohibitive. The adversary will always be able to kill a satellite if he devotes sufficient resources to that end; the secret of survivability in space is to make the cost so great that he finds the effort daunting.

One more important stratagem remains. If the Soviets throw a sufficient number of interceptors at a weapons-carrying satellite to penetrate its screen of decoys and its electronic and optical countermeasures, the sensor satellite -- which has been observing the progress of the the battle -- will inform the weapons carrier of the danger, and authorize the weapons carrier to fire its own KKV's against the attacking interceptors in self defense. This is shootback. Because shootback uses KKV's intended for destroying the Soviet ICBMs, it is a last resort, to be employed when all other stratagems have not worked. But it further lowers the odds against Soviet success.

The bottom line is that by a combination of proliferation, maneuverability, decoys, ECM and OCM and shootback, our space-based defenses can be made highly survivable at acceptable cost.

There remains the question of survivability of the sensor satellites. Only 10 of these are planned, of which only 3 or so take part in the battle over the Soviet Union at any one time, the remainder being over other parts of the globe.

The sensor satellites are attractive targets to the planners of a first strike, because the loss of even a few could be quite damaging to the U.S. defense. Therefore, they require special means of protection.

The first device that comes to mind is proliferation, so important for the weapons-carrying satellites. But proliferation is less useful for survivability of the sensor satellites, because they are too expensive to proliferate in great numbers.

The key to the survival of the sensor satellites is not proliferation but altitude. They will be placed far above the weapons-carrying satellites, in orbits that may be as high as 1000 miles or more. That means it will take a relatively long time for the Soviet rockets to reach them. As these rockets rise to their targets, the sensor satellites will have ample time to move out of their path or put into play other stratagems.

Most serious for the Soviet rockets and interceptors is the fact that on their way up to the sensor satellites, they pass through the constellation of U.S. weapons-carrying satellites and KKV's. This affords many opportunities for the U.S. satellites to take repeated shots at them.

Altitude, as noted, is the key here. The weapons-carrying satellites are in lower orbits 300 to 400 miles high. Consequently, if a weapons carrier defends itself against an attacking interceptor by firing its KKV's, it probably will have time for only one shot before the interceptor catches up to it. But the weapons-carrying satellites defending their sensor satellite against attack can follow a more leisurely strategy of shoot-look-shoot, in which the weapons carriers fire off a salvo, the sensor satellite tells them which Soviet interceptors they have missed, and then they fire another salvo at those.

Suppose, for example, the probability of a successful shot by a KKV is 90 percent. That means that if 100 KKV's are fired at 100 Soviet interceptors, on the average 90 interceptors will be destroyed, and 10 will escape. Now a second salvo of 10 KKV's is fired at the 10 interceptors that remain. Nine of the 10 interceptors will be destroyed, and 1 will escape. That means 1 out of the original 100. If the KKV's fire a third salvo, there is a high probability that this last one will be destroyed, so that none of the Soviet interceptors gets through.

Shoot-look-shoot is highly effective. But it takes time. That is why altitude, and the time it buys, are the keys to the survivability of the sensor satellites.

Paul H. Nitze

An Arms Control Agenda That Kissinger Should Know

I read with interest Henry Kissinger's op-ed column of March 8 in The Post. I found myself in complete agreement with his description of Soviet negotiating behavior. I differ, however, with several of his points regarding the current Nuclear and Space Talks (NST) and the U.S. approach to those talks.

First, Kissinger noted the problem of asymmetrical negotiating attitudes, resulting in the United States' offering a stream of compromises while the Soviets remain intransigent. While I agree that this problem has plagued us in the past, I do not believe it is unavoidable.

This administration has done a remarkable job of sticking to the basic principles of its original arms control positions, while responding with tactical flexibility when the Soviets have shown flexibility of their own. We are closing in on an INF agreement that is almost identical to our original proposal. Similarly, the agreed elements in the START group keep our ongoing principles intact. And in the defense and space group, despite Mikhail Gorbachev's best efforts, we have resisted adding any new limits to the ABM treaty.

In fact, I find curious Kissinger's assertion that the Strategic Defense Initiative is a good illustration of our self-imposed handicaps. The claim is based not on anything that has happened to date but rather on his prediction that we will agree to crippling restrictions on SDI research permitted by the treaty, despite our success in resisting such restrictions thus far. The president made his firmness abundantly clear at Reykjavik.

Second, Kissinger claimed that no compromise is possible between the Soviet intention to kill SDI and the administration commitment to maintain it. To my

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mind, this is too absolute a generalization. (It seems that Kissinger also thinks so, since the five-point proposal he offered at the end of his piece is based on just such a compromise.)

Surely, no compromise is possible if the Soviets can accept no outcome other than the effective end of SDI, but I am not convinced that they would not settle for an outcome that provided predictability to the strategic defense area while permitting us to retain a robust research program.

Many factors bear upon such a judgment, including the possibility of a dialogue, along the lines some Soviet scientists have advanced, aimed at identifying the technologies now understood to be based upon other physical principles and the potential ABM components of systems based upon such technologies. Using such definitions, one can conceive of a regime that would allow SDI to proceed at a rapid but predictable pace. Incidentally, the testing of sensors (other than ABM radars), which Kissinger claims

would be to the Soviets' advantage, is actually the one component of SDI that Gen. James Abrahamson's people say is most crucial to the progress of our program.

Third, Kissinger misstated the U.S. proposal for limits on SDI. At no time have we proposed a 10-year deployment moratorium followed by a two-year period for negotiation. In his July 25 letter to Gorbachev, the president proposed a five-year period of nonwithdrawal from the ABM treaty followed by a two-year negotiation. At Reykjavik, we proposed a 10-year nonwithdrawal period, with each side having the right to deploy immediately at the end of that period.

Fourth, I differ with Kissinger's assessment of the zero option in INF. As Sen. Sam Nunn said a couple of weeks ago, it represents a good asymmetrical reduction, with the Soviets eliminating more than 1,300 warheads and the United States eliminating about 200.

It does not eliminate the American means of retaliating from Europe. We would retain all of our nuclear-capable aircraft in Europe, including F-111s with range greater than the Pershing II, our short-range missiles and nuclear artillery and the 400 SLBM RVs we have dedicated to NATO. Given these remaining systems, as well as our extensive conventional contribution to NATO's defense, I believe talk of decoupling is unjustified.

Finally, let me turn to Kissinger's five-point proposal. I find that much of what he recommended has already been done.

Kissinger recommended a statement of overall strategy. I enunciated such a strategic concept in a speech to the Philadelphia World Affairs Council in February 1985, just before the NST negotiations began. This concept called for radical reductions in the power of offensive nuclear arms, as well as the stabilization of the offense/defense relationship, over the next 10 years, followed by a period of transition to greater reliance on defenses, should new defensive technologies prove feasible.

Kissinger recommended an offer to the Soviets to discuss quantitative restraints on SDI deployment and testing geared to the level of offensive forces. We have been trying for two years in Geneva to engage the Soviets in a discussion of the nature of a cooperative transition that would involve such restraints.

Kissinger recommended an offer to reduce strategic forces in a manner that would limit the capacity for surprise attacks by either side. It is exactly this goal that underlies our insistence that a START agreement include strict sublimits on heavy ICBM RVs, on ICBM RVs and on strategic ballistic missile RVs. Because of our determination to reduce the capacity for surprise attacks, we have held to this position despite strenuous Soviet resistance.

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LOU CANNON

SDI Endangered by Its Friends

On March 23, 1983, in a nationally televised speech on his defense budget, President Reagan put forward the idea that nuclear weapons could be rendered "impotent and obsolete" by a visionary defense system that would "intercept and destroy strategic ballistic missiles before they reached our own soil."

Reagan is rarely guilty of understatement, and he claimed that night to be launching "an effort which holds the promise of changing the course of human history." He may have been right. The effort became the Strategic Defense Initiative (SDI), which U.S. conservatives now prize as Reagan's most valuable contribution to national security and the Soviets have made their principal target in arms negotiations.

Perhaps inevitably, because the technologies involved are complex and uncertain, the SDI debate has been overblown and oversimplified. Reagan, carried away by what he called his "dream" of an antimissile defense, began to talk as if a "space shield" or a "nuclear umbrella" was scientific reality rather than a research program that would take at least a decade before deployment could even begin.

His critics, with equal hyperbole, immediately dubbed SDI "Star Wars" and tried without discernible success to make it a campaign issue. Democratic presidential candidate Walter F. Mondale, debating Reagan in 1984,

darkly suggested that the SDI was a plan to militarize space.

When Reagan last week observed the fourth anniversary of the SDI, he could proudly and accurately claim that it "has been a singularly effective instrument for bringing the Soviets to the bargaining table."

The SDI has also prospered at the hands of Congress, a result obscured by Reagan's tactic of submitting excessive budget requests that Democrats have pared. The SDI is a special research account within the Defense Department budget. While budgets for other military research programs have declined, SDI funding has increased from \$1 billion to \$3.5 billion annually in four years.

But the program is now menaced by some of its most ardent advocates and original supporters. Such conservatives as Sen. Malcolm Wallop (R-Wyo.) and Rep. Jack Kemp (R-N.Y.) are pushing for immediate deployment of a largely token defense system that would have the effect of repudiating the 1972 Antiballistic Missile (ABM) Treaty. They are counting on the support of Defense Secretary Caspar W. Weinberger, usually influential with the president in his areas of expertise.

Conservatives who would like to deploy an antimissile defense system as early as a week from Tuesday seem more threatened by the ABM Treaty than by the Soviets. They fear that

Reagan, despite his promises to the contrary, will be persuaded in the twilight of his presidency to use the SDI as a "bargaining chip" and trade it for Soviet reduction of offensive nuclear missiles.

In the White House, there are different worries. White House chief of staff Howard H. Baker Jr. and national security adviser Frank C. Carlucci are political professionals who recognize that both Reagan and the SDI could be damaged if the president decides to abandon the ABM Treaty or reinterpret it permissively to allow early deployment.

As Reagan has acknowledged, all present SDI tests can be carried out under strict adherence to the ABM Treaty. A decision against the treaty at this time is also a decision against the SDI, since Democrats are likely to retaliate by slashing the program's budget.

In addition, there is a persuasive pro-SDI case against early deployment of a jerry-built system that would give minimal protection to U.S. missile sites and none to civilians. "The one way you can kill SDI in its infancy is to deploy something that doesn't work," a senior administration official said last week. "That would be doing SDI no favor."

Conservatives used to argue that, to prevent a successor from scrapping the SDI, a defensive system must be in space before Reagan leaves office. But as a research program and a hedge against Soviet construction of a defensive system, the SDI has become a permanent feature of the U.S. military landscape and need not be rushed into premature deployment. Ironically, the SDI must now be protected from its friends.

ESPIONAGE...CONT.

news and trade publications, said his company was contacted by U.S. investigators last April.

"Basically they were responding to N.S.D.D. 145 and a government white paper of September 1985 relating to the Soviet acquisition of militarily significant technology," Mr. Young said in an interview. "They asked us whether we would be willing to block access to the database to certain customers and we said we would not. It's all public information, and we feel it should not be subject to classification."

Mr. Young said the group identified itself as the Air Force Assistance Management Group.

"Then they asked us if we would turn over the names of customers and we said absolutely not," Mr.

Young said. "We felt very strongly that this was confidential and that we would go to great lengths to keep it that way."

A short time after the visit, the company cancelled its subscription to the Commerce Department's National Technical Information Service, which has been a major target of Soviet information collection efforts. Mr. Young said the step was primarily an "economic decision."

"However, we also felt that without NTIS there was absolutely no justification for their concern about people gaining access to our database," he said. "We wanted to draw the line so it was absolutely clear."

Jerry Berman, an American Civil Liberties Union attorney involved in national security issues, said the

computer security program poses a threat to constitutional safeguards on the free flow of information. Visits by government agents to private computer firms could have a chilling effect, he said.

"We think the lifting of the policy, because it was so broad, is a step in the right direction," said Mr. Berman. "We are anxious for the government to clarify that its function is to protect systems from unauthorized penetration from outsiders and not for the government to be defining information."

Mr. Berman said he believes the Defense Department and its electronic intelligence component, the National Security Agency, are not the best federal agencies to control the program because they are overly concerned with secrecy.

ISSUE REPORT

Deploy SDI Now

As originally conceived, the Strategic Defense Initiative (SDI) was a "research program" to identify promising technologies for a strategic defense system. Almost four years into the SDI program, this has paid off handsomely. Technologies have been identified as very promising for use in near-term strategic defense deployment. The next step is to turn these promising technologies into reality by moving toward development and testing so that actual deployment can begin.

Currently the Administration is still presenting the SDI program as a long-term research effort, requiring up to ten years for a decision on whether to proceed with engineering development of defenses against ballistic missiles, and years more for actual deployment. Reagan has set a goal of a comprehensive, multi-layered defense of the whole American population against an end-of-the-world assault by thousands of nuclear weapons. There is no question that SDI, so defined, will take many years to develop, test and deploy.

But in the meantime, the American people have no protection against a Soviet nuclear attack, and the U.S. strategic deterrent remains unacceptably vulnerable. The "window of vulnerability" is still wide open, and the long-term research program that SDI has become will not even begin to close it for another decade. So long as SDI appears to be only a research program, it will be subject to attack by friends and foes alike. Opponents see it as a waste of money and supporters as lacking a clear goal.

However, once a decision is made for full scale development of a specific weapon, the program will have the purpose and focus it now badly lacks. If President Reagan orders the Pentagon to develop and deploy just one SDI weapon, he will leave a legacy that no future president or congress can easily reverse. That is the kind of commitment the supporters of SDI want Reagan to make; to set a target date to begin protecting the American people.

The Technology Exists Today for SDI

One of the most enduring fallacies about SDI is that no system can be deployed for

many years. Yet technologies already exist that could be used in a strategic defense system deployed either immediately or in the near future. Some of these technologies can be derived from existing air defense and ballistic missile defense systems; others are emerging from SDI research on advanced anti-ballistic missiles, radars, sensors, and interceptor systems.

The best candidate so far for a strategic defense system against missile warheads in the mid-course of their flight is the Exo-atmospheric Reentry Vehicle Interceptor Subsystem, or ERIS, which is being developed by the U.S. Army. ERIS is an outgrowth of the Army's Homing Overlay Experiment (HOE) conducted at Kwajalein Atoll in the Pacific Ocean in June 1984. During this experiment a missile interceptor successfully destroyed a Minuteman ICBM warhead traveling 20,000 ft per second that had been launched some 4,000 miles away at Vandenberg Air Force Base in California. HOE's passive infrared sensor tracking system worked better than expected at acquiring, tracking, and differentiating targets from decoys. The Homing Overlay Experiment success was so encouraging that the U.S. Army's Strategic Defense Command decided to develop the HOE system, now called ERIS, over a five-year period.

A single site of 100 ERIS interceptors, with modest radar improvements and airborne optical sensors to provide backup battle management would provide at least a partial defense of the U.S. population against ICBMs at a very reasonable cost of about \$3 billion.

Another \$500 million would cover the desired upgrade of radars and sensors. The total for this initial mid-course defense against strategic missiles would be little more than one percent of the annual defense budget.

Today the United States is spending nearly \$300 billion each year on defense and \$3 billion on SDI, and there is nothing to protect the American people against a Soviet launch of nuclear missiles against this country. It would be immoral and foolhardy not to protect the public when the technology that can do so is available at reasonable cost.

SDI should not be viewed as a long-term research program to be followed by the rapid and complete deployment of a highly complex, multi-layered defensive system. Strategic defenses should be built one part at a time, as each technology proves feasible and cost effective. President Reagan has made the important decision to deploy SDI and not bargain it away. He now should instruct the Secretary of Defense to begin full scale development of ERIS and other technologies with target dates for initial deployment within five years.

The technology exists. It requires only a political decision to build it. President Kennedy set a target date to land a man on the moon; President Reagan should set a target date to begin protecting the American people.

Kim Holmes

Deputy Director Defense Policy Studies

James Hackett

Editor, National Security Record



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December 5, 1986

Max,

Lori Ross of the South Africa Foundation called with the answers to your questions:

1. Jobs created in South Africa each year:

Annually 250,000 workers average will come into the labor market.

Average GDP required to create sufficient job opportunities to absorb them is 4.5%/year

Average to end of century would have to be 354,000 jobs created/year.

2. Jobs being created

Past 5 years, employment 52,000/year.
Since 1974, average 86,000 jobs/year

New job creating dwindling at alarming rate.

3. What current population growth rate

1980-1985:	<u>Preliminary official growth rate 1985:</u>
White: 1.4%	.91%
Colored: 2.4%	2.3%
Asian: 2.0%	2.2%
Black: 2.4%	2.8%

4. Figures declining investment

Johannesburg- no figures to prove decline in investment.

South Africa Reserve Bank Figures are as follows:

Total investment:

1982: 39.9 Billion Rand

1985: 81.4 Billion Rand

Decline not reflected here

5. Growth rates past few years
according to Reserve Bank Bulletin

1981 4.8
1982 -1.8
1983 -2.5
1984 5.0
1985 -1.1

AF Press Clips

WASHINGTON, D.C.

December 19, 1986

XXI No. 49

THE NEW YORK TIMES

DECEMBER 14, 1986

PRETORIA ASSAILED ON SECURITY STEPS

Adversaries on Both Left and Right Fault the New Rules

Special to The New York Times

JOHANNESBURG, Dec. 13 — South Africa's newest tightening of emergency rule, which includes stringent censorship, was sharply criticized today by the Government's white adversaries on both its left and its right.

A white opposition leader, Colin Eglin, described President P.W. Botha's justification of the measures as unconvincing, and right-wing white leaders said the South African leader was electioneering.

At the same time, the authorities, exercising new powers to prevent the dissemination of information deemed hostile, denied clearance for the South African Press Association to publish a statement by the United Democratic Front, the largest nonparliamentary opposition movement in the country. The press association is an independent news agency owned by major newspaper groups.

The statement, which was nonetheless issued by the agency with a warning to subscribers that it might contravene emergency laws, was then retracted at official behest.

It described the newest stiffening of emergency powers as "clearly aimed" at some of the United Democratic Front's anti-apartheid campaigns.

The organization, which says it has a following of two million among 600 affiliated organizations, had sponsored campaigns for nationwide resistance to apartheid and for what was called a "Christmas against the emergency."

Calls for Consumer Boycott

The Christmas campaign included calls for a consumer boycott to display displeasure at the nation's newest emergency decree, imposed June 12 to combat violence and protest that have claimed 2,300 lives since September 1984.

The newest tightening of the emergency rules, promulgated last Thursday, prohibit, among other things, reports that assess the success of politi-

cally inspired boycotts or give details of how such boycotts are organized.

President Botha said on national television Friday night that the latest measures, which broaden the definition of subversion and further empower the authorities to stifle news, were needed to combat a terror campaign by the outlawed and exiled African National Congress, which seeks to overthrow the Government.

"One must, of course, take seriously the allegations of plans for violence and terror," Mr. Eglin, the white opposition leader, told reporters.

"However," he said, "the attempt to use this as justification for the clampdown on the press is one of the most unconvincing red herrings I've heard from a political leader in many years."

Jaap Marais, leader of the extreme right-wing Reconstituted National Party, said, "I suspect Mr. Botha's speech was more to do with boosting the Government's image in advance of an election rather than the security situation."

A spokesman for the right-wing Conservative Party said Mr. Botha's speech "looked to me like a prelude to some political maneuver, such as by-elections or a general election."

Botha May Seek New Mandate

The authorities have hinted Mr. Botha may seek a new mandate from white voters next year, through a series of by-elections or in a national election.

Shortly after the tightening of emergency powers, the South African authorities announced a renewed crack-

South African press restrictions now prohibit journalists from transmitting dispatches on any security actions, protests, detentions or "subversive statements" without clearance by Government censors.

down on their adversaries, and police officials said they had "swooped" on what were described as underground resistance cells.

In a statement Friday night, neighboring Swaziland, an independent, black-ruled nation, accused South Africa of raiding its country to abduct two Swiss nationals accused by the authorities here of sympathizing with Pretoria's insurgent foes in the African

The Washington Times

DECEMBER 16, 1986

High U.S. aide visits Zimbabwe

HARARE, Zimbabwe — U.S. Undersecretary of State Michael Armacost met with Prime Minister Robert Mugabe yesterday in the highest level talks between the two countries since a diplomatic row began five months ago. No details of the meeting were released, but the State Department said in Washington Mr. Armacost would affirm U.S. support for the security and development of the countries of southern Africa.

Mr. Armacost leaves today for Botswana and will end his tour with visits to Mozambique and Zambia. In Lusaka, Zambia, he is to meet with representatives of the African National Congress, South Africa's main rebel group. He will be the highest-ranking U.S. official ever to meet with the ANC.

Relations between Zimbabwe and its No. 1 aid donor nosedived after David Kariamazira, minister of youth, sport and culture, attacked U.S. policy in South Africa during a Fourth of July reception at the U.S. Embassy here. Former President Jimmy Carter, in Harare on business, led a walkout by Western diplomats. Mr. Mugabe later apologized to Mr. Carter, but he said he would not apologize to the U.S. government, which withheld \$13.5 million in aid pending an apology.

HAPPY HOLIDAY!

AF/P WILL TAKE ITS
TRADITIONAL TWO WEEK
BREAK FOR THE HOLIDAYS.
OUR NEXT ISSUE WILL BE
DATED JANUARY 9, 1987.

National Congress.

The Swazi authorities said the raiders abducted four people and killed two others in what was held to be one of South Africa's first cross-border raids directed against foreign nationals.

Also, the London-based human-rights group Amnesty International identified three others detained in a crackdown inside South Africa as Molefe Tsele, Vusi Khanyile and Bill Jardine, all members of the National Education Crisis Committee, which opposes apartheid educational policies.

The United Democratic Front had planned to start its Christmas campaign on Tuesday, the 25th anniversary of the African National Congress' guerrilla campaign against the white authorities.

DECEMBER 18,

Anti-apartheid coalition resists efforts to crush it

The following material was written under South Africa's state of emergency, which imposes severe reporting restrictions.

JOHANNESBURG, South Africa (AP) — The country's largest anti-apartheid coalition said yesterday that its entire leadership is in jail or in hiding but that grass-roots supporters are keeping the organization alive underground.

The United Democratic Front, in a statement carried by the independent South African Press Association, said regional and national leaders of the coalition were primary targets of the government's latest crackdown, which includes curbs on news reporting and opposition activities.

Censorship rules imposed under the state of emergency restrict reporting about unrest, security force actions, treatment of detainees, most forms of peaceful protest and a broad range of statements that the government considers subversive.

"Thousands of activists in our affiliates weather the repression by using covert, but peaceful, methods to continue the struggle," the United Democratic Front said in a statement issued by its chief spokesman, Murphy Morobe.

"We don't know, however, how long it will be possible to operate as a legal organization. The state has indicated its determination, by its latest actions, to totally wipe out the UDF."

The UDF says it has 850 affiliated organizations with a total of 2.5 million members.

In Cape Town, nine anti-draft activists accused of making "subversive statements" made their first court appearance in one of the few prosecutions of alleged state-of-emergency offenses since the decree was imposed June 12.

The defendants belong to the End Conscription Campaign. The group opposes mandatory military service, which applies to white men, on the grounds that conscripts are used to patrol black townships and enforce apartheid.

The nine appeared briefly before a magistrate and were released on bail of \$70 each.

The state introduced no evidence on the alleged illegal statements, and the case was postponed until Jan. 14. The defendants, who were detained Dec. 3, were told the state was still formulating specific charges.

Sanctions Said to Weaken U.S. Influence in Pretoria

Officials Point to Latest Crackdown

By Joanne Omang

Economic sanctions imposed by Congress against South Africa have undercut U.S. ability to moderate Pretoria's current crackdown on its opposition, and Congress ought to take notice, senior State Department officials involved with the region said yesterday.

Briefing reporters on recent developments in Africa before the visit next month of Secretary of State George P. Shultz, one senior official said U.S. efforts now focus on demonstrating a willingness to play a role in peacemaking, and on urging regional leaders outside South Africa to think in positive terms about what ought to follow apartheid, the system of strict racial segregation.

The official, who asked not to be named, noted that neither Shultz nor Michael H. Armacost, assistant secretary for political affairs and the department's top Foreign Service officer, who is now traveling in Africa, would visit South Africa on their trips. There is not much point in going at this time, he said.

"We're in a brittle mode of dialogue now" in which South African officials have "reacted rather badly" to U.S. criticism, the official said. They feel "less restrained" in responding with force to anti-apartheid protests by the black majority with such measures as stiff press censorship and the use of bulldozers to oust black settlements from certain areas, the official said.

"That would not have happened a year ago," he said. "The influence we had at the margins is being brushed aside."

Another official long familiar with the region said that was understating the case. "They're ignoring us completely," he said.

Predicting this development, President Reagan vetoed the sanctions measure last October, but Congress overrode the veto.

Sanctions supporters said U.S. influence with Pretoria was never great, and that sanctions were crucial to express rejection of apartheid, which through laws and tra-

dition maintains a racially segregated society that gives 5 million whites control over 24 million blacks. The Reagan policy of "constructive engagement" with the white minority government was ineffective in easing Pretoria's repression, critics of the policy maintained.

One of the administration officials said blacks are nonetheless gaining more power and apartheid is "on the run" in nongovernmental areas, as labor, business, church and academic circles open black-white dialogues. "South Africa is changing before our eyes," he said, but stressed U.S. desire to speed the process.

Armacost's message during his visit to five "front-line states" on or near South Africa's border, which are actively opposed to apartheid, is that they must take the first steps in outlining the structure for a post-apartheid era and that they can count on U.S. help, the official continued.

The administration is "sick and tired" of hearing simple calls for all sides to negotiate without concrete proposals, he said.

Armacost is also "sending a signal" through meetings he expects to have outside South Africa with outlawed African National Congress leaders that any dialogue must include all South Africans, not just the government.

The official said a proposed project to rehabilitate the 300-mile railway from Harare, Zimbabwe, to the Indian Ocean port of Beira, Mozambique, in order to reduce front-line states' dependence on South African transport links, was "one of several options" under consideration for U.S. aid.

Armacost will be "testing the waters" on what role might be played in the region by Mozambique, a left-leaning nation the official praised for its economic reforms. "We've gotten very good value for our money" in aid there, he said.

Press Curbs Aimed at Black Groups

S. Africa's Botha Circles the Wagons

By Allister Sparks
Special to The Washington Post

CAPE TOWN, South Africa, Dec. 14—The drastic new clampdown on the press is aimed more at crippling the emergent black political opposition than at the newspapers themselves, according to people in close touch with government thinking here.

They say that muzzling the press and putting an end to publicity that it feels stirs up the black population is part of the motive. But more importantly, the press restrictions are part of a massive operation aimed at the extensive network of community organizations that have been challenging the state's civic and legal authority in the segregated black townships during the past two rebellious years.

By prohibiting the newspapers from reporting or commenting on the activities of these organizations, the government aims to sever their means of communicating with the black community. They now will find it more difficult to organize and publicize their campaigns and even to meet and raise funds.

"The main aim," one source close to the Cabinet said here this week, "is to create quiet conditions that will enable the government to proceed with getting its new constitutional structures in place."

Most local analysts believe the sweeping restrictions are also intended as a declaration of defiance to the world, and particularly the United States, in response to sanctions.

Some think, too, that they are the harbinger of an early general election to be called by President Pieter W. Botha, who will run on a platform of patriotism and national security. The media crackdown is one display of *kragaaingena*, the Afrikaans word for forcefulness, that is usually a sure sign that the ruling National Party is getting ready for the polls.

The progovernment Afrikaans-language press is already beginning to refer in editorials and articles by political columnists to the prospect of a "laager" election in April. This evokes the imagery of the circling of ox-wagons by the Dutch-descended Afrikaner pioneers into a

defensive laager when they were under attack.

The imagery implies that Botha and his party will portray white South Africans generally, and its dominant Afrikaner element particularly, as being under attack by a vindictive, American-led international community, as well as by the black revolutionaries who are presented as the tools of Moscow.

In the face of this "total onslaught," as government ministers call it, the whites must put aside their differences and stand together.

The laager concept also implies a retreat from the Botha government's attempts to appease world—especially American—opinion.

"Essentially the government is saying, 'to hell with the rest of the world,'" said Robert Shire, head of the political studies department at the University of Cape Town. "Botha's intention now is to wrap himself and his government in the South African flag."

"The government believes that it cannot appease its international critics," Shire added. "No matter what it does it is damned, and there is no longer any point in restraint. And domestically it feels there are more votes in being tough than there are" in pushing reform.

In a national television broadcast Friday night, Botha declared war on the underground African National Congress (ANC) and warned that he will go after its members in and out of the country. The warning was followed almost immediately by a series of armed raids into neighboring Swaziland, further demonstrating the mood of "forcefulness."

The press crackdown is thought to be aimed at an extensive network of community organizations—action committees, street committees, student associations and people's courts—that have sprung up in black townships throughout South Africa over the past two years. They are affiliated with national coordinating bodies such as the pro-ANC United Democratic Front and the black-consciousness Azanian People's Organization.

In many townships these self-styled "alternative" groups have challenged and made inroads into the civic and legal authority of the state.

This has been the thrust of the black rebellion that has rocked South Africa for the past two years. With the declared intention of mak-

ing the townships "ungovernable," black activists have waged a campaign to smash Pretoria's administrative system in the townships.

The state's structure there is based on black councils that were elected under the apartheid system in heavily boycotted polls. Many of the black councilors, discredited as "collaborators," have been killed or forced to flee. Others have resigned.

As the administrative structures began to crumble in many townships, the "alternative" community organizations sought to take over effective control.

The activists' campaign also paralyzed Botha's efforts to implement his apartheid reforms at the regional and national levels.

These reforms, which revamp apartheid rather than abolish it, seek to establish a system of "own affairs" government for the different race groups at all levels, with the white minority remaining in overall control of matters of national importance.

By disrupting the "own affairs" structure at the local level and discrediting the idea of collaboration in what is pejoratively called "the system," the activists made it impossible for the government to find credible black leaders willing to participate in the higher structures.

Using the sweeping powers granted them by the emergency declaration last June, large contingents of police and troops moved into the townships and began a counteroffensive aimed at disabling the "alternative" organizations and reconstructing the official administrative system.

Thousands of community leaders have been detained, but the sophisticated operation has gone beyond mere repression. A series of Joint Management Committees (JMCs), which are the local limbs of an elaborate intelligence network called the National Security Management System, have sought to reestablish the legitimacy of the state authorities by redressing local grievances.

As a corollary, they have exploited factional rivalries and run disinformation campaigns in an attempt to discredit the community organizations.

"From the government's point of view the JMCs have been extremely successful," said Willie Breytenbach, a former political adviser to the Botha government who now teaches at the prestigious Afrikaans University of Stellenbosch. "They

believe they are winning the battle in the townships and now they are being given carte blanche to go all out and finish the job."

Breytenbach sees the news blackout as part of a total war that will now be waged to neutralize the "alternative" organizations.

The blackout means nothing can be published about them or the boycotts, strikes and campaigns of civil disobedience they have been organizing. The detention of their members cannot be reported, nor what is done to them in detention.

The security forces can crack down on them, even remove whole dissident communities, without the public attention provided by monitoring bodies such as the Black Sash and the Detainees' Parents' Support Committee, which have also been gagged by the press restrictions.

While the community organizations are silenced and crushed, the Joint Management Committees will press ahead with their campaign of trying to win credibility for the authorities and their black nominees in the townships, says Breytenbach.

If the radical black opposition can be put out of action, the government believes it will then be easier to co-opt more compliant blacks to get its stalled "own affairs" constitutional reforms into operation at regional and national levels as well.

Frederik van Zyl Slabbert, former leader of the Progressive Federal Party who now heads a new political think tank here, calls this a strategy of "repression and co-option" that he says will be the pattern of future action by the Botha government.

Said Breytenbach, "The government believes it has found the success formula, now they want more of it. And now that sanctions are a *fait accompli*, they believe there is no longer a political price to pay. It has already been paid. They have nothing more to lose."

Another Stellenbosch political scientist, Andre du Toit, believes Botha's personality has much to do with the swing to belligerency.

"He feels aggrieved and misunderstood," said du Toit. "He feels he has done more than any other South African leader in the way of reform, but he is not given due credit for this . . . Now he is angry."

Whether through anger or cold calculation, many experienced po-

Continued on Pg. 4

Pretoria Moves Against 3 Publications

By ALAN COWELL

Special to The New York Times

JOHANNESBURG, Dec. 15 — South Africa was said tonight to have ordered restrictions on three publications — the first individualized actions of their kind since tightened censorship regulations were promulgated under emergency rule last week.

The publications were The Sowetan, The Weekly Mail and a local news sheet published by the opposition Progressive Federal Party.

Four days after the latest toughening of emergency rule, meanwhile, the authorities also reported continued violence in the nation's segregated black townships, saying two blacks were burned to death in Soweto yesterday, and a third fled to safety after being set alight in another township.

Statements by 13 Groups Banned

Journalists working on The Sowetan a newspaper that strongly opposes apartheid, said a police order forbade publication of any statements by 13 organizations supporting an anti-Government campaign called "Christmas against the emergency."

A police spokesman said orders had been issued against The Sowetan and The Weekly Mail under emergency regulations giving the police broad powers. A police spokesman said the restriction imposed on The Sowetan was also ordered against The Weekly Mail, an anti-apartheid newspaper run mainly by liberal whites.

In Pietermaritzburg, the capital of Natal province, the authorities said a local newsletter issued by the white opposition Progressive Federal Party was banned today.

Radley Keys, a local opposition spokesman, said a copy of the newsletter was sent for approval last week to a government office in Pretoria established to enforce the new regulations. The office, he said, sent him a curt telex today saying: "Approval for publication has been denied."

The Bureau for Information said the newsletter, called "Outreach" and said to carry news items about missing persons and conditions in black townships in the Pietermaritzburg area, "was not authorized for publication."

In the restrictions placed on The

Sowetan, the organizations it was prohibited to quote included the United Democratic Front, the biggest nonparliamentary opposition movement in the country, and the Congress of South African Trade Unions, the leading black labor federation.

The two bodies, along with the South African Council of Churches, are among the sponsors of the "Christmas against the emergency" campaign.

The Sowetan had earlier carried a full-page advertisement, sponsored by the United Democratic Front and calling for support for the anti-emergency protest. Under the tightened emergency rules it is an offense to "resist or oppose" the Government in its execution of emergency rule.

"This newspaper may have been censored," The Star, an evening newspaper here said today on its front page. "We are not permitted to say where, how or to what extent."

Reports of Killings

The Bureau for Information, the Government's principal propaganda arm, said that 200 black youths burned alive a man aged about 30 years in Soweto, Johannesburg's black satellite city, while security forces found a sec-

South African press restrictions now prohibit journalists from transmitting dispatches on any security actions, protests, detentions or "subversive statements" without clearance by Government censors.

ond charred body, of a black man aged about 45, elsewhere in Soweto.

The Bureau said that, near Vereeniging, south of Johannesburg, a crowd set fire to a third black man, who managed to flee alive.

The Government statement also reported that the police opened fire on 20 blacks who hijacked a bus in Soweto yesterday, wounding and arresting one of them. In Tembisa, a township close to Johannesburg, the Bureau said, a group of 80 black youths set fire to two private homes, while a security force patrol was stoned in Boipatong township near Vereeniging. The patrol shot, wounded and arrested one of the group, the Bureau said.

Since September, 1984, about 2,300 people, most of them black, have died, and an estimated 30,000 people have been detained without trial for varying periods.

Last week the authorities tightened the emergency regulations, introducing new censorship rules and outlawing school, bus, rent and consumer boycotts. The authorities also widened the definition of subversion to include the advocacy of boycotts or the creation of alternative power structures such as the street committees that have been formed in some townships.

President P. W. Botha said the steps were taken to avert a terror campaign by the outlawed African National Congress over the Christmas period.

Opposition figures asserted, however, that the Government was seeking to prevent mass protest. A campaign by political, labor and church groups to protest apartheid and emergency rule is set to begin Tuesday.

The censorship regulations, government officials have indicated, are designed to prevent anti-apartheid campaigners from gaining encouragement by public word of their successes.

Murphy Morobe, a spokesman for the United Democratic Front, said that before the current censorship was introduced, word of successful protests showed blacks "that they did not stand alone in facing the onslaught of state terror."

Along with the Congress of South African Trade Unions, the South African Council of Churches and the National Education Crisis Committee, the Front has urged South Africans to observe "10 days of unity in protest against apartheid and the state of emergency."

During the 10-day campaign — the opening of which is supposed to be marked by the ringing of church bells at dawn Tuesday — the organizers have urged the suspension of sporting activities and music festivals and the early closing of the illicit drinking houses called shabens. They have also urged a boycott of Johannesburg's largely white-owned stores — an offense under the new security regulations. The nature of the campaign was announced before the regulations were promulgated.

PRESS CURBS AIMED AT BLACK GROUPS (Continued)

litical observers here believe Botha is setting the stage for an April election.

They say the combination of sanctions and a tough crackdown on black revolutionaries creates an ideal climate for a call to whites, especially the Afrikaners, to close ranks behind a strong government in the face of an external threat.

"It can be a replay of Vorster's

1977 triumph," said Breytenbach. John Vorster, Botha's predecessor, won a landslide victory after crushing the 1976 Soweto uprising and running a chauvinistic campaign that exploited white resentment of the critical rhetoric of the Carter administration and its vociferous Africa spokesman, Andrew Young.

According to Slabbert, "Botha will use sanctions against the right

wing and he'll use the threat of a right-wing takeover to frighten the more liberal English-speaking voters into supporting him rather than the Progressive Federal Party. He can win himself a helluva victory."

This article was written under new South African press restrictions that prohibit the reporting of nonofficial news of violence,

unlawful gatherings, strikes, boycotts and other forms of organized dissent, or of any "subversive statement" as defined by the Pretoria government, unless cleared by a board of official censors. Under the rules, it is the responsibility of the correspondent to judge what falls under the category of censorable material.

Pretoria's New Line Rules Adopted in Name of Democracy Appear Only to Erode It Even More

JOHANNESBURG, Dec. 13 — When South Africa's white rulers sought Friday to justify their newest and most draconian tightening of emergency rule, they did so in a manner that seemed to some critics to defeat the very goals they sought to pursue.

News By casting the outlawed
Analysis African National Congress as the direct cause of a form of rule that is stifling

South Africa's limited democracy, the authorities tacitly promoted the insurgent movement to the status of apartheid's principal antagonist. And that seemed to defeat the Government's prime goal: the emasculation of the congress.

The status barely tallies with the record of a movement whose principal gain seems to have been to capitalize on a nation's agony by presenting itself as the sole source of hope and redemption. The message, by many accounts, has been well received in the nation's segregated black townships, if only because 38 years of Afrikaner rule have eroded the alternatives.

It is perhaps indicative of black desperation that the military campaign of the African National Congress — low-key, sporadic and hardly a threat in any conventional sense — is seen by its supporters as heroic.

At the same time, the proclamation of the new measures — designed in part as a psychological counterblow to black protest — seemed a tacit acknowledgement that earlier tough emergency measures in force since June 12 had failed to win black quiescence.

A Purported Policy Statement

The centerpiece of the Government's case, as presented to reporters, is a slender, blue-bound document entitled "A.N.C. Planning 1987," said to be a congress policy statement obtained by Pretoria's intelligence services. So far, only the authorities have attested to its authenticity.

The document, said to represent official African National Congress strategy, purports to prove that the organization, based in Lusaka, Zambia, seeks to combine military activity with a psychological war designed "to reinforce the confidence of our people in the ability to emerge victorious" and a political war designed to mobilize mass resistance to apartheid through such organizations as the United Democratic Front.

According to the document, the congress seeks to promote the idea of "people power," to divide and enervate the white minority and to harness black township protest as a quasi-military force led by congress representatives to press a "people's war."

But the document says the United Democratic Front — the country's biggest nonparliamentary opposition movement, which subscribes to the same political charter as the African National Congress — has failed to fulfill the role ascribed to it by the congress as a force of political mobilization. It dwells, too, on a military strategy that has "not come anywhere near

the achievement of the objectives we set ourselves."

If that is the case, a reporter asked a Government minister, without receiving an attributable answer, why all the fuss?

A Comparison With Vietnam

Militarily and politically, according to the official line, South Africa is not frightened of the congress but does not underestimate its ability to turn domestic protest to its own goals, which encompass the end of apartheid and the creation of a new social and economic order. That is said to explain the crackdown.

According to Dave Steward, a principal Government propagandist, there is a comparison between South African press reporting of the crisis in South Africa and American press reporting of Vietnam.

Mr. Steward said on nationwide television the other day that the American press contributed directly to the outcome in Vietnam. The inference is that the Government does not intend to allow the same thing to happen here.

The regulations seem to dwell at length on a perceived role of the South African press, in particular, in promoting the "revolutionary onslaught." At a first reading, it seems possible to report the mere fact that a boycott of, say, white-owned stores is taking place. But it is unlawful to seek to gauge the success of the boycott, or to report how people might be cajoled or intimidated or enticed into supporting it.

The Government's reasoning seems to be that if news of a protest disappears, then that protest will find no echo that might encourage others to take part, or give heart to those who are already participating.

Crackdowns and Reforms

The regulations also expand the official definition of subversion, making it unlawful to advocate such forms of protest as boycotts, which are regarded by some as a peaceful way of pressing demands in a land where normal parliamentary channels are not available to the majority of the people.

In a conflict in part dependent on who holds the psychological initiative, the Government's view is that enforced public silence about protest will erode the will of the protesters to proceed in the absence of visible and acclaimed advances.

Mr. Steward indicated the other day that the Government would then be able to proceed with its program of cautious racial change.

But the regulations also bar all but officially authorized reporting of actions by the security forces. Those forces, including local black auxiliary police forces in segregated black townships, may thus operate beyond public scrutiny, presumably with greater freedom to pursue the raids that have led to 22,000 detentions since the newest state of emergency was declared on June 12.

Since September 1984, about 2,300 people, the vast majority of them black, have died in protest and violence. More than ever, under the new

restrictions, the chronicling and interpretation of such slaughter will be ordered by the white authorities.

Closing Nonrevolutionary Options

In the view of some of the Government's opponents, the very ascendancy of the supposed "revolutionary climate" is rooted in the increasing restrictions on nonrevolutionary alternatives. In the 27 months since the start of the crisis, the avenues of black protest — public meetings, say, or black funeral rallies — have been steadily closed or narrowed, while the white authorities have shown themselves more and more embattled, a mood encouraged by foreign punishments such as divestment of South African holdings and other economic sanctions.

After President P. W. Botha went on nationwide television Friday night to justify the clampdown by reference to the purported African National Congress threat of terror and murder, Colin Eglin, leader of the opposition in the segregated, white chamber of Parliament, said reports of impending violence and terror should be taken seriously.

Nonetheless, he said, Mr. Botha's justification for the crackdown was unconvincing.

"What was still missing," Mr. Eglin said, "was any convincing statement that he or his Government had any meaningful plan to bring about a political solution to the problems of this country."

THE NEW YORK TIMES
DECEMBER 15, 1986

The Rest Is Silence

Anthony Lewis

If there is a rational future for South Africa, and there should be, Zwelakhe Sisulu will play an important part in it. Character, intellect and history make him someone who can help the center hold if and when the country moves toward a nonracial democracy.

He is a newspaper editor, 36 years old. He was a Nieman Fellow at Harvard two years ago, and his understanding and presence made a deep impression on those who came to know him there, including me. He has lately led opposition to South Africa's system of separate and unequal schools. He is the son of a great figure in the anti-apartheid movement, Walter Sisulu, who has been imprisoned with Nelson Mandela for 20 years.

Zwelakhe Sisulu was taken into detention last week, picked up at 3:30 in the morning at his home in Soweto and taken to an unidentified prison. It was the day after the Government imposed on the press, domestic and foreign, an extraordinarily harsh censorship system.

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Excerpts From Rules By Pretoria

Special to The New York Times

JOHANNESBURG, Dec. 13 — Following are excerpts from South Africa's tightened emergency regulations, announced Thursday:

'Subversive Statement'

"Subversive statement" means a statement —

(A) In which members of the public are incited or encouraged, or which is calculated to have the effect of inciting or encouraging members of the public:

(1) To take part in any activity or to commit any act ... of "unrest";

(2) To resist or oppose any member of the Cabinet or a minister's council or any other member of the Government or any official of the Republic or any member of the Cabinet of a self-governing territory or any official of a self-governing territory or any member of a security force in the exercise or performance by any such member or official of a power or function in terms of a provision of a regulation made under the Public Safety Act, 1953, or of a law regulating the safety of the public or the maintenance of public order;

(3) To take part in a boycott action —

(a) against any particular firm or against firms of any particular nature, class or kind, either by not making any purchases at or doing other business with or making use of services rendered by that particular firm or any firms of that particular nature, class or kind, or by making purchases only at or doing other business only with or making use only of services rendered by firms other than that particular firm or other than firms of that particular nature, class or kind;

(b) against any particular product or article or against products or articles of any particular nature, class or kind, by not purchasing that particular product or article or any products or articles of that particular nature, class or kind, or

(c) against any particular educational institution or against educational institutions of any particular nature, class or kind, by refusing to attend classes or to participate in other activities at that particular institution or at any institutions of that particular nature, class or kind;

(4) To take part in an act of civil disobedience —

(a) by refusing to comply with a provision or requirement under any law or by contravening any such provision or requirement, or

(b) by refusing to comply with an obligation toward a local authority in respect of rent or a municipal service;

(5) To stay away from work or to strike otherwise than in accordance with the provisions of the Labor Rela-

South Africa Blinds Itself

The Pretoria regime's Christmas gift to itself is a press purged of unwelcome news. Its 24-page censorship proclamation goes further than requiring clearance for stories dealing with security or "subversive" statements. Also forbidden is any indication, such as blank spaces, showing busy scissors at work. That may please the Government and its supporters. But for everybody else, no news is terrible news. It is the willful self-blinding of a country stumbling on a precipice.

Certainly censorship won't stifle rebellion by a black majority clamoring for rudimentary rights. Instead it will give wings to rumor and credibility to exaggeration, and feed suspicions that Pretoria is hiding brutal use of emergency-rule nightsticks. The regime insists the new rules are not intended to limit debate, except when the debate concerns the national emergency. How on earth is that emergency to be sensibly discussed by muffling what was once the freest press in Africa?

The demise of that tradition was somberly recorded with perhaps excessive pessimism by The Johannesburg Star: "This is just possibly the last issue of any relatively free newspaper you will read in South Africa." The Sowetan, a daily published by blacks in Johannesburg, called the regulations the final nail in the coffin of press freedom. "Well, that's it," wrote The Pretoria News. "Today South Africa joins such sophist autocracies as Zambia, Mozambique, Tanzania, Paraguay, China and its arch-foe, Soviet Russia."

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tions Act, 1956 (Act 28 of 1956) or any other appropriate law regulating labor relations or to support any such stay-away action or strike;

(6) To attend or to take part in any restricted gathering;

(7) To exert power and authority in specific areas by way of structures purporting to be structures of local government and acting as such in an unlawful manner, or to establish such structures, or to support such structures, or to subject themselves to the authority of such structures, or to make payments due to local authorities to such structures.

(B) By which the system of compulsory military service is discredited or undermined.

Restrictions On Publication

No person shall publish ... news or comment on or in connection with —

(A) Any security action;

(B) Any deployment of a security force or of vehicles, armaments, equipment or other appliances which to a reasonable bystander would appear to be for the purposes of security actions;

(C) Any restrictive gathering, insofar as such news or comment discloses at any time before the gathering takes place the time, date, place and purpose of such gathering, or gives an account of any speech, statement or remark of any speaker who performed at the gathering in contravention of a condition, prohibition or requirement deter-

mined or imposed under a law mentioned in the definition of "restricted gathering";

(D) Any action or boycott by members of the public which is an action or boycott referred to in paragraph (A) (3), (4) or (5) of the definition of "subversive statement," insofar as such news or comment discloses particulars of the extent to which such action or boycott is successful or of the manner in which members of the public are intimidated, incited or encouraged to take part in or to support such action or boycott, or gives an account of any incidents in connection with such intimidation, incitement or encouragement;

(E) Any structures referred to in paragraph (A) (7) or (8) of the definition of "subversive statement," insofar as such news or comment discloses particulars of the manner in which members of the public are intimidated, incited or encouraged to support such structures or to subject themselves to the authority of such structures;

(F) Any speech, statement or remark of a person in respect of whom steps under a provision of Chapter 3 of the Internal Security Act, 1982, or a condition under Regulation 3 (6) of the Security Regulations are enforced, insofar as any such speech, statement or remark has the effect or is calculated to have the effect of threatening the safety of the public or the maintenance of the public order or of delaying the termination of the state of emergency;

(G) The circumstances of, or treatment in, detention of a person who is or was detained under Regulation 3 of the Security Regulations, or

(H) The release of a person who is detained under the said Regulation 3.

Career Diplomats Will Head NSC's Mideast, Africa Sections

Incoming national security affairs adviser Frank C. Carlucci has picked two veteran Foreign Service officers to head the Middle East and African divisions of the National Security Council staff, administration officials said yesterday.

Carlucci's choices, Robert B. Oakley and Herman J. Cohen, are career diplomats with extensive experience in their areas of work. Both are less controversial within government ranks than Carlucci's earlier choices of Fritz W. Ermarth to head the Soviet affairs section and Jose S. Sorzano as senior specialist on Latin American affairs.

Oakley, who served as head of the State Department's counterterrorism office for two years until September, is resident associate at the Carnegie Endowment for International Peace studying terrorism and its foreign policy implications.

Oakley will be returning to a job he has done before, having served as chief of the Near East and South Asia section of the NSC staff in 1974-77 during the Ford administration.

Since then, he has been deputy assistant secretary of state for East Asian affairs, ambassador to Zaire and Somalia and special ambassador for counterterrorism.

Oakley was a classmate of Carlucci at Princeton University.

As Mideast chief at NSC, Oakley will succeed Dennis Ross, who came to the job last summer when Howard J. Teicher vacated the post to be chief of NSC's politico-military section.

Teicher, whose resignation was announced Tuesday, was deeply involved in the secret U.S. arms sales to Iran. However, Ross' colleagues at the White House and State Department said they think that Ross had no part in the secret project and probably did not know of it until about the time it became public.

Cohen is deputy director of the Foreign Service, a senior personnel-management post at State. He has spent about half of his 31 years in the Foreign Service in jobs deal-

South Africa Regime Uses Doublespeak To Make Repression Sound Democratic

By ROGER THURLOW

JOHANNESBURG, South Africa— "What we're trying to do in South Africa is to establish a democracy," Stoffel van der Merwe, the deputy information minister, was saying to explain his country's latest affront to democracy—press censorship. "And that is the reason why we do not clamp down on the press much harder."

Thus, Draconian measures become generosity, and repression becomes relief. In today's South Africa, a country that is as rich in paradox as in diamonds and gold.

The 24-carat contradictions abounded last week. The press, as Mr. van der Merwe said on another occasion, would have to give up its democratic freedom for the sake of democracy.

'Freedoms vs. Democracy'

"The whole strategy of the revolution (is) to use the freedoms of democracy to destroy democracy; therefore, the revolutionary forces have to be denied the use of democratic facilities," was the way he put it. "There is a danger in this type of struggle where you cannot allow the freedoms of democracy to be used against it."

Mr. van der Merwe is the chief disseminator of information for a government that uses doublespeak to communicate to the outside world. Perhaps that is the only language fit to announce state-of-emergency crackdowns to a population that has long been told it lives in a country protecting the last vestiges of Western democracy in Africa.

"It is a language of panic, used by people who realize they don't exercise as much influence as they thought they did under the state of emergency," says a political philosophy professor at an Afrikaans-language university. He says he wants to remain anonymous because "I'm not sure what we can be quoted as saying under the new restrictions." He worries that the government may next try to talk away the need for a parliament and elections.

Doublespeak was around long before the new press laws. The government says apartheid is dead, while every day new-

ing with Africa, including that of ambassador to Senegal in 1977-80.

When rumors swept the State Department several months ago that Assistant Secretary for African Affairs Chester A. Crocker might leave his post, Cohen was among those prominently mentioned to succeed him. There is no indication currently that Crocker will depart.

Cohen will succeed Clark A. Muddock, a Central Intelligence Agency official dealing with Africa before being named senior director of NSC's African affairs division in September.

born babies must be registered according to their color. A black township near Pretoria that the government wants to move farther away from a white neighborhood is "deproclaimed" or "disestablished"—meaning it ceases to exist. The government can't acknowledge that it is being moved because the government has officially declared an end to forced removals. The government says it has nothing against the concept of power sharing, but then a minister turns thumbs down to a provincial power-sharing arrangement because it doesn't leave the whites a big enough share.

Now there is press censorship for the sake of freedom of the press. By reporting on things like boycotts, demonstrations, anti-government statements and political unrest, the media are being exploited by revolutionaries and thus are in danger of being destroyed. That's the way the government sees it, and explains it. Through censorship, the government is out to save the members of the media from themselves.

The media are guilty of something that Dave Steward, the head of Pretoria's Bureau for Information, calls "climate creation," which he says is making it harder for the government to have its way in the six-month-old state of emergency.

"Some newspapers publish articles praising listed communists as heroes of the nation," Mr. Steward told a nationwide television audience in an attempt to explain the new press laws. "The fact is that in a broad spectrum of our newspapers, the ANC (the banned African National Congress) and Nelson Mandela (its jailed leader) have more positive coverage than the government and the president."

In such a situation, Mr. Steward said, "the state has a right, and in fact a duty, to make sure that the opposition, the radicals, cannot use the media to bring about a situation where the freedom of the media itself would ultimately be destroyed."

Thus, the government nobly reckons, it better destroy the freedom of the press before the radicals do. But, there is another motivation: The government worries that if it doesn't shackle freedom of the press, freedom of the press will shackle it.

"We must remember what happened in the Vietnam War," Mr. Steward told the TV audience. What happened, as he tells it, was that "the United States lost the Vietnam War primarily because of the manner in which the media reported on the war."

In South Africa's conflict, Mr. Steward estimates that only about 20% of the battle is with bombs and guns and bullets. The rest, he says, is a struggle of communications. So, in its fight to save democracy, the government finds that one of the main tenets of democracy, press freedom, is its chief enemy.

The War for South Africa

How the ANC's Black Guerrillas Think They Can Defeat the Afrikaners

By Steven Mufson

JOHANNESBURG—It seemed odd when South African police captured a guerrilla from the African National Congress carrying a book whose cover read "The Renaissance."

But inside, the title page turned out to be from a novel from the Penguin Crime Series, "Murder Without Icing." Further inside, the police discovered, pages 10 through 112 were missing altogether. Instead, the rebound book included "An Elementary Handbook on Explosives" put out by Umkhonto we Sizwe, the military wing of the ANC. There were chapters with titles such as "How to Make Napalm" and "The Self-Igniting Molotov." There were helpful tips on fuses and detonators: "Under no circumstances must you test these when they are connected to the explosive. It could be the last thing you ever do."

A rising number of ANC attacks over the past two years has provided a look at how well ANC agents apply the instructions outlined meticulously in the little manual. A year ago, ANC executive com-

mittee member Thabo Mbeki told me that "if white South Africa has a hazy notion today of how great the crisis is in the country, 12 months ahead it won't be so hazy." The threat was plain; the ANC had declared 1986 the Year of Umkhonto we Sizwe (literally Spear of the Nation)—a clear test of the military capability of the ANC's fighting arm.

As the year draws to a close, the verdict is mixed.

On Friday, South African security forces began massive arrests of alleged "subversives" linked to the ANC, and claimed a plot to incite a revolution on Tuesday, the 25th anniversary of the founding of Umkhonto. (Tuesday is also the Day of the Covenant, commemorating the Afrikaner pioneers' victory over the Zulus in 1838.)

During the first six months of this year, the ANC struck 34 percent more often than it did during the last six months of 1985. The number of attacks by the end of August (168) was three times as high as the average annual number of attacks for the previous decade. Umkhonto has bolstered the ANC's credibility among a black populace that is growing more sympathetic to militant strategies. Tom Lodge, politics lecturer at the University of Witwatersrand,

and electrical power substations [see table].

If the statistics didn't testify to the persistent ANC activity, then the contingent of heavily armed policemen standing guard at Polley's shopping arcade below police headquarters in Pretoria would. Even Stadler and his top-ranking colleague, Col. Jack Buchner, concede that they are unlikely to bring ANC attacks to a halt. Buchner puts it this way: "When a flea starts biting you, it can bite you whenever and wherever it wants to."

To describe these acts as the work of "fleas" suggests a randomness that doesn't do justice to ANC strategists. For years, the ANC pursued a selective campaign of daring and carefully coordinated missions, such as the attacks on South Africa's coal-to-oil conversion plant and nuclear power station in the early 1980s. The purpose of the attacks was to impress blacks with the ANC's capabilities. In a phase that began last year, the ANC is trying now to cultivate a "peoples' war," a less-sophisticated but broader-scale insurgency.

Umkhonto was founded in 1961 by Nelson Mandela. Although Mandela went to Algeria for training during the end of the brutal Algerian war with the French, the ANC's attacks under his leadership bore little resemblance to Algerian strategy. Unlike the Algerians, who readily struck at civilians, the ANC focused on railways and economic infrastructure. In the 18 months following its founding, Umkhonto carried out 150 acts of sabotage. Then, in 1963, its headquarters at a farm in Rivonia, a suburb north of Johannesburg, was raided and top leaders and political leaders were seized, crippling ANC military activities for more than a decade.

Joe Slovo, a white lawyer, later wrote that the headquarters had been widely known to ordinary ANC cadres and that a period of success "had bred a mood of carelessness and bra-

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UMKHONTO WE SIZWE ACTIVITY

JULY 1985-JUNE 1986

	June 30- Dec. 31, 1985	Jan. 1- June 30, 1986
Guerrilla attacks on police or police facilities; police/Umkhonto clashes:	25	50
Attacks on South African Defense Force personnel or buildings:	6	0
Attacks on homeland politicians, community councillors and other individuals:	22	9
Landmine explosions:	6	11
Limpet mine attacks on economic infrastructure, mainly Escom power substations:	9	26
Limpet mine attacks on railway facilities:	2	3
Limpet mine or bomb attacks in or outside hotels or restaurants during business hours:	0	4
Limpet mine or bomb attacks on commercial premises used by civilians, during business hours:	1	4
Gunfire attacks on commercial premises during business hours:	0	1
Grenades thrown in crowded central business districts:	1	0
Limpet mines in central business districts or recreational facilities outside regular hours:	15	5
Attacks on government or public buildings:	1*	0
Others/unspecified:	0	5
TOTAL:	88	118

* The low level of attacks on government buildings compares with 10 during the previous six months.

Source: Tom Lodge, politics professor, University of Witwatersrand.

TERRORIST INCIDENTS IN SOUTH AFRICA 1976-86

(MOST ATTRIBUTED TO THE ANC)

1976	4	1982	39
1977	20	1983	56
1978	13	1984	44
1979	12	1985	136
1980	19	1986 (as of 8/31)	168
1981	55	TOTAL:	566

Source: Institute of Strategic Studies, University of Pretoria

estimates that there may be 400 to 500 fully trained ANC guerrillas in the country at any time.

But the police have scored important victories, unearthing arms caches, and capturing or killing ANC guerrillas—181 of them in the last two years. Despite the dreaded necklace killings of black township residents suspected of collaborating with the government, portions of the police informer network still appear to be functioning.

"The ANC has no military capability, not in the conventional sense," says Brigadier Hermann Stadler, the burly, chain-smoking police officer heading the government's side of the battle. He believes there are no more than 20 to 50 ANC guerrillas operating inside the country. He notes that the ANC has no formal brigades, no tanks and no ability to do frontal battle with the South African Defense Forces. Its major bases are hundreds of miles from South African borders and are vulnerable because they are located in South Africa's weak neighbors.

"They use what I call bomb commuters," Stadler says. He also concedes that more and more "bomb commuters" are striking at black police officers, border farmers, shopping cen-

PHOTO BY TOBEY—THE WASHINGTON POST

THE WAR FOR SOUTH AFRICA (Continued)

vado which was, in the end, to prove costly." Slovo, now head of the South African Communist Party, concluded that Umkhonto had to operate in smaller cells.

"Those who take part in such work should know only what is absolutely necessary for the performance of their tasks," he said. Now ANC guerrillas operate in cells that contain as few as two people and rarely more than five. The biggest alleged cell ever is now on trial in Durban; it allegedly had 12 people, including a pregnant woman and two doctors. Prominent anti-apartheid leaders inside South Africa play no role in Umkhonto activities, though many of them endorse ANC political objectives.

The commander of Umkhonto is Joe Modise, who left South Africa for military training in 1962. Earlier, he had been a truck driver from Sophiatown, a vibrant, largely black section of Johannesburg in the 1950s that the government demolished to make way for a white neighborhood named Triomf (Afrikaans for "triumph"). Little else is known about Modise, who makes highly militant speeches on the ANC's Radio Freedom.

The 60-year-old Slovo also holds a top position in Umkhonto. Slovo, who fought for the Allies in World War II, was acquitted of treason along with 155 others in a marathon trial in the late 1950s. He was detained briefly in 1961 and left South Africa in 1963. His wife, a leftist academic named Ruth First, was killed by a parcel bomb intended for Slovo.

Umkhonto's political commissar, Chris Hani, is one of the few ANC guerrillas to have seen pitched combat. He and about 100 ANC men fought alongside Zimbabwean rebels in an offensive in the late 1960s that tied down a segment of the Rhodesian army for nearly three weeks.

A picture of the workings of Umkhonto we Sizwe emerges from a variety of sources: trial records of captured ANC men; interviews with former guerrillas who have gone over to the police; 1960s testimony by the jailed Mandela; conversations with three ANC executive committee members last year and with two leading South African academics.

Umkhonto's command structure was modeled largely on the Irgun Zvai Leumi Jewish underground that operated in Palestine before Israeli independence. It is believed to have between 10 and 12 regional commands and a coordinating high command.

Most ANC guerrillas train in camps in northern Angola. The camps hold between 3,000 and 4,000 men, including support staff. Much of the equipment used is surplus Warsaw Pact material. A limited amount of up-to-date equipment is provided by the Soviet Union. The instructors include exiled South Africans and Cubans who speak through translators. Trainees learn to use rocket-propelled grenades, a Russian machine gun, an 82-millimeter mortar, an anti-tank gun, small Russian arms, the standard NATO rifle and a Portuguese rifle.

Trials of captured ANC men suggest the military training is good. One lawyer defending an alleged ANC agent relied on the explosives expertise of his client to poke

holes in state allegations about sabotage. In another case South African military experts were unable to strip and reassemble a captured anti-aircraft weapon. The ANC man on trial did it in a few minutes. Defense lawyers say their clients possess understanding of the workings of railroad signal crossings, advanced map-making abilities and radio communications aptitude.

"They don't handle tanks, but to some extent, ANC training is comparable to that received by troops in the South African Defense Force," says Brigadier Stadler.

Conditions in the camps are mediocre and reports about camp morale vary. Marion Sparg, a 28-year-old white woman who was sentenced this month to 25 years in prison for limpet-mine attacks on police stations, said that camp morale was high and trainees sang freedom songs with enthusiasm. But two ANC defectors complain that food and sanitary conditions are poor.

"They gave us Russian beef. When you opened it you found it was green on top," complained Mr. X, who now works for the South African police. Malaria, rare in South Africa, is a risk in Angola. Defense lawyers say the ANC trainees often feel isolated and lonely in the camps.

Some trainees are selected for further courses in East Germany and the Soviet Union. Another defector, who introduces himself at police headquarters simply as John, says he went to Odessa in the Soviet Union for further training in the use of mortars and artillery. He says there were 70 ANC men at the camp, plus about 30 other people from Zimbabwe, the Palestinian Liberation Organization and Oman.

Once selected for missions, ANC guerrillas return to South Africa through neighboring countries using false passports and identity documents. The ANC gives them between \$150 and \$500 in cash and the names of contacts. Through the contacts, the guerrillas gain access to central arm caches, which are buried for them by other operatives. They must: transport weapons; train people inside the country at elementary sabotage; distribute pamphlets; carry out reconnaissance of potential targets; establish new identities and places to stay; and execute military missions.

At the University of Witwaterstrand, Tom Lodge believes 40 to 50 guerrillas are entering the country every month, outpacing the numbers caught by police. A man from a homeland who claims his home is used as a safehouse by ANC guerrillas in transit gives a comparable number. In his sector alone, he estimates that four men a month are infiltrating the country.

Many guerrillas are caught immediately. Once, a car full of ANC guerrillas was caught in a speed trap. Another guerrilla transporting four grenades was mugged by a group of four gangsters. In self-defense he tossed one of the grenades. It shattered the windows of a nearby house, whose residents then chased the hapless guerrilla down the street. He tossed another grenade to scare off the swelling mob and was later caught by police.

Others walk into traps. Peter Ngwenya, an IBM technician, was recruited in Botswana

and instructed to meet a woman and help her transport arms. He dropped her at a hotel in Johannesburg, drove to Soweto and placed the arms in a coal box at the house of a relative. Police were waiting as he left the house. The woman vanished.

Some guerrillas, returning from years of exile, visit their families and often find police waiting for them. (Col. Buchner says police keep watch of close to 3,000 suspected ANC guerrillas in and out of the country.)

Many guerrillas display independence and discipline, working in isolation and in the face of formidable obstacles.

Joseph Maja, a guerrilla tried last year, was unable to find a safe place to stay. So for months he slept in drainage pipes, discotheques and unused homes. One group of guerrillas built an elaborate underground hiding-place underneath a house in Soweto.

The story of Andrew Sibusiso Zondo, who was hanged in September, is probably typical of many ANC guerrillas. Born six years after the banning of the ANC, Zondo drifted into politics during the 1980 school boycotts in KwaMashu township outside Durban. On the way home from a 1981 demonstration, Zondo met a man in his 20s and compared notes about the day's events. In later meetings, the older man revealed that he was an ANC member and asked Zondo to set up a cell in KwaMashu. Zondo's cell distributed pamphlets and spray-painted walls with ANC slogans.

Zondo briefly went to Swaziland ostensibly to further his education. In 1983 he was in Mozambique when the South African government retaliated for a Pretoria bomb blast with an attack on a Maputo suburb. Zondo says South African forces hit a clinic, a day-care center and a factory.

"It was that day I decided to join Umkhonto. It seemed as if there would be no chance to change the lives of blacks except through violence," he said at his trial.

So Zondo gave up his education for military training and spent the next two years in the Angolan camps. "It was the best experience I have had in my life," he recalled later. "I began to feel like a human being. I wasn't a native or a kaffir." (Kaffir, Arabic for non-believer, is the South African equivalent of "nigger.")

In late 1985, Zondo returned to the Durban townships and was put in command of three cells. He also ran training sessions while remaining under cover. Commands came from an agent who travelled back and forth between South Africa and Swaziland.

Last Dec. 20, South African soldiers assassinated ANC agents and their relatives (including women and children) in a raid in the mountain kingdom of Lesotho. The same day, Zondo's contact in Swaziland—who worked under the name of Tall Man—told Zondo to retaliate within three days against a suitable target.

At his trial, Zondo said that the ANC didn't specify the target but gave explicit instructions to avoid civilian casualties. The Umkhonto explosives pamphlet discovered in a different case starts with the following instructions: "The target must always be carefully selected. . . . The

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Zambian poverty builds Ex-Guerrillas crisis for its president Turn Farmers

By Allister Sparks
Special to The Washington Post

By Peter Younghusband
THE WASHINGTON TIMES

CAPE TOWN, South Africa —
Zambian President Kenneth Kaunda
is facing a grave political crisis after
the bloodiest urban violence since
independence 22 years ago, reports
from Lusaka indicate.

Mr. Kaunda, 62, is under unprec-
edented pressure from labor lead-
ers, his own ruling party and angry
young support-
ers to reverse
massive food
price increases
that triggered

three days of rioting and looting in
nine cities and towns.

Mr. Kaunda has not budged from
his decision to lift subsidies that
have more than doubled the price of
corn meal from \$3.80 to \$8.20 for a
110-pound bag, the standard size for
bulk sale. Unskilled workers earn as
little as \$7 a month in Zambia.

Instead, Mr. Kaunda ordered
army troops to the riot-torn cities
and towns in the Copper Belt prov-
ince of central Zambia to help par-
amilitary police put down the distur-
bances.

Six people by official count and as
many as 30 by unofficial estimates
were slain in clashes with security
forces using semi-automatic rifles.

Thousands of Zambians who ram-
paged through the towns were not
only protesting the new price of corn
meal — a bitter pill prescribed by
the International Monetary Fund as
part of radical reforms to rescue the
economy. Many also denounced Mr.
Kaunda and his party, the only legal
political organization, in the most
strident criticism of his leadership
since he led the former, British
colony of Northern Rhodesia to inde-
pendence on Oct. 24, 1964.

Mr. Kaunda, a one-time school-
teacher who governs with a mixture
of autocracy and paternalism, is
rarely tolerant of criticism. Scores
of political opponents are in deten-
tion, some in death row awaiting ex-
ecution.

At the height of the riots, 1,000
demonstrators, many of them teen-
agers, were arrested by police in
Kitwe, a city of 500,000 that is the
hub of the copper mining industry,
which earns landlocked Zambia 90
percent of its export income.

Mr. Kaunda himself, closeted with
advisers in his palatial residence
known as State House, had not
spoken publicly about the riots by

late last week.

The veteran African statesman is
chairman of the six-nation bloc of
front-line states in confrontation
with South Africa, so his plight is
receiving no sympathy from the
South African government.

He once described the IMF-
prescribed reforms, including mas-
sive devaluation of the currency, as
"bitter medicine which sometimes
leaves scars on the body after cur-
ing."

Mr. Kaunda has been forced to
swallow the bitter pill in return for
IMF credits worth \$280 million in
first aid at a time when repayments
of \$4 billion in foreign debts drain
almost half of his \$1 billion a year in
export income.

One of the reforms that triggered
the violence is a weekly auction of
foreign currency in which the value
of the Zambian kwacha has plunged
from 2.5 to the U.S. dollar a year ago
to 0.1 to the U.S. dollar today.

The auctions, which started in Oc-
tober 1985, call for sealed bids, the
highest of which set the value of the
kwacha.

The Zambian press and public fig-
ures say the auctions have reduced
most of Zambia's 7 million people to
paupers as a result of a 200 percent
increase in the cost of living with no
parallel rise in wages.

The Roman Catholic Bishops'
Conference called the reforms "the
things that oppress people." One
hundred women leaders of Mr.
Kaunda's ruling United National In-
dependence Party recently walked
out of a political meeting when for-
mer Vice President Reuben Kaman-
ga warned corn meal prices would
go up.

Zimbabwe Congress of Trade
Unions Chairman-general Freder-
ick Chiluba forecast labor unrest if
inflation was not checked.

But Mr. Kaunda has stated firmly:
"Auctioning will continue. We are
not going to change; it's a good sys-
tem."

Eleven back-benchers in Mr.
Kaunda's party proposed abolition
of the auction this week, but de-
ferred the move until unrest had
eased in the Copper Belt. But re-
newed violence erupted for the first
time in the capital of Lusaka itself
yesterday when thousands of youths
protesting the new prices looted a
supermarket and gasoline station

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SIMUKAI FARM, Zimbabwe—Escorting vis-
itors through Simukai's flourishing wheat and
cornfields, Andrew Nyathi jokes that, before he
came here to farm, the only things he had ever
planted were land mines.

Nyathi, known as "Comrade Andrew" to his
fellow guerrillas during Zimbabwe's long and
bitter war of independence, was the commander
of a unit of the Patriotic Front forces that, in
1981, finally brought down the white-minority
government of what was then called Rhodesia.

Today Nyathi is chairman of a community of
ex-guerrillas who pooled their demobilization pay
after the war, bought 4,500 acres of land 50
miles southeast of Harare and established their
own collective farm.

Although only one of the original 76 guerrillas
had ever farmed before, Simukai (the name
means "stand up and be counted" in the Shona
language) has prospered in its five years.

The community has grown to 150 men, wo-
men and children who are self-sufficient in food
production. They cultivate 700 acres of wheat,
corn, soybeans and peanuts; raise 247 cattle,
140 pigs and 60 sheep; operate a general store
for the surrounding community and make
enough profit to pay themselves a small monthly
wage.

The people here make their own bricks, run
their own vehicle repair workshop and have built
a nursery for their children.

"It's been a hard struggle but in another year
or two we'll be standing firmly on our own feet,"
Nyathi said in a recent interview.

The achievement of the Simukai community is
not isolated. Thousands of former combatants,

who were left unemployed and poorly qualified to
earn a living in the civilian community after the
war have been encouraged to launch collective
enterprises by the socialist-minded but pragmat-
ic government of Prime Minister Robert Mu-
gabe.

Many have been helped by an organization
called the Zimbabwe Project, which was founded
with aid money in 1978 to help the thousands of

refugees fleeing the war and is now
devoted to assisting ex-combatants.
The project has helped establish
about 400 collectives, ranging from
sewing and carpentry cooperatives
to small supermarkets, market gar-
dens and full-fledged farms like Si-
mukai.

It has put 4,000 former guerrillas
through courses in basic skills
needed to run the co-operatives,
such as carpentry, building, weld-
ing, bookkeeping and management.

"Not all the co-ops have suc-
Continued on page

2 decades of war tear Mozambique

By Holger Jensen
THE WASHINGTON TIMES

Mozambique, a vast, undeveloped nation on the east coast of southern Africa, was a Portuguese colony until it became one of the linchpins of Moscow's effort to expand Soviet influence on the Dark Continent.

The unhappy transition has brought two decades of continuous warfare to the country and endless misery to its 15 million inhabitants.

Soviet-backed guerrillas of FRELIMO, the Portuguese acronym for the Front for the Liberation of Mozambique, fought a 10-year independence war against the colonial government that ended in 1974, when a revolution in Portugal toppled the 35-year dictatorship of Antonio Salazar.

The new leftist government in Lisbon surrendered all Portuguese colonies in Africa, and Mozambique became independent on June 25, 1975. Its capital, formerly called Lourenco Marques, became Maputo, and FRELIMO President Samora Machel began to communize the country.

Private schools were closed, collective farms were organized and private homes were nationalized. Almost overnight the once prosperous colony became an economic disaster zone, causing massive resentment in the black population and the emigration of most of the country's 160,000 whites.

Although Mozambique's economy was heavily dependent on two white-ruled neighbors, Rhodesia and South Africa, Mr. Machel offered sanctuary to Marxist guerrillas waging war against both countries. And he cracked down ruthlessly on dissent at home, executing and imprisoning thousands of opponents including many members of his own FRELIMO party.

One of them, Andre Matsangaisse, managed to escape into the bush with a handful of supporters. They established a headquarters in

the Gorongosa game reserve, began raiding FRELIMO concentration camps to free other dissidents and RENAMO was born.

Again a Portuguese acronym — the letters stand for the Mozambique National Resistance Movement — it did not become a national force until 1977, when it attracted the attention of Rhodesian intelligence chief Ken Flower.

He offered military aid to RENAMO if it would divert some of its energies against Robert Mugabe's Mozambique-based ZANLA guerrillas.

When Mr. Matsangaisse was killed in a military operation in 1979, his second-in-command, Afonso Dlakama, took over the leadership of RENAMO. A former soldier in the Portuguese colonial army who also had joined and later defected from FRELIMO, he enjoyed Rhodesian aid until that country became independent Zimbabwe in 1980.

However, before the white Rhodesians turned over the reins of power to Mr. Mugabe's Marxist government, they transferred the RENAMO support operation to South Africa, also plagued by Mozambique-based terrorists of the African National Congress.

The South African Defense Force provided training, regular supply drops and radio communications with the outside world. But Pretoria was motivated purely by self-interest — it also maintained its economic links with the Maputo government and ultimately signed a treaty with Mr. Machel whereby both countries agreed to stop supporting each other's guerrilla movements.

The Nkomati Accord of 1984 pulled the rug out from under RENAMO — even though the South Africans gave a parting gift of Soviet-bloc weapons captured in Angola — since it deprived the movement of an external base and, more important, rendered it virtually incommunicado.

By then RENAMO had already es-

tablished control in 50 percent of the countryside — and it continued to make gains, capturing large stocks of enemy weapons — but it had no way of broadcasting its victories or countering FRELIMO's propaganda.

To communicate with RENAMO's sole foreign representative, based in Lisbon, Mr. Dlakama had to send runners on clandestine border crossings into Zimbabwe and Malawi, where they would mail communiques to Portugal. As communications became more sporadic, the Lisbon spokesman turned into a European playboy and stopped sending the money he had been collecting for RENAMO from wealthy Portuguese sympathizers.

Maputo, meanwhile, continued to characterize the guerrillas as ragtag "bandits," incapable of taking over the country. And it made hay of RENAMO's prior associations, charging that it was still being supported by South Africa and Malawi.

Pleading drought and promising to make Western-style economic reforms, Mr. Machel garnered massive amounts of aid from the West while relying on stepped-up military assistance from the Soviet Union and its allies to prop up his government.

On Oct. 19 Mr. Machel was killed in a plane crash that Maputo immediately blamed on South Africa. His successor, former Foreign Minister Joaquim Chissano, was sworn in as president on Nov. 6.

By FRELIMO's own admission, the war has cost \$4 billion, displaced a million people and resulted in at least 100,000 casualties — hardly the work of "bandits." And there are now seven East bloc armies fighting on FRELIMO's side.

But, in his first news conference last week, Mr. Chissano bragged that "Mozambique and the West are continuing to speak of the need to support Mozambique militarily. We are deepening our relationship with the United States, Britain, Italy, Germany and Brazil. We hope soon to see the results of this work."

Washington Times DECEMBER 17, Zambia lifts curfews

LUSAKA, Zambia — The government yesterday lifted curfews imposed after last week's food price riots. The riots killed 15 people, injured at least 1,500 and caused millions of dollars in damage. Dawn-to-dusk curfews still were in effect in nine towns until President Kenneth Kaunda ordered them lifted yesterday.

The violence began a week ago after the government removed a subsidy for refined corn meal, a staple for most of Zambia's 6 million people. The price went from \$3.80 to \$8.20 for a 110-pound bag to meet International Monetary Fund conditions for new credit. After the worst urban violence since independence 22 years ago, Mr. Kaunda canceled the price increase last Thursday. He said his government would have to cut social services to restore corn meal subsidies.

THE WASHINGTON POST

DECEMBER 15, 1986

S. Africa Frees Swiss Couple

■ JOHANNESBURG — Authorities freed a Swiss couple and returned them to Swaziland, where South African security personnel had seized them last week accusing them of having links to African National Congress guerrillas.

Foreign Minister Roelof F. (Pik) Botha said his government released the man and his fiancée because of its good relations with Swaziland and Switzerland. The couple, Daniel Schneider, 29, and Corrine Bischoff, 25, told reporters in Swaziland they had not been mistreated.

For Mobutu: A Handshake, Not a Hug

President Mobutu Sese Seko of Zaire got a warm welcome at the White House last week, the sort he's grown used to in 20 years of official visits. President Reagan called him "a voice of good sense and good will." Secretary of State Shultz excused himself early from a Congressional hearing on the Iran scandal to meet with Mr. Mobutu.

Others, however, like Representative John Conyers of Michigan, denounce Mr. Mobutu as a despot who heads an unpopular and corrupt regime. What sort of friend is Mr. Mobutu, and why does America need friends like him?

The question presents a real issue, not limited to Africa: How to help a longstanding ally without sending the wrong signals around the world about American values? It's an issue the Administration doesn't seem to understand.

One of Mr. Mobutu's virtues is continuity. For two crisis-ridden decades, he has presided over a huge country bordering on nine others at the heart of Africa. Western companies have mined its cobalt, copper, industrial diamonds. When world prices plummeted, international financial institutions rushed in to guide him through massive economic difficulties. Mr. Mobutu did his part: "His great achievement," one State Department official says, "is being able to keep the place together and keep it

from disintegrating into chaos and civil war." He has also supported American strategic objectives elsewhere in Africa.

Yet such reliability tells only part of the story. His people have slid into deepest poverty. Zairian per capita income is among the lowest in Africa; real wages are a tenth what they were in 1960. Half the children die before they reach the age of 5. Corruption is rampant and harassment, imprisonment, torture and execution have taught most Zairians not to protest.

All the while, Mr. Mobutu has created a personality cult and lined his pockets. He is said to have skimmed billions to buy chateaus in Belgium, homes in France, Italy, Switzerland, Senegal, the Ivory Coast — and support in Zaire. Yet there are few signs of sufficient discontent to overcome tribal divisions, geography or underdeveloped communications and transportation.

The Reagan Administration follows the policy of its predecessors, supporting a stable and helpful ally in the region, however tyrannical. But that doesn't require lavishing affection on him when he comes to call. It is one thing to receive an ally in a businesslike, even friendly manner. It is another matter, entirely, to fawn over a dictator.

THE NEW YORK TIMES,

DECEMBER 14, 1986

Mobutu Sees Himself as Disinformation's Victim

PRESIDENT MOBUTU SESE SEKO of Zaire, who met with President Reagan at the White House last week, is one of Africa's most durable leaders, having seized power in 1965 in the former Belgian Congo. Reagan Administration officials consider the 56-year-old Mr. Mobutu an ally, and he is said to be a channel for covert American aid to Jonas Savimbi's rebels in Angola. But Zaire's economy, despite aid from the International Monetary Fund and World Bank and \$70 million a year from the United States, is in dire straits after years of mismanagement and corruption. In Washington, Serge Mukendi, a Zairean dissident, accused Mr. Mobutu of having amassed a fortune of \$5 billion, more than Zaire's \$4.5 billion foreign debt. And human rights advocates said his single-party Government had committed "gross and systematic" abuses.

During his Washington visit, President Mobutu discussed Zaire's problems with Clyde Farnsworth of The New York Times. Following are excerpts from their conversation, which was conducted in French and English.

Question. Are you one of the world's richest men? Is your wealth greater than Zaire's debt?

Answer. I cannot live outside the budget. There is one sole budget, and there is a presidential allowance fund. Where would the money come from? It's just not possible. The budget is published every year. It is known down to the last centime. The World Bank audits us. Money can only leave in regulated amounts, fixed by accord with the I.M.F. I know that we disturb people in some ways and make them unhappy, and so they do everything they can to bring me down. The

person that you call Mobutu and his country are victims of disinformation. My enemies say anything to try to bring me down.

But I rule only through popular support. All the people are behind me. Human rights violations? They will say anything. But the people know the truth. I am not yet overthrown. I am here. For four years, the World Bank and I.M.F. have controlled everything.

Q. Have you been asked to give money to the Nicaraguan contras?

A. I don't have it to give.

Q. How close are you to Washington?

A. There are 50 independent countries on the continent. A lot of them receive assistance from the U.S. Some appreciate it, some attack the U.S. My country is different. We get very little assistance from the U.S. Whether we do or not, we are friends.

Q. What is Zaire's regional role?

A. Zaire and all independent countries of Africa are bound by the charter of the Organization for African Unity. However, there are countries that have quite a bit of money because they have oil. And they don't seem to honor this charter. Sometimes they get militarily involved in the affairs of other countries. I think the occupation of Chad is an excellent example. Chad asked Zaire to help, and we sent 3,000 men to Chad at two different times. Obviously, this was costly. We had to send them Coca-Cola and water by air. We also trained troops from Chad in Zaire.

We don't expect thanks necessarily, but our allies should consider the fact that we actually did something like this, simply because we do not

accept what Libya is doing. Don't forget that Zaire was the first country in Africa to establish normal diplomatic relations with Israel. So you can see why Zaire is a target of Qaddafi.

Savimbi Connection?

Q. Do American military supplies go through Zaire to Savimbi in Angola?

A. It's simply not true.

Q. Do you expect United States help with the I.M.F.?

A. President Reagan, in front of the press, made a formal promise to that effect. First there must be a commitment to continue the I.M.F. program. We don't want to continue on the path that almost led to catastrophe.

Q. What went wrong?

A. We did a perfect job with our commitments for four years. The results have been very negative for our people, but quite positive for the wealthy countries. In other words, Zaire is a net exporter of capital. We have given back more than we actually received to begin with. Zaire will still honor its commitments, but it will no longer be an exporter of capital.

In 1986, Zaire paid out \$500 million to the international banking and financial community through the I.M.F. However, the international financial community did not give one dollar to Zaire.

Seven African countries have experienced food riots in which people died.

In Zaire, because of decisions between us and the I.M.F., there have been sacrifices, but no riots and no bloodshed.

Power of Kenya's Leader Is Growing

By SHEILA RULE

Special to The New York Times

NAIROBI, Kenya, Dec. 14 — The Kenyan authorities appear to be moving to place increasingly greater power in the hands of President Daniel arap Moi and the nation's sole political party, as some church leaders and other critics warn that such steps border on totalitarianism in a country that professes to be a democracy.

The Parliament of Kenya, a pro-Western nation that has long stood as a symbol of relative stability in Africa, this week unanimously approved a Constitutional amendment that stripped the security of tenure from the powerful posts of Attorney General and Auditor General. The Attorney General is the country's chief legal officer, and the Auditor General oversees its accounts.

Tenure had been provided to protect the officeholders from political pressure. Mr. Moi, whose power has grown steadily in the last four years, now has the legal power to dismiss them.

One Member of Parliament was barred from taking part in the final vote on the bill after he spoke openly against the change and refused to withdraw a remark that members had been subjected to intimidation in this session of the amendment.

Moi Fuels Public Debate

The bill was passed after a public debate in this East African country over whether Parliament or the ruling party held supreme power. Mr. Moi, whose Government, like many others in Africa, is hostile to political dissent, tried to end the debate by declaring that the party was more powerful than any other institution in the country, including both Parliament and the courts.

"As President of the party," said Mr. Moi, whose pronouncements normally have the force of law, "I appoint high court judges, provincial commissioners, district commissioners, the Vice President and others. The party is supreme."

But Roman Catholic bishops here said in a letter to Mr. Moi that these recent moves could cause instability in Kenya, whose Government in recent months has undertaken the most harsh crackdown on political dissidents since a failed coup in 1982. Some Kenyans and foreigners view the bishops' letter as heightening tensions between state and church. The President and his supporters have accused church leaders of intruding into politics.

The bishops, who represent about 3 million Catholics in this nation of 20 million people, said they were "conscious of a certain inadequacy of dialogue in the country," and they called for discussions at all levels of society to determine the will of the people. They voiced concern at assertions that the power of the party was paramount and that those who thought otherwise were considered disloyal.

'Totalitarian Role' Is Assumed

"At present, discussion is precluded by the allegations of powerful party officials that any questioning of the system is tantamount to disloyalty," the clergymen said. Already the party is assuming a totalitarian role. It claims to speak for the people and yet does not allow the people to give their views.

"We see the Constitution as a guarantee of peace and stability. We are alarmed at calls from politicians to change the Constitution and at the ease with which this can be effected. We are not constitutional lawyers, but we instinctively fear that any suggestions that the Constitution is easily changed will lead to instability."

The influential Law Society of Kenya and the National Christian Council of Kenya, representing about six million Protestants, also publicly criticized the amendment as a trend toward the erosion of democracy. Earlier this year the Catholic Church and the Protestant councils objected to the Government's plan to abolish the secret ballot in par-

liamentary primaries and instead require voters to line up in public behind the candidate of their choice. Mr. Moi tried to diffuse the controversy by announcing that church leaders and senior civil servants would continue to vote by secret ballot in elections.

Moi Defends Amendment

One of the nation's English-language daily newspapers said this week that Mr. Moi defended the Constitutional amendment by saying that "what was important for the security of a public servant's job was the faith the President had in him or her." He said the public voting plan was intended to eradicate bribery by unpopular candidates.

As the bill changing the Constitution was passed, another Kenyan was convicted on charges of being associated with the shadowy underground movement known as Mwakenya, bringing to at least 44 the number of people jailed for offenses linked to the clandestine socialist organization since the Government began a severe crackdown on the movement in the early months of this year.

Kenyan critics of the Government assert that hundreds have been detained in Mr. Moi's drive to root out the dissidents and that the authorities have been guilty of detentions without trial, sentencing defendants to prison without access to legal council, holding people incommunicado without saying that they were in police custody and torturing prisoners.

Amnesty International, the London-based human rights group, has issued several statements this year voicing concern over these issues, saying in one statement in May that two Kenyans detained without trial since 1982 had "reportedly been held in permanent solitary confinement" and "like other political detainees in the past, they have been denied beds or mattresses and sleep on the cement floor of their cells with only a mat and blankets."

THE WASHINGTON POST

By Patrick E. Tyler

DECEMBER 15, 1986

Libyan Presence Grows in Sudan, Egyptians Say

CAIRO—Dec. 14—Sudanese Prime Minister Sadiq Mahdi, just weeks after he promised the Reagan administration that he had expelled Libyan military forces from his country, allowed hundreds of Libyans, described as agricultural advisers, to return to Darfur Province, where Libya has maintained support operations for its forces fighting in neighboring Chad, according to military sources here.

The presence of 300 to 400 Libyans in Darfur has not been acknowledged publicly by Mahdi but

has been monitored by Egyptian military officials, who are skeptical that the Libyans are in Sudan for agricultural purposes and even more skeptical that Mahdi has severed his military ties to Libyan leader Moammar Gadhafi.

"We still don't know where Mahdi stands," said one senior national security official in Egypt.

Libya established a military presence in Sudan early this year, setting up a base manned by 700 combat troops and giving Gadhafi a strong eastern flank from which to support

insurgents fighting to topple Chad's French-backed government.

Mahdi visited Tripoli in August and told Gadhafi to remove the troops, Mahdi said in a recent interview. But by the time Mahdi visited Washington in October seeking additional U.S. aid and giving assurances that he had distanced himself from Gadhafi, hundreds of Libyan advisers were on their way back to Darfur, according to the sources.

"So in essence, Gadhafi removed only half of his forces," said one senior Egyptian official. "Mahdi is still

playing at something, because he lets Gadhafi give him some trucks or something, and in return, Gadhafi keeps these people in Darfur."

An Egyptian military official said it was unclear whether the Libyans who returned to Darfur were military personnel, but this official treated the Libyan presence as an indication that Mahdi was seeking to maintain his ties to Gadhafi, while keeping Egypt at arm's length.

The presence of Libyan forces in Sudan has been perhaps the great-

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THE WAR FOR SOUTH AFRICA (Continued)

target must symbolize the people's hatred for the government and its system. . . . The action can be directed against government personnel, police and soldiers, spies, agents, students, stooges and informers; but not against innocent bystanders of any description."

But Zondo ignored those instructions. Instead he placed a limpet mine in a rubbish bin in a crowded shopping center. It exploded half an hour later, killing five whites and injuring more than a dozen others. When he was sentenced to death, Zondo refused to ask President P.W. Botha for clemency.

The ANC used to insist on two years' training for guerrillas. But since 1982, the group has been sending people on two-week crash courses or weekend training programs. Loose groups of "comrades" in the black townships also appear to have access to weapons such as AK-47s, and gun battles have broken out in chance clashes between youths and army patrols.

In 1983, a man from Pietermaritzburg with a full-time job trained in Swaziland on weekends. For eight months, he worked alone. He received coded instructions in telegrams from Swaziland telling him where to pick up limpet mines. He traveled by taxi and planted mines at night. One white taxi driver even joked about not trusting black passengers. "You could be carrying a bomb or something," he said. He was right. The ANC agent finally was apprehended outside the city hall with a bomb on the night Botha was speaking there.

"The ANC will never have the capacity to knock out the state," says Tom Lodge. But its

strategy of violence remains a key part—along with boycotts, strikes and sanctions—of an assault on the legitimacy of the government. What Umkhonto can do, Lodge says, is make black townships unsafe for troops and, most importantly, rally support among blacks. He adds that the ANC "must generate through military activity a wider amount of popular resistance."

The story of two ANC guerrillas who set up a base in late 1984 in the remote rural region called Ingwavuma provides a fascinating look at the practical problems at mobilizing wider resistance. The mission is fully documented in a secret diary kept by one of the guerrillas, with the names of contacts carefully coded. It was later presented as evidence in court.

The first breach of security took place even before the pair of guerrillas slipped into South Africa. Their contact had blurred their impending arrival to a friend, who wanted the ANC men to bump off a local chief over a non-political dispute. "I stressed to him that we were not roaming bands, hired assassins, but rather our objectives are national. It was our duty to weld people together," the guerrilla noted in the diary.

Things settled down for a time. The pair established hiding places for arms and recruited people for training. They crossed into Mozambique and Swaziland for supplies and functioned freely for three months.

Some problems persisted, leading ultimately to their capture. Many people thought they

SOUTH AFRICA BLINDS ITSELF (Continued)

Abroad, censorship won't brighten headlines about South Africa or shrink the distance from Pretoria and the Western democracies among which it yearns to be counted. A year ago, remember, Pretoria curbed television coverage of racial conflict, on the theory just reiterated by the chief censor — that media coverage "lost" the Vietnam War. But even without those pictures, Congress overrode a Presidential veto, approving sanctions against South Africa.

This time, censorship has internal purposes. It is intended to end black-organized boycotts and hide from view such embarrassments as the anti-conscription campaign by South Africa's white youth. It is meant to convey the impression of a determined leadership stamping out internal "subversion," and moving against unruly neighbors.

Instead of resolute, however, the Pretoria rulers appear only intense. Nothing will better become this innovation than its end.

THE REST IS SILENCE (Continued)

That was only one among many detentions. Estimates are that several thousand were arrested in the first few days of the case to a lawyer. new clampdown: But the detention to be held indefinitely of Zwelakhe Sisulu nitely, without was a particular charges, without symbol of the trial, without ac-policy on which P. W. Botha and his Government are now set.

Governing by force: that is the policy. Mr. Botha has stopped talking about "reforms" in the system of institutionalized racism. He has vetoed proposals to ease the segregation laws. He has crushed any thought of negotiating about political rights for the black majority of South Africans.

The policy of all-out repression requires that all significant figures in the black community be pictured as dangerous, violent revolutionaries. For if they were admitted to be reasonable people, with only the reason-

able desire to be treated as human beings, then it would evidently be right to reason with them instead of arresting them.

So these Zwelakhe Sisulus are bound to be swept into prison, joining more than 10,000 others already there — educators, union officials, priests, just about anyone who represents a modest challenge to the system. And it has been made a crime, "subversion," to criticize those who carry out the detentions.

The logic of the policy required the silencing of the press. In the absence of any other way to express political grievances, with the vote denied and meetings prohibited, the press could at least make people aware of each other's feelings. Now grievances must be totally repressed.

As usual in such situations, the press has its craven elements. The managing director of the Argus chain, Peter McLean, said "we accept that there is a revolutionary at-

tack against this country and that it is of paramount importance that we do not, however unwittingly, give support and encouragement to those seeking to effect change by revolutionary means."

But there are brave editors and reporters and photographers in South Africa, white and black. They understand that the pressure for change comes from the cruelty of the system, not from some "revolutionary attack." That is why they have been silenced.

There is a terrible inevitability about all that is happening in South Africa. It was clear last spring that the Botha Government had turned away from the path of negotiation. In June the Common- can contain the wealth mission, situation indefinitely, had hoped nitely by the use of otherwise, said: force."

"The government It was predicted-believes that it able that there would be more arrests, more killings, more repression. But the actual

WALL STREET JOURNAL

DECEMBER 17, 1986

Apartheid foes launched a 10-day Christmas campaign against South Africa's six-month-old state of emergency, despite government rules imposed last week that ban most peaceful protest. In Soweto and elsewhere, blacks switched off lights and lit candles to mark the start of the drive.

were gangsters. One guerrilla breached security by flirting with a local woman and making contact with a guerrilla from another sector; and recruits often failed to show up for training sessions. Moreover, it was difficult to keep a small rural community from buzzing about two strangers in its midst.

Though receptive, the local people had doubts about the capability of Umkhonto we Sizwe. In his diary, one of the guerrillas wrote, "One of our women said we'll start the war and retreat to Swaziland leaving them at the mercy of the police and the army."

But the guerrilla recognized the relationship that Lodge notes between the ANC's military prowess and its political credibility. He wrote: "People have no confidence about our capability to strike at the enemy and win. They have accepted us because we talk the truth about oppression and we are their children and brothers. Now it is to us to demonstrate our capability to fight . . . and win the war. We must not leave them. . . . If need be they must see our dead bodies, they must bury them. So that they say, 'They never left us. They died defending us, teaching us how to fight the enemy.'"

developments, as they occur, are sickening.

A Dean of the Evangelical Lutheran Church, the Very Rev. Simon Farisani, has been taken into detention in the so-called homeland of Venda. Dean Farisani was tortured almost to the point of death during previous detentions.

The other day the Botha Government, answering charges that hundreds of children were in detention, said it was holding only 256. Among them were one 11-year-old and six aged 12.

The South African military raided neighboring Swaziland, kidnapped two Swiss nationals and detained them for two days. The forces also took a Swazi man — by mistake, as they indicated when they released him on the border the next day. But part of the "mistake" cannot be undone, because they killed his son.

So it goes. So it will go until government by violence gives way to government by reason. □

PRESENCE GROWS

... (CONTINUED)

est single irritant in relations between Mahdi's nine-month-old government and the United States.

U.S. officials ordered a near total evacuation of the U.S. mission in Khartoum last April after an American communications officer was shot in the head as he drove home.

The State Department in late November allowed U.S. personnel and their dependents to return to Sudan following specific assurances from Mahdi that he had severed military ties with Libya and had improved security for American diplomats in the country.

U.S. officials have yet to comment on the new Libyan presence. However, Egyptian military officials, who exercised virtual proprietary military rights in Sudan under former president Jaafar Nimeri, find Mahdi's relationship with Gadhafi threatening to Egyptian security.

It was through the Egyptian military that U.S. intelligence officials were able to train anti-Gadhafi commandos in Sudan and operate a clandestine radio transmitter to promote indigenous opposition in Libya until Nimeri was driven from power in April 1985. Nimeri now lives in exile in a large villa near the Egyptian presidential palace.

Mahdi likes to assert his independence from Egypt. "I think the Egyptians have not fully realized what happened in the Sudan and there is still a lingering nostalgia for Nimerism without Nimeri," he said last month.

ZAMBIAN POVERTY

... (CONTINUED)

and clashed with paramilitary police.

"People can tolerate too much," a woman shopper in Kitwe, where rioting erupted first on Monday, told local reporters. "They can't remain silent forever. Now they're making their anger known, just like the young people of South Africa."

On Tuesday, the government closed the land borders, then reopened them yesterday. The authorities imposed a dusk-to-dawn curfew in riot centers and dispatched troops to the Copper Belt to help police, but not before rioters had set fire to an office of the ruling party in the town of Kalulushi, beating to death a policeman and assaulting Kaunda's district governor for Kitwe, Bill Chanda.

At independence, Mr. Kaunda inherited a healthy economy based on copper exports. Instead of diversifying into agriculture, which has been

EX-GUERRILLAS TURN FARMERS (Continued)

ceeded but some have done extremely well," said Judith Acton, the project's white director who was imprisoned and exiled for her pro-black sympathies by the Rhodesian white-minority regime of former prime minister Ian Smith.

"The ex-combatants are people with a commitment and a sense of purpose and they are often a source of inspiration to the communities around them," Acton said.

They also add a flamboyant touch to the enterprises they run with the colorful guerrilla names many still use. A visitor to the collectives meets such characters as Comrade Kissinger, Comrade Lord Soames, Comrade Gunpowder and Comrade Instant Death.

One of the collective farms, called Vukuzenzele (meaning "wake up and do it yourself"), is run by former guerrillas who suffered disabling wounds. Tasks are assigned according to the physical capabilities of the 100 men and their families who live there.

Among Zimbabwe's collectives, Simukai is a striking success story.

"It all started when we were in the assembly points waiting to be demobilized after the independence agreement," Nyathi said. "We were trying to decide what work we could do when we left. Because of the large unemployment problem we decided to try farming."

First they rented a farm. When they received the demobilization payments of \$110 a month for two years that formed part of the peace settlement, each contributed \$1,000 toward the down payment on a farm of their own.

They decided against growing tobacco. Nyathi, a short man with a caution born of years of survival in the bush, decided it was too risky. "Tobacco is a specialized crop and we had no experience. We could have lost a lot of money quickly," he said.

Instead they started modestly with market gardening and a few basic crops. They paid themselves a meager salary of \$25 a month each and plowed all profits back into the

done only in recent years, he depended mainly on mineral exports. But world copper prices plummeted 60 percent between 1974 and 1984, and economists criticized the fact that one-seventh of export income was spent on costly food imports each year.

Washington Times DECEMBER 18,

France parachutes supplies to Chad

PARIS — France, responding to an appeal by President Hissene Habre of Chad, has parachuted several tons of supplies to beleaguered forces fighting Libyan armored columns in the north of the divided country. A French Defense Ministry communique said food, munitions and fuel were dropped Tuesday night from two transport planes in an exceptional operation aimed at aiding inhabitants of the Tibesti region directly threatened with famine and reprisals by the Libyans driving from the north.

Washington Times DECEMBER 18,

Rebels ambush convoy in Nile

NAIROBI, Kenya — Rebel forces in the southern Sudan have ambushed a convoy of government steamers on the river Nile, destroying four and inflicting heavy casualties on the convoy's military escort, a spokesman for the Sudan People's Liberation Army (SPLA) said yesterday. The steamers were attacked at Lul near Malakal Saturday as they were sailing north toward Kosti, he said by telephone from the Ethiopian capital. Four boats were destroyed and the remaining five were stranded and unable to move, he added. The convoy was guarded by several hundred soldiers — an estimated two battalions — many of whom were killed in the attack or drowned as their vessels sank, the spokesman said.

Washington Times DECEMBER 18,

Three arrested as Pretoria agents

LUSAKA, Zambia — Police have arrested three Westerners on charges they are South African agents and are responsible for bombings during last week's food riots in northern Zambia, a police spokesman said yesterday. "They have confessed to having been recruited by the South African government," said Lawrence Munalisa, police public relations officer, who announced the arrests of the Briton, New Zealander and Australian. He would not reveal the men's identities or give much additional information. Espionage and sabotage are punishable by death here.

From Times News Services and Staff Reports

farm. Last year they raised a \$40,000 bank loan to buy cattle. The total capital investment, according to Nyathi, is now \$230,000.

The community is run on democratic lines. There is an election every April for the positions of chairman, vice-chairman, secretary, treasurer and a committee of eight.

Simukai's workshop staff recently installed a new \$5,000 electrically operated corn grinder, saving \$2,000 by doing the job themselves. The committee then decided to donate their old mechanical grinder to a new collective farm that has just started up.

The machine was handed over at a ceremony here a few days ago. "It has no meaning if you advance in isolation. We must help others to do as we have done," Nyathi said in a brief speech.

THE NEW YORK TIMES. **Boom Over, Nigeria Tries
Its Luck on the Farm**

DECEMBER 13, 1986

By JAMES BROOKE
Special to The New York Times

OTTA, Nigeria — Visitors who turn left at the sign advertising "Day-Old Chicks and Dressed Chickens" and drive to the end of the country lane will usually find Nigeria's former head of state down on the farm.

"We're raising turkeys for Christmas," the former leader, Lieut. Gen. Olusegun Obasanjo, 50 years old, said as he hustled from henhouse to pig sty, dressed in faded jeans, scuffed sandals and a tie-dyed tunic called an "adire."

The general's second career as a farmer is part of a trend sweeping this nation of 100 million. Chastened by the crash of the oil boom, Nigerians are turning back to agriculture. The goal is to make black Africa's largest nation self-sufficient in food by the end of next year.

Decrees and Appeals

In typical Nigerian fashion, the move to agriculture is being undertaken by a mix of draconian decrees and appeals to the Nigerian's nose for profits.

"Turning Farms to Gold Mines," a headline in Nigeria's largest magazine, Newswatch, announced. In full "how to" detail, the article breathlessly profiled the nation's latest "cassava and yam millionaires."

The move to home-grown cassavas and yams has a certain urgency. Effective Jan. 1, 1987, Nigeria, once the second-largest buyer of American wheat, will ban all wheat imports.

The wheat ban comes on the heels of similar decrees issued in the last 14 months. These include bans on imports of rice, corn, vegetable oil and day-old chicks.

'As Simple as That'

"We cannot afford wheat — it's as simple as that," said Tony Momoh, Nigeria's Information Minister. "We want to encourage local substitutes —

rice, maize, yams and cassava."

Nigerian farming, Mr. Momoh said, has suffered from two evils: excessive state interference and easy oil money.

At independence in 1960, agricultural exports — largely cocoa, peanuts and palm oil — accounted for 70 percent of Nigeria's export earnings. Today, food exports — largely cocoa — account for 3 percent of exports. Last year, Nigeria imported peanuts and cooking oil.

Five years ago, Nigeria's annual oil revenues were \$25 billion and Nigerians were happy to import food. This year, oil revenues will be about \$5 billion, and Nigerians are scrambling to grow their own food.

Going Into Agriculture

"In my time, you could take 10 top civil servants and only two would be interested in going into agriculture," said General Obasanjo, who was head of state in 1978-79. "Today, you would be lucky to find less than eight."

To make farming more attractive, the Government this year abolished state marketing boards that had set prices for cocoa, grains, cotton, peanuts and palm oil. "The most dramatic effect has been on cocoa," said an American farming expert here.

Although cocoa prices dropped slightly on the world market last year, the prices paid Nigerian farmers in the field jumped from about \$250 a ton last year to about \$1,250 a ton this year.

Nigeria's military Government has decided to make the small farmer and low technology the centerpieces of the back-to-the-farm movement.

Many agricultural projects of the big oil era have fallen flat. In one case, a multimillion-dollar project was started in 1977 to plant and process sugar cane in the state of Gongola. A decade later, the plantation is

running at one-third capacity.

A total of 100 tractors imported from Britain never worked properly. Blades on American cane-cutters repeatedly broke. New blades and imported herbicide cost scarce foreign exchange. Today, the cane is cut and weeded by local men who are paid \$2 a day.

In contrast, the World Bank has had better success with a series of small-scale agricultural development projects under which water wells are drilled in villages, roads are improved, new crop strains are introduced and simple, easy-to-repair machines are made available.

Loans for Farming

Since 1978, about \$800 million has been invested in the projects, benefiting four million families. Hoping to expand farm production along these lines, Nigeria's Government has promised to rebuild 40,000 miles of rural feeder roads by 1990. Making farm life more attractive may also help drain some of Nigeria's millions of unemployed and underemployed from the cities.

In one program, the state of Oyo has granted unemployed university students loans to start farming. Since

February, 91 college graduates have taken this route.

Judging from declining births and declining volumes of sewage, Lagos city officials say they believe the capital has lost as much as 10 percent of its population of five million in the last three years. "More and more the glamour of Lagos is off," General Obasanjo said.

Nigeria's new farmers, exports say, are encountering two major roadblocks: a cumbersome land-tenure system and a lack of storage areas.

In Nigeria, the Government owns all vacant land, but the "certificates of occupancy" necessary for use are often difficult to obtain.

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MEMBERS OF THE PANEL

JOHN GARDNER is Vice President for Engineering and Operations in the McDonnell Douglas Corporation. He served as Deputy Director of the Fletcher Panel on Defense Technologies. Mr. Gardner was until last year Director of Systems in the Strategic Defense Initiative.

EDWARD GERRY is the President of W.J. Schaefer Associates and a member of the Air Force Scientific Advisory board. Dr. Gerry was chairman of the Boost-phase Systems Concept Group of the Fletcher Panel on Defense Technologies. He is former Assistant Director for Technologies in the Strategic Technologies Program of DARPA. Dr. Gerry's fields of research are lasers and plasma physics. He is the co-inventor of the gas dynamic laser.

ROBERT JASTROW is the founder and was for 20 years Director of the Goddard Institute for Space Studies of NASA. Dr. Jastrow was the first Chairman of NASA's Lunar Exploration Committee, which set the scientific goals for the exploration of the moon. He was awarded the NASA Medal for Exceptional Scientific Achievement. In recent years Dr. Jastrow has written extensively and testified before congressional committees on nuclear strategy and strategic defense.

WILLIAM NIERENBERG is the Director of the Scripps Institute of Oceanography of the University of California, San Diego. He is a member of the Defense Science Board and the National Science Board, and past Chairman of the JASONS, science advisory group to the Institute for Defense Analysis. Dr. Nierenberg was the first Chairman of the NASA Advisory Council.

FREDERICK SEITZ is President Emeritus of Rockefeller University. Dr. Seitz was President of the National Academy of Sciences and President of the American Physical Society. He is former chairman of the Defense Science Board and former Science Advisor to NATO. Dr. Seitz received the National Medal of Science, America's highest award for scientific achievement, for his contributions "to the foundation of the modern quantum theory of the solid state of matter." In 1983, he received the Vannevar Bush Award, presented by the National Science Board of the National Science Foundation.

STATEMENT BY DR. FREDERICK SEITZ

This study was undertaken following the Reykjavik Summit and the interest generated by the Summit in the question: How soon can the United States deploy effective defenses against ballistic missiles?

At the Summit, President Reagan offered a 10-year extension of the ABM Treaty in two 5-year stages, coupled with a major builddown of offensive weapons. This would not compromise U.S. security in any degree if defenses against ballistic missiles cannot be built in less than 10 years, as is the widespread impression. However, if effective U.S. defenses can be put in place in less than 10 years, the extension of the ABM Treaty might then not be in the interest of the U.S. A relevant question in deciding on the important matter of the ABM Treaty extension would be the extent to which the USSR is going ahead with the development of its own ABM defenses outside the limits of the Treaty.

With these policy issues in mind, the Marshall Institute convened a panel of experts with many years of experience in fields related to space and missile defense, to address the technical questions involved in early deployment -- namely, how soon an effective U.S. defense against ballistic missiles can be developed, what it would look like, and how much it would cost -- and to evaluate the technical data available on the extent of Soviet ABM activities.

The panel first examined Soviet ABM activities, and then went on to consider options for early deployment of missile defenses in the 1990s, basing its study on unclassified data available to senior officials and Members of Congress for purposes of program planning. Discussions among the panel members focused on types of defensive weapons and sensors, promising systems architectures, costs, schedules, system effectiveness, and the important issues of survivability and battle management software needed for effective space-based defenses.

The panel took a "Team B" approach, in which SDIO program managers provided it with an up-to-date data base in each technical area, and the panel performed its own independent analysis of the data. The report on the panel's findings represents its best judgment on schedules, costs and technologies pertinent to deployment of initial U.S. defenses.

The members of the panel are: John Gardner, Edward Gerry, Robert Jastrow, William Nierenberg and myself. Dr. Jastrow will summarize the panel's principal findings on costs and schedules. Dr. Gerry will report on the important question of survivability in space. Mr. Gardner and Dr. Nierenberg could not be present.