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PROJECT ADMINISTRATION DATA

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GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Closcout Notice Date 02/21/91

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Project Director PAPP D S_____ School/Lab INTL AFFS_____

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Contract/Grant No. D.O. 1421 AGMT. DTD 5/2/89_____ Contract Entity GTRC

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Title STRATEGY, TECHNOLOGY & PUBLIC POLICY: COPING WITH THE FUTURE SECURITY ENV

Effective Completion Date 901031 (Performance) 901031 (Reports)

Closeout Actions Required:	Y/N	Date Submitted
Final Invoice or Copy of Final Invoice	Y	_____
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NOTE: Final Patent Questionnaire sent to PDPI.

STRATEGY, TECHNOLOGY
AND THE
FUTURE OF U.S. MILITARY POLICY

Report of the Georgia Institute of Technology Conference

August 24-26, 1989

Sponsored by
The Office of the Chief of Staff
of the U.S. Army
through the
U.S. Army Research Office
and
The Georgia Institute of Technology

Conference Organizers

Dr. Daniel S. Papp is Professor of International Affairs and Director of the School of Social Sciences at the Georgia Institute of Technology. He has served as Research Professor at the Strategic Studies Institute of the U.S. Army War College and as Senior Research Analyst at the Center for Aerospace Doctrine of the U.S. Air War College.

Dr. Linda Brady is Associate Professor of International Affairs at the Georgia Institute of Technology. She is also the Chairperson of the International Security Studies Section of the International Studies Association. Dr. Brady has been an analyst in the Office of the Secretary of Defense and the Fellow for Arms Control at the Carter Center for Policy Studies.

FOREWORD

Held at Georgia Tech in Atlanta, Georgia on August 24-26, 1989, this conference offered a program of research and public dialogue on how the United States should best respond to the changing domestic and international security environment. The conference was designed around three primary questions:

1. How will changing domestic and international political, economic, military, and demographic trends influence U.S. efforts to obtain American security objectives as we move toward the 21st century?
2. What opportunities and dangers will emerging technologies present to U.S. security decision-makers during the same time-frame?
3. How can American policy-makers best integrate these evolving trends and emerging technologies to enhance American security during the remaining years of this century and beyond?

While answers to these questions are important for all branches of the U.S. Department of Defense, they are especially important for the U.S. Army. Changing domestic and international political and military environments will inevitably have an impact on Army roles, missions, and deployments. Domestic and international economic trends will influence how much--or little --the U.S. Army, always the least well funded of the U.S. military services, will receive to accomplish its designated roles and missions. With its large manpower requirements, demographic trends are also critical inputs to Army capabilities.

Similarly, as new military technologies become available, the U.S. Army must incorporate effectively useful technologies into its order of battle, and defend against new technologies that potential and actual enemies incorporate into theirs. Together, these evolving trends and emerging technologies present formidable challenges to the U.S. Army leadership--and the leadership of the entire country--as they formulate policies to enhance American security for the remaining years of this century and beyond.

Each of the primary conference questions were addressed in the 16 papers, three luncheon/dinner presentations, and accompanying debate and discussion that took place during the three days of the conference. Given the nature of the issues addressed, it was not surprising that few unanimous conclusions were reached. Nevertheless, the 58 people who participated in the conference reached widespread agreement on several points, including the futility of separating domestic policies and international issues in an interdependent world, the necessity to continually revise and reassess assumptions on which policies are made, the probability of heightened lethality in future major wars, the inevitability of making future weapons acquisition decisions without adequate understanding of how weapons might perform or be used, the likelihood of lower levels of forward deployed military forces, and the continuing and even growing necessity for public support of U.S. military policy in an era where the nearly half-century-old Soviet threat is increasingly perceived as being supplanted by other threats to U.S. security,

only a few of which are military. These points are all discussed more fully in the conclusion.

Obviously, the issues examined at this conference were complex, interdependent, and global. Nevertheless, if there was one point on which the conferees were in unanimous agreement, it was that during the three days of the meeting they gained a fuller and more complete understanding of the scope and depth of the challenges and opportunities that face the future of U.S. military policy.

TABLE OF CONTENTS

Executive Summary	
Conference Program	
Summary of Conference Proceedings	
Abstracts of Papers	
Conference Participants	

EXECUTIVE SUMMARY

As the 1980s ended and the 1990s began, the United States was confronted by a rapidly changing international system that had potential to undermine much of the rationale on which U.S. security planning was based for the preceding 45 years. At the same time, new military technologies were emerging that had potential to revolutionize military affairs. This conference explored the impacts that the evolving international system and emerging military technologies together might have on the future of U.S. military policy.

The conference reached seven primary conclusions:

- o For military planning, as well as for other areas in which the United States interacted with the international environment, it is no longer possible to isolate domestic policies from international policies.
- o The speed of change in the strategic environment is so great that security planners must not only plan future policies, but also continually examine the accuracy of the assumptions that they hold about the present environment to see if those assumptions remain relevant.
- o The greater lethality of present and future weapons will almost inevitably heighten the human cost of future major conflicts.
- o While many new military technologies are emerging, political and economic factors will combine to make it virtually inevitable that not all will be acquired.

- o In the future strategic environment, there will be fewer forward deployed U.S. military assets, and strategic mobility will therefore become more important.
- o Future economic conditions are likely to be increasingly constrained for the military, and more emphasis will almost inevitably be placed on joint capabilities and operations.
- o Public support remains absolutely essential for the maintenance of successful U.S. military policy.
- o Accurate assessments of the impact that the evolving strategic environment, emerging military technologies, and other factors will have on the future of U.S. military policy can best be obtained by blending together experts from diverse backgrounds with diverse perspectives and outlooks.

Conference Proceedings

Strategy, Technology, and the Future of U.S. Military Policy

Georgia Tech

August 24, 25, 26, 1989

Thursday, August 24

7:00 p.m. Reception, Dinner and Keynote Address

General Donn A. Starry, U.S. Army (ret.)

"Strategy, Technology, and American Security"

Friday, August 25

EVOLVING STRATEGIC TRENDS

8:30-8:45 a.m. Welcome--John P. Crecine, President, Georgia Tech

8:45-10:15 a.m. Panel 1: The American Domestic Scene

Chair: Dr. Loch Johnson, University of Georgia

Paper: "Human Resources," Dr. Lawrence J. Korb,
Brookings Institution

Paper: "The American Defense Industrial

Base," Dr. James Blackwell,
Center for Strategic and
International Studies

10:15-10:30 a.m. Break

10:30-12:00 Noon Panel 2: U.S.-Soviet Relations

Chair: Dr. Ty Cobb, Center for Naval Analysis

Paper: "The Impact of 'New Thinking' on U.S.-
Soviet Relations," Dr. Gary Guertner,
Strategic Studies Institute of the U.S.
Army War College

Paper: "Change and Continuity in U.S. Policy
toward the U.S.S.R.," Dr. John Spanier,
University of Florida

12:15-1:30 p.m. Lunch

1:30-3:00 p.m. Panel 3: Multipolarity

Chair: Dr. Linda P. Brady, Georgia Tech

Paper: "The Atlantic Triangle," Ambassador Martin
Hillenbrand, University of Georgia

Paper: "The Pacific Quadrangle," Dr. John
Endicott, Georgia Tech

3:00-3:15 p.m. Break

3:15-4:45 p.m. Panel 4: The Third World

Chair: Dr. Robert Pastor, Carter Center of Emory
University

Paper: "Third World Debt and Economic
Development," Mr. Robert Forrestal,
President, Federal Reserve Bank of
Atlanta

Paper: "The Diffusion of Modern Military Weapons
to Third World States," Dr. Michael
Salomone, Georgia Tech

7:00 p.m. Dinner and Program Address

General Jack Merritt, U.S. Army (ret.),
"Making U.S. Military Policy"

Saturday, August 26

EMERGING TECHNOLOGIES

8:30-10:00 a.m. Panel 5: Nuclear and Conventional Trade-Offs: Is the
Security Paradigm Changing?"

Chair: Dr. Robert Kennedy, Georgia Tech

Paper: "The Irrelevance of Nuclear Weapons," Dr.
John Mueller, University of Rochester

Paper: "The Utility of Nuclear Weapons," Mr.
Peter Wilson, National Security
Consultant

10:00-10:15 a.m. Break

10:15-11:45 a.m. Panel 6: Emerging Military Technologies

Chair: Col. Robert Helms, U.S. Army

Paper: "The Impact of New Conventional
Technologies on Strategy," Dr. Alex
Gliksman, Twentieth Century Fund

Paper: "The Impact of New Nuclear, Space, and
Exotic Technologies on Strategy," Dr.
David Finkleman, U.S. Air Force Space
Command

11:45-1:00 p.m. Lunch

Congressman George "Buddy" Darden, Member, House Armed
Services Committee,

"The Present and Future of U.S. Military Policy: A
Congressional Viewpoint"

STRATEGY, TECHNOLOGY, AND PUBLIC POLICY

1:00-2:30 p.m.

Panel 7: Strategic Alternatives for American Military
Policy

Chair: Col. Don Snider, U.S. Army

Paper: "New Roles and Old Missions: Developing
Future American Military Strategy,"
Col. Karl Robinson, Strategic Studies
Institute, Army War College

Paper: "The Future of Strategic Mobility," Dr.
Ted Greenwood, Columbia University

2:30-2:45 p.m.

Break

2:45-4:15

Panel 8: Public Policy and Military Policy

Chair: Col. Ken Allard, U.S. Army

Paper: "The Future of Defense Reform," Col. Dan
Kaufman, United States Military Academy

Paper: "Developing Public Support for Future
Military Policy," Mr. Peter White,
President, Southern Center for
International Studies

4:15-5:00

Panel 9: Concluding Discussions/Reception

Discussion Leader: Dr. Daniel S. Papp

SUMMARY OF CONFERENCE PROCEEDINGS

The United States is now, and for the foreseeable future will be, confronted by a rapidly changing security environment characterized chiefly by the end of bipolarity and the emergence of multipolarity, the blurring of old lines of demarcation between "domestic" and "international" issues, and the inclusion of new concerns into the traditional security equation. Established relationships between the United States and the Soviet Union, the United States and its allies, the Soviet Union and its allies, and both superpowers and the developing world are in a state of flux. Moreover, within the superpowers, their allies, and developing countries, significant political, economic, and demographic forces are at work that promise--or threaten--to transform the fundamental character of those societies.

Simultaneously, across a spectrum of conventional, nuclear, space, and exotic technologies, impressive new capabilities are emerging. These emerging technologies have potential to force paradigmatic changes in the strategic thinking and operational planning that have dominated military affairs since World War II. Indeed, it is even possible that in the next few years capabilities will emerge that will revolutionize military thinking, planning, and operations as much as nuclear weapons did nearly half a century ago.

Viewed independently, these evolving trends and emerging technologies each by themselves present significant challenges to American security planners. But when they are considered together, they present challenges that become truly daunting for security planners. Thus, if U.S. security planners are to formulate strategies for the 21st century that will allow the United States to cope successfully with the myriad security challenges that will confront it, these evolving trends and emerging technologies must

be examined together. Immodestly, this conference considered that to be its overreaching rationale.

The conference was organized into three distinct sections, each of which examined one of the primary questions listed above. The first section analyzed evolving strategic trends, the second emerging technologies, and the third the interrelationship of strategic trends, emerging technologies, and the future of U.S. military policy. Nine panels and three luncheon/dinner presentations took place during the conference.

I. Evolving Strategic Trends. In this section, four panels examined various emerging domestic and international strategic trends. The first panel explored the American domestic scene, and offered a decidedly mixed picture. On the one hand, serious concerns were expressed about the ability of the American industrial base to meet and respond to American defense needs in both crisis and non-crisis situations. On the other hand, considerable optimism was voiced about the ability of the American military in future years to continue to recruit and retain sufficient high quality personnel. It was evident throughout this first panel that the future of industrial and human inputs to American security needs must be addressed now.

The second panel examined the evolving U.S.-Soviet relationship. One paper and discussion centered on Soviet perspectives on the relationship, and the other paper and discussion centered on U.S. perspectives. Consensus was reached that the "Gorbachev revolution" is in fact a genuine revolution, but that its outcome remains clouded in doubt. Consensus was also reached that the current bargaining situation between the two superpowers favors the United States. While there was widespread agreement that the United States, both for political and policy reasons, should take

the initiative in approaching the U.S.S.R. rather than wait to react to Soviet initiatives, less agreement existed on how that should be accomplished.

The third panel analyzed evolving relations between and among the major powers in the Atlantic and in the Pacific. Discussions on the "Atlantic Triangle," defined here to mean the trilateral relationship between the U.S., Western Europe, and the Soviet Union/Eastern Europe, concluded that all sets of bilateral relationship in that triangle were changing. Although the single European Act for 1992 provided some of the impetus for change, other political and economic facts were observed to be at work, too. In many cases, these other political and economic facts were seen as more fundamental than the Act in bringing about change. (Some observers also argued that the "Atlantic Triangle" should more appropriately have been named the "Atlantic Quadrangle," with Eastern Europe itself having a separate identity. Events in Eastern Europe subsequent to the conference bore out the accuracy of this perspective.)

Discussions on the "Pacific Quadrangle," defined here to mean the quadrilateral relationship between the United States, China, Japan, and the Soviet Union, concluded that change was equally apparent here. With four major national players all viewing the same region of the world as vitally important to themselves, both the dangers and opportunities inherent to Pacific affairs were emphasized. Conferees agreed that the changes endemic in relations between and among the major powers in the Atlantic and the Pacific had to be handled carefully by U.S. planners. All present agreed that U.S. objectives in both regions had to be more carefully delineated; given the rapidity of change in both Europe and Asia, shopworn assertions that a particular objective or policy was "in the national interest" have

to be continually reevaluated and reassessed.

The fourth panel discussed two different aspects of the Third World's impact on current and future U.S. security concerns. The first paper and discussion centered on the impact that Third World debt and underdevelopment are having and might have in the future on U.S. security. Several specific prescriptions for both debt and underdevelopment problems were offered. No consensus emerged on the prescriptions. However, it was agreed that long-term structural solutions including bilateral negotiations on a county-by-county basis to encourage capital flow to developing countries, more responsible fiscal and trade policies in Third World states, and reduced pressure from First World creditors for repayment, not quick-fix political responses, provided most hope for amelioration of these problems. The second paper and discussion approached the impact that the diffusion of modern military weapons to Third World States might have on U.S. security interests. After evidence was presented concerning the scope and directions of the diffusion, conferees agreed that in some scenarios the diffusion of modern military weapons to Third World states would increase the cost of U.S. intervention, in some cases so prohibitively that intervention might be precluded.

As the discussion of these evolving strategic trends proceeded, it became increasingly apparent to most conferees that the speed of change in the strategic environment was so great that security planners must not only plan future policies, but also continually examine the assumptions which they hold about the nature of the present strategic environment. Without an accurate understanding of the strategic environment and how it is likely to change in the future, no policy planner can hope to make constructive and useful policy, except through blind luck. And the future of the

country is too important to be left to luck.

2. Emerging Technologies. The two panels in this section analyzed the impact that emerging conventional, nuclear, space, and exotic technologies are likely to have on future U.S. military strategy. The first panel (Conference Panel 5) presented contrasting views on whether emerging technologies would fundamentally change the international security paradigm. Indeed, one viewpoint argued that nuclear weapons themselves had never changed the international security paradigm, maintaining that not much had really changed in military affairs with the advent of nuclear weapons. From this, it was argued that emerging technologies would also do little to change the paradigm. Conversely, the contrary viewpoint argued that nuclear weapons had indeed revolutionized warfare, that the Faustian bargain struck between the West and nuclear weapons remained valid, and that revolutionary weapons technologies had potential to affect profound change on strategic and military affairs. Nevertheless, the argument proceeded, smaller but secure nuclear arsenals would likely remain the enforcers of the "long peace." A large majority of conference participants agreed with the second point of view.

Perhaps surprisingly, a consensus emerged from out of this discussion that the growing lethality of conventional weapons and the increased "usability" of nuclear weapons virtually guaranteed that casualty rates in a future major war would reach unprecedented levels. But despite this consensus, no agreement was reached on the more fundamental issue of whether fighting a major war was no longer a real policy option, or whether the probable heightened lethality of future major wars made deterrence all the more critical to achieve and maintain.

The second panel on emerging technologies (Conference Panel 6)

examined the impact that specific types of emerging conventional, nuclear, space, and exotic technologies might have on military strategy and tactics. One presentation stressed the importance of new information systems that will be able to collect and analyze data in near real-time and bring weapons to bear against hostile forces in an extremely rapid and accurate way. It argued that these systems will be the driving force behind potentially revolutionary developments in conventional warfare, and posited that it may soon be possible to employ advanced non-nuclear munitions to perform missions previously reserved for nuclear weapons. It also asserted that major new developments in reconnaissance, surveillance, and target acquisition capabilities would lead to indirect fire supplanting maneuver as the key element in the battlefield of the future. The second presentation observed that in the areas of nuclear, space, and exotic technologies, the major task in the near-term and mid-term futures will be applying the untapped value of technologies already demonstrated. Specific technical areas identified included integrative engineering, intensive digital computation, coherent optimization and resource exploitation, material sciences, and energetic materials. At the same time, it was stressed that many technologies face fundamental physical limitations on future advances.

Importantly, conferees agreed that despite the probable proliferation of new military technologies, a combination of political and economic factors make it unlikely that all will be acquired. Indeed, it is even possible that go-no go decisions on emerging weapons technologies in the future will be made more and more frequently on the basis of less and less knowledge about potential capabilities of those technologies. For planners, the task of formulating strategy will thus become even more

difficult as they will have to pick and choose from among an array of weapons technologies of uncertain potential.

3. Strategy, Technology, and Public Policy. The task of the three panels in Section III was to begin to integrate the implications of evolving strategic trends and emerging technologies into a set of observations useful for policy makers. The first panel in Section III (Conference Panel 7) examined possible strategic alternatives for U.S. military policy. The first paper and discussion centered on new roles and old missions for the U.S. military, observing that in the future there will be reduced forward deployment of forces, reduced military budgets, and down-sized military forces. Consensus was also reached on the likelihood that preparations for global war would be partially replaced by preparations for regional contingencies and greater involvement in non-traditional operations such as drug interdiction, counter-terrorism, response to environmental crises, and controlling illegal immigration. It was also agreed that as military resources become more limited, redundant and overlapping capabilities must be and will be reduced. Thus, for very practical reasons, the number and extent of joint military operations will probably increase. The second paper and discussion took as the point of departure the assumption that despite the growing importance of small conflict scenarios, the large war threat remains most pressing, and most U.S. mobility forces should be structured for such a contingency. While there was sizeable disagreement with this assumption, there was little disagreement with the observation that given the uncertain world of the future and the likelihood of reduced forward deployment of forces, mobility capability will become increasingly important and should be expanded. There was little expectation that this would actually occur.

The second panel (Conference Panel 8) discussed the future of U.S. defense reform and the necessity of developing public support for present and future military policy. In the presentation and discussion on the future of U.S. defense reform, three areas were discussed: acquisition, strategy-making, and joint operational effectiveness. Widespread but not unanimous agreement was reached that while improving the acquisition process was important, the truly critical issues of concern, especially as a result of evolving strategic trends and emerging technologies, were the need to improve strategy-making and joint operational effectiveness. Several different perspectives were put forward on how these requirements could be achieved. In the areas of improving strategy-making, it was again suggested that the combination of rapidly evolving strategic trends and emerging technologies necessitated continual reexamination by policy-makers of their assumptions. It was also suggested that tours of duty be extended in certain key positions to allow those in critical positions to build up greater levels of expertise. Others observed that better training and education had even more potential to improve strategy-making. As for improving joint operational effectiveness, conferees agreed that more and better training and an emphasis on the inevitability of more joint operations provided the best hope for productive results.

In the presentation and discussion on the necessity of public support for U.S. military policy, most conference participants agreed that there are at least three identifiable factors that challenge that support. First, significant change in the communist world is widely perceived to have lessened and even eliminated the "communist threat." Second, large segments of the American public see alternate threats to American security such as drugs, environmental pollution, and a large debt burden which in

many cases cannot be met by military force, but which nevertheless must be met. And finally, many Americans attribute the rapid economic growth and high standards of living in Japan and many Western European states to the smaller defense burdens borne by these states. The conferees agreed on the importance of maintaining public support, but reached no agreement on how best to accomplish this. Nevertheless, the participants unanimously agreed that unless the Department of Defense found ways to generate public support, Defense Department budgets would in future years be significantly, perhaps even drastically, reduced.

In the final conference panel, each paper presenter was given two minutes to address what he most wanted conference attendees to remember from his presentation. This rapid-fire set of concluding presentations proved extremely effective in recapping the most critical points that were raised throughout the conference.

4. Conclusions: Strategy, Technology, and the Future of U.S. Military Policy In the final analysis, the conference proved a complete success in presenting to a diverse audience the evolving strategic trends and emerging technologies with which security planners must cope as they formulate current and future policies. It also drove home the point that if successful policies are to be formulated and implemented, these trends and technologies must be taken into account. Old assumptions and perceptions must be reexamined; roles and missions must be reviewed; solutions to past problems must be reassessed; defense reform must be continually reevaluated; and public perceptions must be taken into account as policy is shaped.

The conference reached several extremely important conclusions, relevant both to the Department of Defense as a whole and the U.S. Army in

particular. First, as a statement of the obvious, conference participants unanimously agreed that it was futile to try to separate domestic and international policies in today's world. Global interdependence in economic, social, and even political terms is so pervasive that few countries can institute a domestic policy that does not have international ramifications, or put in place a foreign policy that does not have domestic carry-over.

Second, conferees agreed that the speed of change in the strategic environment was so great that security planners must not only plan future policies, but also continually examine the accuracy of the assumptions that they hold about the very nature of the present strategic environment. Unless this examination is undertaken, security planners run the risk of advocating and implementing policies designed for a world that no longer exists.

Third, although the conferees disagreed about the role that nuclear weapons had had in maintaining the "long peace" (1945-89), they concurred that the greater lethality of all weapons would almost inevitably heighten the human cost of future major conflicts. Most agreed that the likelihood of future major conflicts had therefore been reduced. Further, the conferees agreed that the diffusion of modern military weapons to Third World states may in some cases make the cost of military intervention so high that the major powers may become less willing to intervene than they had been in the past. However, this did not imply that the frequency of regional conflicts would necessarily decline. Rather, given the host of regional issues that still exist, it implied that regional conflicts would be as frequent as ever, but that their lethality would increase even as superpower involvement became less frequent and less noticeable.

Fourth, participants concluded that while many new military technologies loomed on the horizon, a combination of political and economic factors made it virtually inevitable that some will not be acquired. For planners, the task of formulating strategy thus will become even more difficult as they will have to pick and choose from among an array of weapons technologies of uncertain potential.

Fifth, with the likelihood that the evolving strategic environment will lead to fewer forward deployments of U.S. military assets, strategic mobility is likely to become more important than ever. More attention must therefore be paid to rapid, reliable strategic and tactical airlift and sealift capabilities.

Sixth, with future economic conditions likely to be more constrained for the military, greater emphasis will almost inevitably be placed on joint capabilities and joint operations. Redundant capabilities are likely to be viewed here favorably, and a greater premium will probably be placed on inter-service cooperation.

Seventh, the conferees unanimously agreed that public support remained absolutely essential for the maintenance of successful U.S. military policy. Without exception, they stressed that with the Soviet threat perceived as having diminished, alternate threats to U.S. security such as drugs and environmental deterioration perceived as having grown, and the perception strengthening that Japanese and European economic prosperity results from smaller defense burdens, public support for traditionally-defined U.S. military expenditures and activities will weaken in the 1990s. In the absence of a reversal of these perceptions, then, the 1990s are likely to be a decade in which military expenditures are curtailed, even as pressures on the military to take on new roles and missions increase.

Finally, and perhaps most importantly, many of the conclusions reached in this conference were the result of bringing together individuals with different perspectives from the military, academic, the government, and the private sector. Too often, people in all walks of life and in all professions focus too narrowly on issues of primary concern to themselves, and maintain too limited a circle of contacts with whom to discuss vital national issues. This conference consciously sought to blend experts from diverse backgrounds so that diverse perspectives and outlooks could be obtained and discussed on those vital national issues. The conference succeeded in this objective as well.

Abstracts of Papers
(in order of presentation)

Human Resources
Dr. Lawrence J. Korb
Brookings Institution

In the final analysis, the effectiveness of any military force will be heavily impacted by the quality of the men and women employed by the defense establishment. It is individuals who must design and operate weapon systems in accordance with the plans that they develop. The U.S. military recognizes the importance of its human resources by measuring their aptitude and training level in the readiness system employed by the Joint Chiefs of Staff.

Similarly the quality of the people coming into the armed forces is heavily impacted by the society from which they are drawn. A society with a severe drug problem cannot expect the members of its armed forces to be drug free. Nor can a society with a substandard educational system produce men and women capable of mastering complex weapons systems.

However, the military is not completely at the mercy of societal trends. It can provide training to remedy the shortcomings of the nation's civilian educational system; or it can build child care centers to cope with the increasing numbers of single parents and working spouses found in society.

In looking at the societal factors impacting upon the human resources of the military, over the next generation, there is nothing in the environment which can prevent the U.S. military from recruiting and retaining sufficient high quality personnel capable of carrying out even the most complex missions. However, the leadership of the Department of Defense (DOD) must be willing to take the steps necessary to accommodate societal changes and not cling to some outmoded concept of the way they would like to be. In the past, DOD has shown its ability to do that, and there is no reason to believe it will not do so in the future.

The American Defense Industrial Base
Dr. James Blackwell
The Center for Strategic and International Studies

The U.S. defense industrial base is no longer the arsenal of democracy that won World War II for the West. In the modern era of deterrence, the ability to mobilize commercial industries to wartime production is no longer the dominant factor in keeping the peace -- strategic offensive nuclear weapons are the primary deterrent today -- so the requirements on the defense industrial base today are quite different than those of 1939. The U.S. defense industrial base must be efficient, competitive and flexible to meet the strategic requirements of a rapidly changing global security environment.

Measuring the performance of the base to meet these needs is difficult because of the problems with extracting good data, but what information is available indicates that the U.S. defense industrial base is in a serious state of decay. Foreign penetration of U.S. manufacturing markets not only introduces potential vulnerabilities for wartime supply, but also erodes the competitive edge of the U.S. economy. Profitability rates and the investment climate in defense sectors are poor, declining, and -- in contrast to the rest of U.S. manufacturing -- have little prospect for improvement anytime soon. Companies are responding to this environment by a variety of strategies, the most troubling from the national security perspective being that they are leaving the defense business altogether.

The problems of the U.S. defense industrial base are largely structural. The competitive structure is quite varied, ranging from competitive to near monopolistic. In addition to traditional entry barriers for the critical high-technology sectors (capital, skilled labor, engineering talent, etc.), the defense acquisition system itself is a formidable barrier that must be overcome in order to succeed in the defense business.

The preservation of the defense industrial base for the future of deterrence requires new policies, including an effective leadership structure in the executive branch, more productive oversight of the defense industry, greater stability in planning, programming and budgeting, and selective incentives for key critical defense industries.

The Impact of 'New Thinking' on U.S. Soviet Relations

Dr. Gary L. Guertner
U.S. Army War College

"We are undergoing an evolution from dealing with the threat of communism to the consequences of its failure."

Secretary of State James Baker

I. What is New Thinking?

This presentation will define the major elements in the Gorbachev revolution, stressing the historic relationships between Soviet domestic and international affairs.

II. U.S. Perceptions of New Thinking.

U.S.-Soviet relations will be determined by a consensus among U.S. decision makers on the consequences of the Gorbachev revolution. Does he represent (1) a political revolution (less threatening), or (2) an evolutionary stage toward a more powerful Soviet adversary? The Bush Administration is moving toward a consensus on interpretation (1).

III. Policy Options: Consensus and Conflict Between the Revolutionary and Evolutionary Schools.

- A. The U.S. role in Soviet domestic affairs
- B. Arms control, force modernization, and military strategy
- C. Regional disputes and Third World disengagement

Change and Continuity in U.S. Policy Toward the U.S.S.R.

Dr. John Spanier
University of Florida

The vast changes that have occurred in recent years both within the Soviet Union and in the tone and substance of Soviet foreign policy would suggest that an emphasis on the continuities in superpower relations would almost seem superfluous. It has become commonplace to talk of "the end of the cold war," "beyond containment" and "integrating the Soviet Union into the community of states". Contrary to this trend, this presentation will focus on the question of whether the current period of relaxed tensions between the United States and the Soviet Union is part of a repetitive cyclical pattern since the end of World War II. Statements that Soviet policy is losing its revolutionary fervor, changing to a status quo policy, becoming more pragmatic, and needs to turn inward to cope with its economy, have been heard repeatedly from the time of Stalin's death to the early detente days of the 1970s.

This presentation will therefore focus on the three characteristics of postwar Soviet foreign policy: one, that Soviet leaders have changed their policy when new opportunities for expansion occurred or old policies had failed; two, that the record of the past four decades suggests that the adjustments of Soviet policy are tactical rather than fundamental; and three, that Soviet policy has throughout this period been characterized by a cautious but persistent policy of expansion. If this is correct, why do we now believe that the cold war is finally over?

Among the reasons usually cited are Gorbachev himself, an enlightened leader willing to question the orthodoxies of the Soviet system; the economically disastrous situation the Soviet Union faces, requiring it to reorder its priorities from the expansion of its influence to internal reform and restructuring; the failure of Brezhnev's foreign policy, adding pressure on Gorbachev to relax external tensions and sponsor a series of arms reduction and control plans, etc. Each of these will be discussed and questions raised whether separately or collectively they mean the cold war is over or coming to an end.

What is clearer is that the current bargaining situation favors the United States. Clausewitz asserted that states fight wars to create a more congenial and safer postwar world. If the Soviet Union is indeed facing both internal and external problems which compel it to seek long term relief, if it is at least suing for a truce, then the key question for the United States is essentially the terms on which it is willing to settle the conflict -- terms that will advance U.S. interests in a possible post-cold war world. Some of these will then be presented.

The Atlantic Triangle
Ambassador Martin J. Hillenbrand
University of Georgia

With the ending of the post-World War II era as we have known it, America's ability to understand and to adapt to the profound changes now taking place in the world will largely determine our economic, political and military role in the years ahead. The expression "restoring American competitiveness" is not merely a slogan; it reflects an essential economic goal which, if not achieved, will make impossible the exercise of the kind of leadership which we have taken for granted in the post-war years. If Gorbachev does succeed in maintaining his position in the U.S.S.R. and in accomplishing his reform programs, he will accelerate the process of change in Europe while, ironically enough, losing some of his influence as leader of a superpower, as the purely military factor becomes less important.

The U.S. relationship with Western Europe during the 1990s will be determined both by changes that may occur in European and American assessments of the military threat, and by the kind of Europe that emerges from the implementation of the Single European Act by December 31, 1992 and the years beyond. The Western Europeans see themselves as having the major role to play in any new developing relationship with Eastern Europe within a so-called European Peace Order. Should that relationship become a reality, the implications for NATO-Warsaw Pact relations will obviously be profound, leading, as some visionaries are beginning to put it, to a dissolution of the blocs. The challenge to American diplomacy within this changing world will be great; an important goal must be to make sure that traditionally important institutions that tie us to Europe, such as NATO, do not become the victims of impatience or premature conclusions about their irrelevance.

The Pacific Quadrangle
Dr. John E. Endicott
Georgia Institute of Technology

In the Pacific, U.S. relations with the Soviet Union will be driven by U.S. responses to Gorbachev's initiatives to gain acceptability from East Asian states and integration into the East Asian economic community. U.S.-Soviet military relations in East Asia will focus on Soviet attempts to gain a new arms control regime that has as its ultimate objective reductions in U.S. naval forces in the Pacific. The U.S. should follow a strategy of "active involvement" with the Soviet Union with the objective of stabilizing security environments in Indo-China and Korea. The U.S.-Soviet relationship will be subject to social, political and economic tensions related to internal reforms.

Positive U.S.-Japanese relations will remain central to U.S. policy in Asia. Domestic political realignment in Japan may dampen the defense build-up beyond 1995, but increased opposition party strength -- with a possible new role in a restructured political system -- may lead to a greater willingness by the Government of Japan to purchase U.S.-produced military hardware. Economic discontinuities will continue as the U.S. continues to pressure Japan for better access to manufactured goods and agriculture markets. Emphasis will continue to be placed on restructuring the Japanese economy to enable it to absorb a greater percentage of East Asian NIC's manufactured exports. U.S.-Japanese cooperation in ODA targets will play a large role in overall U.S.-Japanese relations.

After recovering from the brutal shock of the June 4th massacre, U.S.-Chinese relations will focus more on economics and less on the military. However, continuing corruption in party cadre as well as fundamental internal cleavages will slow down achievement of the Four Modernizations. Such internal tension will dampen force projection capabilities of the PLA -- not an unwelcomed development by her neighbors.

Of significant military import for the mid-term -- approximately 2000-2005 -- will be the possibility for reunification of the Korean Peninsula with direct impact on U.S. force levels there. In the interim, the U.S. should place emphasis on sustainability and decreasing the costs of U.S. forces stationed in Asia. Some attention should be focused on an international effort for construction of a canal across the Kra Isthmus to provide strategic SLOC alternatives. Relations among the four powers of NEA will continue to be complicated by the Japanese claim to the Soviet-held Northern Territories -- a common objective of all political parties in Japan. Increased power of the Japan Socialist Party may lead to a reappraisal of the Sino-Japanese relationship in light of JSP's tougher line toward the PRC. All powers, however, could cooperate in solving the Korean problem.

Third World Debt and Economic Development
Mr. Robert P. Forrestal
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The debt predicament of the less developed countries (LDCs), especially among our neighbors in Latin America, presents the United States with a range of foreign policy concerns. Many have linked recent riots in Venezuela, Argentina, and Brazil to frustration over declines in living standards caused in part by debt-related austerity measures. Should civil disorders intensify, U.S. security interests would be compromised proportionately.

However, the debt crisis offers even greater risks to our humanitarian and economic interests. Malnutrition and social dislocations are imposing unconscionable costs in human suffering in those countries -- costs that we as an advanced economy should be addressing. Moreover, lost opportunities for investment in greater export potential and the LDCs inability to import are excluding them from the trend toward globalization in world markets. This weakness has deprived the United States of some of its traditional markets, and the benefits of the globalizing trade system are diluted by the absence of so large a number of potential participants.

For these reasons, it is imperative to make meaningful progress toward helping the LDCs manage their debt in ways that also allow them to reverse the deterioration of their economies. As a step in that direction, the Brady plan departs from previous U.S. initiatives in raising the possibility of reducing debt rather than simply rescheduling payments. In this regard, the plan represents a shift from our earlier focus on the safety and soundness of the U.S. financial system, which has now been shored up against the risk of LDC defaults, to greater emphasis on enhancing political and economic stability among debtor nations.

To further these ends, we should proceed with negotiations on a country-by-country basis to evolve mechanisms that will encourage new capital flows into the LDCs. Talks should stress the importance of reforms to correct fiscal and trade policy inefficiencies in those countries. Together, reduced pressure from creditors and more reasonable domestic policies should hasten the reentry of the LDCs into the globalizing marketplace. Helping this to happen is the best way for us to obtain our national security objectives with respect to the developing countries.

**The Banalization of the International Arms Trade: Rise of
the Economically Motivated Suppliers**

**Dr. Michael D. Salomone
Georgia Institute of Technology**

The arms trade during the first three post war decades was dominated by the United States and the Soviet Union and driven by their geostrategic competition. In systemic terms, arms transfers for the United States Government represented one of the few instruments available to it to maintain the international status quo and the post war balance of power. For the Soviet Government arms transfers represented a way to revise the international order and to penetrate areas of United States interest and influence. Specifically, the superpowers used arms transfers to support recipient regime stability, ensure forward basing opportunities, affect regional balances of power, increase influence in areas of strategic competition, and attempt to influence the orientation of recipient regimes on a host of regional and global political issues.

The arms trade in the 1980s has become much more heterogeneous, involving a larger number of suppliers, a wider array of finished products and equipment and a more sophisticated and cautious pool of buyers. Major suppliers now include France, Israel, Great Britain, China, Brazil, Italy, and West Germany. Economic motives have become ascendent in the calculations of suppliers in this group, and among a significant number of recipient governments. The recipients are increasingly demanding offsets and co-production agreements as a condition for buying arms. Thus the medium of transfer is increasingly becoming the transfer of military technology, not the provision of finished military products, although end items, rather than technology, remain the primary import in areas of conflict.

One of the conditions favoring the entry of these new economically motivated suppliers is the absence of "political strings" attached to the transaction from the supplier side. Brazil, for example, stresses its arms independence from the superpowers as a selling point for underscoring its reliability as a supplier. The implications for United States foreign policy of the economically driven diffusion of military equipment include a diminished capability to influence and manage regional security issues. The implications for global stability and regional security include the proliferation of weapons into conflict areas from a plethora of sources, and the potential introduction into these areas of new and troubling weapons such as chemical weapons and missiles.

The Essential Irrelevance of Nuclear Weapons

Dr. John Mueller
University of Rochester

Although it is widely held that the existence of nuclear weapons has profoundly shaped our lives and destinies, it appears rather that nuclear weapons have neither crucially defined a fundamental stability nor do they threaten severely to disturb it. They have not been necessary to deter major war, to cause the major powers to behave cautiously, or to determine alliance patterns. Effective deterrents have been the memory of World War II, major power contentment with the postwar status quo, and the belief in the likelihood of escalation.

There seems to have been a long term trend away from war in the developed world. The long peace since World War II is less a peculiarity of the nuclear age than the logical conclusion of a substantial historical process. War in the developed world seems so improbable as to be obsolescent, imbalances in weapons systems are unlikely to have much impact, and the arms race may come under control not so much out of conscious design as out of atrophy born of boredom. Indeed, with the apparent collapse of world communism in the mid-1980s and with the consequent demise of the Cold War, the two sides seem now to have begun a sort of negative arms race.

The Utility of Nuclear Weapons
Mr. Peter A. Wilson
National Security Consultant

Similar to "the prospect of an execution concentrating the mind", nuclear weapons have helped stabilize the post-World War II political military equilibrium. In part because of nuclear weapons, the superpowers have behaved with considerable caution during post-war political-military crises, have been cautious about escalation and have accepted major political military defeats (Vietnam and Afghanistan) without using their full military capability.

Even an acceptance of the Mueller thesis - the obsolescence of the large war option - does not obviate the argument that nuclear weapons insured that leaders found the big war option unattractive if not suicidal. Once both superpowers deployed large nuclear forces in a protected fashion, a theory of victory in a global war was hard to design. During the 1970s and 1980s, the Soviet High Command designed a non-nuclear concept of operations for "victory" in Europe. This concept floundered in part on the barrier of extant and modernizing British and French nuclear forces.

For this reason, the Faustian bargain struck between the West and nuclear weapons technology continues to remain valid. Nuclear weapons provide a society-threatening deterrent at a fraction of the cost of contemporary high technology non-nuclear forces.

Now we face profound changes in a "post Cold War" global security environment. Major changes include: (1) the decline of the nuclear armed superpowers; (2) the rise of the Eurasian "Rimland"; (3) revolutionary weapon technologies; and (4) the diffusion of advanced weapon suppliers.

In this changing environment, we must re-evaluate the role of nuclear weapons in our overall national security policy. One of the central questions for the 1990s is whether the U.S. should exploit and formalize the appearance of a multilateral nuclear deterrent system. This structure will become clearer as the result of reductions flowing from a START treaty and the ongoing expansion and modernization of the nuclear forces of the U.K., France, and China. On the other hand, we and the Soviets might resist this and agree to the mutual deployment of advanced aerospace defenses. The political implications of any joint U.S. and U.S.S.R. agreement to "rule the heavens" would be profound.

Contrary to the rhetoric of former President Reagan and President Gorbachev, the basic attraction of nuclear weapons, their efficiency, will remain. This attraction will increase as both superpowers struggle to resolve internal socio-economic problems. The solution to those problems will be found in part by a reduction of high technology non-nuclear forces. A future military equilibrium can be maintained with smaller but secure nuclear arsenals. In the end, these arsenals will remain the enforcer of the "long peace" especially in an era of dramatic political, economic, and technological change.

The Impact of New Conventional Technologies on Strategy

Dr. Alex Glikzman
Twentieth Century Fund

A revolution in information systems is the driving force behind potentially revolutionary developments in conventional warfare. The key characteristics of emerging technology systems are their ability to collect and analyze data on military activities in near real-time and to bring weapons to bear against hostile forces in an extremely rapid and accurate way. If enemy forces can be rapidly identified and attacked with great accuracy, explosive power ceases to be important. As a result, brainpower is replacing firepower as the determinant of military advantage.

It may soon be possible to employ advanced non-nuclear munitions to perform missions previously reserved for nuclear weapons. This is especially true for missions currently performed by SNF, such as attacks against tank formations. Military force structures will be smaller. There will be fewer weapons on the battlefield and fewer troops required to operate them. This is a product of the high cost of weapons and manpower and of the higher "kill" rates of munitions that some have termed "one-shot, multiple kill" weapons. Given the high accuracy and lethality of advanced weaponry, conflicts will be extremely short. As a result, forces will fight with munitions on-hand. In the long term, this will reduce the need for elaborate logistic support.

Indirect fire will replace maneuver as a key element in the battlefield of the future. With the far-looking, high precision and deep strike potential of emerging military systems, a defender will be able to counter an aggressor, seeking to exploit points of weakness, by redirecting the defensive fire of stationary and stand-off weapons launchers. The defender will no longer need to rapidly move forces to reinforce points of weakness. This could mark a decline of the tank as a tool of warfare. Force-to-space ratios that have dominated thinking on the number of troops and armaments required to guard a given area of frontage may cease to be an issue. This may be particularly important in calculating conventional arms reduction options. A major development in new technology is in RSTA systems -- systems for Reconnaissance, Surveillance, and Target Acquisition. These systems are primarily designed for identifying, tracking and targeting relatively small mobile military targets such as tanks in real-time. RSTA would operate against ground targets as AWACS operates against aircraft. Command and control of military operations will be highly centralized. This is dictated by the short nature of future battles, the high cost of new sensor capabilities and the need to assure that expensive but highly lethal munitions are effectively employed in attacking time urgent targets.

The Impact Of New Nuclear, Space and Exotic Technologies On
Military Policy and Strategy

Dr. David Finkleman

United States Space Command

and

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This presentation will review the impact of advanced technology on current national strategy and military policies and conjecture the influence of advanced technologies on future policies. Project Defender in the late 50's fostered technologies which led to strategic systems which are still the essence of national military policy. National Security Review No. 12 was recently commissioned to re-examine that policy in the context of current technical thrusts, such as the resurgence of ballistic missile defense research. The implications of nuclear, space, and exotic technologies will be explored. It will be demonstrated that many technologies face fundamental physical limitations on future advances. The major task for the next generation will probably be applying the tremendous untapped value in technologies which have already been demonstrated, at least in the laboratory. It will also be shown that military applications often follow commercial needs in promoting technical advances, reversing a fifty year trend. Significant technological advances which can materially affect strategy and policy will be discussed. They include: integrative engineering, intensive digital computation, coherent optimization and resource exploitation, material science, and energetic materials. The synergism between these advances and future strategic needs, such as maintaining world wide influence without continuous world wide presence, will be pointed out.

New Roles and Old Missions: Developing Future American
Military Policy
COL Karl Robinson
U.S. Army War College

The world is in the midst of international change. Power alignments that have been relatively constant since the beginning of the Cold War are breaking down. Events in the Soviet Union and the Warsaw Pact have reduced the public perception of the threat of global war, and if promised force reductions, doctrinal changes and rearranged national priorities come to pass, the actual threat of global war may be reduced to a level that equals the expectations of the public. At the same time, the threat of regional conflicts appears to be increasing as traditional enmities find new expression in conflicts fueled by increases in the quantity and quality of arms available to warring nations and factions. Likewise many developed countries, including the United States, find themselves confronted by new security challenges such as illegal immigration, drug trafficking, terrorism, and environmental disasters.

Technological advances promise to ameliorate and complicate problems emerging from anticipated environments. Breakthroughs in surveillance capabilities and communications tend to reduce uncertainties that give rise to insecurity, while new weapons technologies threaten established defense capabilities.

As the United States struggles to react to this new and dramatically different environment, the armed services are looking ahead to a future that will involve reduced forward deployment of forces, reduced budgets, and likely reductions in size. Global war preparations will be replaced, in part, by preparations to react to regional contingencies and greater involvement in operations related to "domestic" missions such as drug interdiction, terrorism, environmental crises, and illegal immigration. The jointness of military operations will continue to increase as redundant service capabilities are eliminated.

The Army's role in national security will remain pivotal as the service that gives the greatest evidence of lasting national commitment, with broadest applicability across the spectrum of conflict, and with the critical role in creating conditions necessary for successful conflict termination. The Army will be smaller, but of higher quality and more diverse in terms of capabilities -- light versus heavy, conventional versus low intensity conflict, active versus reserve.

These changes will not come quickly, and events may dictate that change may only be slight, but the potential for rather dramatic evolutionary change cannot be ignored. The U.S. military must plan ahead to adapt to a U.S. international role that is more complex and diverse than the focus on containment that has been our greatest concern for the past forty years.

The Future of Strategic Mobility

Dr. Ted Greenwood
Columbia University

Despite the growing importance of small conflict scenarios, especially in the Third World, for U.S. defense planning, we should continue to size and structure most of our mobility forces for the worst case, large war threat. Important exceptions are Marine Corps amphibious shipping, maritime prepositioning shipping and the ability to operate into relatively primitive airfields and ports.

In the large-war scenario, timing assumptions are the most critical for sizing and structuring mobility forces. Rapid-transition-to-war scenarios have been unnecessarily onerous in the past, are more so today, and will become even more so over time if current trends for mobilization, reduce the demand for mobility forces and allow greater reliance on sealift compared to airlift or prepositioning.

Other than continuing to expand CRAF, there seems no justification for the large investment needed to expand airlift beyond current program objectives.

Completion of the prepositioning plans in Europe, increases in Korea, and more maritime prepositioning all seem worthwhile.

The trend to increasing government-owned or government-controlled sealift must continue as the contribution that the U.S. merchant marine can make to national defense planning continues to decline. Current programs are sensible, but more is needed. Opportunities to use new technology to achieve ultra-fast sealift should be exploited, if not too expensive.

One implication of conventional arms reductions in Europe or elsewhere is that, if we insist upon hedging our bets, mobility capability will become increasingly important and should be expanded. Despite the relatively low cost, the historical record does not lead to optimism that this will occur.

The Future of Defense Reform

COL Daniel J. Kaufman

U.S. Military Academy

I. Overview

-- First order question: Reform of what?

(A) Acquisition

(B) Strategymaking

(C) Joint Operational Effectiveness

-- Acquisition reform gets most of the attention; other two are more important

II. Acquisition Reform

-- Repeated efforts at reform

-- Fragmented decision making system

-- Technical vs. political processes

-- Realistic expectations for institutional reform

-- Effectiveness vs. efficiency

III. Strategymaking

-- Translating national security objectives into strategy requires direction from political leadership

-- The way it should work: CJCS alternative strategies/tradeoffs to Sec Def to Pres for presidential decision/guidance

-- The essence of strategymaking

--- Realistic view of requirements and assets

--- Identification of critical shortfalls

--- Matching ends and means

IV. Joint Operational Effectiveness

-- Force planning based on contingencies/requirements from "strategymaking"

-- Joint requirements for

--- Doctrine/training

--- Equipment capabilities/interoperability

-- Joint officer education/training

-- Role of the Chairman and the CINCs: Boon or bane?

-- A true general staff?

-- Influence of service priorities/perspectives

-- The need for a little "waste, fraud and abuse?"

V. Conclusions

-- Focus on what is important: improving strategymaking and joint operational effectiveness

-- Institutional changes need not be dramatic

Developing Public Support for Future Military Policy

Mr. Peter C. White

Southern Center for International Studies

Throughout American history, public support has been a necessary prerequisite for a successful United States military policy. During peace or war, when the American public supported U.S. defense efforts and military ventures, the U.S. government found it possible to find and use military forces in the pursuit of national objectives. When public support for defense efforts and military ventures flagged, funding levels for the U.S. military decline, and the ability of the U.S. government to use military forces to pursue national objectives lessened as well. Nothing suggests that this linkage between public support and the military will change in the future.

Public support for U.S. military policy is today challenged by at least three identifiable factors. First, significant change in the communist world has lessened the American public perception of the "communist threat," which for much of the post-World War II era has been the primary motive force behind public support for the U.S. military.

Second, large segments of the American public see alternate threats to American security, threats that in many instances cannot be met by military force but which nevertheless must be met. These threats include drugs, environmental degradation, a decaying domestic social infrastructure, and a large debt burden.

Third, rightly or wrongly, many Americans attribute the rapid economic growth and high standards of living in Japan and many European states to the smaller defense burdens borne by these states. Inevitably, such perception will raise questions about continued high levels of American defense spending.

Given the importance of public support for U.S. military policy, it will therefore become increasingly important for the U.S. national security community to carefully, accurately, and convincingly delineate threats to U.S. security and formulate policies to respond to those threats. Similarly, the U.S. military must use wisely and efficiently those resources which are made available to it.

Failure to successfully pursue any of the above will inevitably undermine public support for U.S. military policy in an era which will be resource-constrained.

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Draft of the Final Report
on the Conference

"Strategy, Technology, and the Future of U.S. Military Policy"

Atlanta, Georgia
August 24 - 26, 1989

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"Strategy, Technology, and the Future of U.S. Military Policy"

Held at Georgia Tech in Atlanta, Georgia on August 24-26, 1989, this conference offered a program of research and public dialogue on how the United States should best respond to the changing domestic and international security environment. The conference was designed around three primary questions:

1. How will changing domestic and international political, economic, military, and demographic trends influence U.S. efforts to obtain American security objectives as we move toward the 21st century?
2. What opportunities and dangers will emerging technologies present to U.S. security decision-makers during the same time-frame?
3. How can American policy-makers best integrate these evolving trends and emerging technologies to enhance American security during the remaining years of this century and beyond?

While answers to these questions are important for all branches of the U.S. Department of Defense, they are especially important for the U.S. Army. Changing domestic and international political and military environments will inevitably have an impact on Army roles, missions, and deployments. Domestic and

international economic trends will influence how much--or little --the U.S. Army, always the least well funded of the U.S. military services, will receive to accomplish its designated roles and missions. With its large manpower requirements, demographic trends are also critical inputs to Army capabilities. Similarly, as new military technologies become available, the U.S. Army must incorporate effectively useful technologies into its order of battle, and defend against new technologies that potential and actual enemies incorporate into theirs. Together, these evolving trends and emerging technologies present formidable challenges to the U.S. Army leadership--and the leadership of the entire country--as they formulate policies to enhance American security for the remaining years of this century and beyond.

Each of the primary conference questions were addressed in the 16 papers, three luncheon/dinner presentations, and accompanying debate and discussion that took place during the three days of the conference. Given the nature of the issues addressed, it was not surprising that few unanimous conclusions were reached. Nevertheless, the 66 people who participated in the conference reached widespread agreement on several points, including the futility of separating domestic policies and international issues in an interdependent world, the necessity to continually revise and reassess assumptions on which policies are made, the probability of heightened lethality in future major wars, the inevitability of making future weapons acquisition

decisions without adequate understanding of how weapons might perform or be used, the likelihood of lower levels of forward deployed military forces, and the continuing and even growing necessity for public support of U.S. military policy in an era where the nearly half-century-old Soviet threat is increasingly perceived as being supplanted by other threats to U.S. security, only a few of which are military. These points are all discussed more fully in the conclusion.

Obviously, the issues examined at this conference were complex, interdependent, and global. Nevertheless, if there was one point on which the conferees were in unanimous agreement, it was that during the three days of the meeting they gained a fuller and more complete understanding of the scope and depth of the challenges and opportunities that face the future of U.S. military policy.

CONFERENCE RATIONALE

The United States is now, and for the foreseeable future will be, confronted by a rapidly changing security environment characterized chiefly by the end of bipolarity and the emergence of multipolarity, the blurring of old lines of demarcation between "domestic" and "international" issues, and the inclusion of new concerns into the traditional security equation. Established relationships between the United States and the Soviet Union, the United States and its allies, the Soviet Union and its allies, and both superpowers and the developing world are

in a state of flux. Moreover, within the superpowers, their allies, and developing countries, significant political, economic, and demographic forces are at work that promise--or threaten--to transform the fundamental character of those societies.

Simultaneously, across a spectrum of conventional, nuclear, space, and exotic technologies, impressive new capabilities are emerging. These emerging technologies have potential to force paradigmatic changes in the strategic thinking and operational planning that have dominated military affairs since World War II. Indeed, it is even possible that in the next few years capabilities will emerge that will revolutionize military thinking, planning, and operations as much as nuclear weapons did nearly half a century ago.

Viewed independently, these evolving trends and emerging technologies each by themselves present significant challenges to American security planners. But when they are considered together, they present challenges that become truly daunting for security planners. Thus, if U.S. security planners are to formulate strategies for the 21st century that will allow the United States to cope successfully with the myriad security challenges that will confront it, these evolving trends and emerging technologies must be examined together. Immodestly, this conference considered that to be its overreaching rationale.

SUMMARY OF CONFERENCE PROCEEDINGS

The conference was organized into three distinct sections, each of which examined one of the primary questions listed above. The first section analyzed evolving strategic trends, the second emerging technologies, and the third the interrelationship of strategic trends, emerging technologies, and the future of U.S. military policy. Nine panels and three luncheon/dinner presentations took place during the conference.

Section I. Evolving Strategic Trends. In this section, four panels examined various emerging domestic and international strategic trends. The first panel explored the American domestic scene, and offered a decidedly mixed picture. On the one hand, serious concerns were expressed about the ability of the American industrial base to meet and respond to American defense needs in both crisis and non-crisis situations. On the other hand, considerable optimism was voiced about the ability of the American military in future years to continue to recruit and retain sufficient high quality personnel. It was evident throughout this first panel that the future of industrial and human inputs to American security needs must be addressed now.

The second panel examined the evolving U.S.-Soviet relationship. One paper and discussion centered on Soviet perspectives on the relationship, and the other paper and discussion centered on U.S. perspectives. Consensus was reached that the "Gorbachev revolution" is in fact a genuine revolution, but that its outcome remains clouded in doubt. Consensus was

also reached that the current bargaining situation between the two superpowers favors the United States. While there was widespread agreement that the United States, both for political and policy reasons, should take the initiative in approaching the U.S.S.R. rather than wait to react to Soviet initiatives, less agreement existed on how that should be accomplished.

The third panel analyzed evolving relations between and among the major powers in the Atlantic and in the Pacific. Discussions on the "Atlantic Triangle," defined here to mean the trilateral relationship between the U.S., Western Europe, and the Soviet Union/Eastern Europe, concluded that all sets of bilateral relationship in that triangle were changing. Although the single European Act for 1992 provided some of the impetus for change, other political and economic facts were observed to be at work, too. In many cases, these other political and economic facts were seen as more fundamental than the Act in bringing about change. (Some observers also argued that the "Atlantic Triangle" should more appropriately have been named the "Atlantic Quadrangle," with Eastern Europe itself having a separate identity. Events in Eastern Europe subsequent to the conference bore out the accuracy of this perspective.)

Discussions on the "Pacific Quadrangle," defined here to mean the quadrilateral relationship between the United States, China, Japan, and the Soviet Union, concluded that change was equally apparent here. With four major national players all viewing the same region of the world as vitally important to

themselves,, both the dangers and opportunities inherent to Pacific affairs were emphasized. Conferees agreed that the changes endemic in relations between and among the major powers in the Atlantic and the Pacific had to be handled carefully by U.S. planners. All present agreed that U.S. objectives in both regions had to be more carefully delineated; given the rapidity of change in both Europe and Asia, shopworn assertions that a particular objective or policy was "in the national interest" have to be continually reevaluated and reassessed..

The fourth panel discussed two different aspects of the Third World's impact on current and future U.S. security concerns. The first paper and discussion centered on the impact that Third World debt and underdevelopment are having and might have in the future on U.S. security. Several specific prescriptions for both debt and underdevelopment problems were offered. No consensus emerged on the prescriptions. However, it was agreed that long-term structural solutions including bilateral negotiations on a county-by-county basis to encourage capital flow to developing countries, more responsible fiscal and trade policies in Third World states, and reduced pressure from First World creditors for repayment, not quick-fix political responses, provided most hope for amelioration of these problems. The second paper and discussion approached the impact that the diffusion of modern military weapons to Third World States might have on U.S. security interests. After evidence was presented concerning the scope and directions of the diffusion, conferees

agreed that in some scenarios the diffusion of modern military weapons to Third World states would increase the cost of U.S. intervention, in some cases so prohibitively that intervention might be precluded.

As the discussion of these evolving strategic trends proceeded, it became increasingly apparent to most conferees that the speed of change in the strategic environment was so great that security planners must not only plan future policies, but also continually examine the assumptions which they hold about the nature of the present strategic environment. Without an accurate understanding of the strategic environment and how it is likely to change in the future, no policy planner can hope to make constructive and useful policy, except through blind luck. And the future of the country is too important to be left to luck.

Section II. Emerging Technologies. The two panels in this section analyzed the impact that emerging conventional, nuclear, space, and exotic technologies are likely to have on future U.S. military strategy. The first panel (Conference Panel 5) presented contrasting views on whether emerging technologies would fundamentally change the international security paradigm. Indeed, one viewpoint argued that nuclear weapons themselves had never changed the international security paradigm, maintaining that not much had really changed in military affairs with the advent of nuclear weapons. From this, it was argued that emerging technologies would also do little to change the

paradigm. Conversely, the contrary viewpoint argued that nuclear weapons had indeed revolutionized warfare, that the Faustian bargain struck between the West and nuclear weapons remained valid, and that revolutionary weapons technologies had potential to affect profound change on strategic and military affairs. Nevertheless, the argument proceeded, smaller but secure nuclear arsenals would likely remain the enforcers of the "long peace." A large majority of conference participants agreed with the second point of view.

Perhaps surprisingly, a consensus emerged from out of this discussion that the growing lethality of conventional weapons and the increased "usability" of nuclear weapons virtually guaranteed that casualty rates in a future major war would reach unprecedented levels. But despite this consensus, no agreement was reached on the more fundamental issue of whether fighting a major war was no longer a real policy option, or whether the probable heightened lethality of future major wars made deterrence all the more critical to achieve and maintain.

The second panel on emerging technologies (Conference Panel 6) examined the impact that specific types of emerging conventional, nuclear, space, and exotic technologies might have on military strategy and tactics. One presentation stressed the importance of new information systems that will be able to collect and analyze data in near real-time and bring weapons to bear against hostile forces in an extremely rapid and accurate way. It argued that these systems will be the driving force

behind potentially revolutionary developments in conventional warfare, and posited that it may soon be possible to employ advanced non-nuclear munitions to perform missions previously reserved for nuclear weapons. It also asserted that major new developments in reconnaissance, surveillance, and target acquisition capabilities would lead to indirect fire supplanting maneuver as the key element in the battlefield of the future. The second presentation observed that in the areas of nuclear, space, and exotic technologies, the major task in the near-term and mid-term futures will be applying the untapped value of technologies already demonstrated. Specific technical areas identified included integrative engineering, intensive digital computation, coherent optimization and resource exploitation, material sciences, and energetic materials. At the same time, it was stressed that many technologies face fundamental physical limitations on future advances.

Importantly, conferees agreed that despite the probable proliferation of new military technologies, a combination of political and economic factors make it unlikely that all will be acquired. Indeed, it is even possible that go-no go decisions on emerging weapons technologies in the future will be made more and more frequently on the basis of less and less knowledge about potential capabilities of those technologies. For planners, the task of formulating strategy will thus become even more difficult as they will have to pick and choose from among an array of weapons technologies of uncertain potential.

Section III. Strategy, Technology, and Public Policy. The task of the three panels in Section III was to begin to integrate the implications of evolving strategic trends and emerging technologies into a set of observations useful for policy makers. The first panel in Section III (Conference Panel 7) examined possible strategic alternatives for U.S. military policy. The first paper and discussion centered on new roles and old missions for the U.S. military, observing that in the future there will be reduced forward deployment of forces, reduced military budgets, and down-sized military forces. Consensus was also reached on the likelihood that preparations for global war would be partially replaced by preparations for regional contingencies and greater involvement in non-traditional operations such as drug interdiction, counter-terrorism, response to environmental crises, and controlling illegal immigration. It was also agreed that as military resources become more limited, redundant and overlapping capabilities must be and will be reduced. Thus, for very practical reasons, the number and extent of joint military operations will probably increase. The second paper and discussion took as the point of departure the assumption that despite the growing importance of small conflict scenarios, the large war threat remains most pressing, and most U.S. mobility forces should be structured for such a contingency. While there was sizeable disagreement with this assumption, there was little disagreement with the observation that given the uncertain world of the future and the likelihood of reduced forward deployment of

forces, mobility capability will become increasingly important and should be expanded. There was little expectation that this would actually occur.

The second panel (Conference Panel 8) discussed the future of U.S. defense reform and the necessity of developing public support for present and future military policy. In the presentation and discussion on the future of U.S. defense reform, three areas were discussed: acquisition, strategy-making, and joint operational effectiveness. Widespread but not unanimous agreement was reached that while improving the acquisition process was important, the truly critical issues of concern, especially as a result of evolving strategic trends and emerging technologies, were the need to improve strategy-making and joint operational effectiveness. Several different perspectives were put forward on how these requirements could be achieved. In the areas of improving strategy-making, it was again suggested that the combination of rapidly evolving strategic trends and emerging technologies necessitated continual reexamination by policy-makers of their assumptions. It was also suggested that tours of duty be extended in certain key positions to allow those in critical positions to build up greater levels of expertise. Others observed that better training and education had even more potential to improve strategy-making. As for improving joint operational effectiveness, conferees agreed that more and better training and an emphasis on the inevitability of more joint operations provided the best hope for productive results.

In the presentation and discussion on the necessity of public support for U.S. military policy, most conference participants agreed that there are at least three identifiable factors that challenge that support. First, significant change in the communist world is widely perceived to have lessened and even eliminated the "communist threat." Second, large segments of the American public see alternate threats to American security such as drugs, environmental pollution, and a large debt burden which in many cases cannot be met by military force, but which nevertheless must be met. And finally, many Americans attribute the rapid economic growth and high standards of living in Japan and many Western European states to the smaller defense burdens borne by these states. The conferees agreed on the importance of maintaining public support, but reached no agreement on how best to accomplish this. Nevertheless, the participants unanimously agreed that unless the Department of Defense found ways to generate public support, Defense Department budgets would in future years be significantly, perhaps even drastically, reduced.

In the final conference panel, each paper presenter was given two minutes to address what he most wanted conference attendees to remember from his presentation. This rapid-fire set of concluding presentations proved extremely effective in recapping the most critical points that were raised throughout the conference.

CONCLUSIONS

In the final analysis, the conference proved a complete success in presenting to a diverse audience the evolving strategic trends and emerging technologies with which security planners must cope as they formulate current and future policies. It also drove home the point that if successful policies are to be formulated and implemented, these trends and technologies must be taken into account. Old assumptions and perceptions must be reexamined; roles and missions must be reviewed; solutions to past problems must be reassessed; defense reform must be continually reevaluated; and public perceptions must be taken into account as policy is shaped.

The conference reached several extremely important conclusions, relevant both to the Department of Defense as a whole and the U.S. Army in particular. First, as a statement of the obvious, conference participants unanimously agreed that it was futile to try to separate domestic and international policies in today's world. Global interdependence in economic, social, and even political terms is so pervasive that few countries can institute a domestic policy that does not have international ramifications, or put in place a foreign policy that does not have domestic carry-over.

Second, conferees agreed that the speed of change in the strategic environment was so great that security planners must not only plan future policies, but also continually examine the accuracy of the assumptions that they hold about the very nature

of the present strategic environment. Unless this examination is undertaken, security planners run the risk of advocating and implementing policies designed for a world that no longer exists.

Third, although the conferees disagreed about the role that nuclear weapons had had in maintaining the "long peace" (1945-89), they concurred that the greater lethality of all weapons would almost inevitably heighten the human cost of future major conflicts. Most agreed that the likelihood of future major conflicts had therefore been reduced. Further, the conferees agreed that the diffusion of modern military weapons to Third World states may in some cases make the cost of military intervention so high that the major powers may become less willing to intervene than they had been in the past. However, this did not imply that the frequency of regional conflicts would necessarily decline. Rather, given the host of regional issues that still exist, it implied that regional conflicts would be as frequent as ever, but that their lethality would increase even as superpower involvement became less frequent and less noticeable.

Fourth, participants concluded that while many new military technologies loomed on the horizon, a combination of political and economic factors made it probable that some would not be acquired. For planners, the task of formulating strategy thus will become even more difficult as they will have to pick and choose from among an array of weapons technologies of uncertain potential.

Fifth, with the likelihood that the evolving strategic environment will lead to fewer forward deployments of U.S. military assets, strategic mobility is likely to become more important than ever. Similarly, with future economic conditions likely to be more constrained for the military, a greater premium will almost inevitably be placed on joint capabilities and joint operations.

Finally, and perhaps most important, the conferees unanimously agreed that that public support remained critical for U.S. military policy. Without exception, they stressed that with the Soviet threat perceived as having diminished, alternate threats to U.S. security such as drugs and environmental deterioration perceived as having grown, and the perception strengthening that Japanese and European economic prosperity results from smaller defense burdens, public support for traditionally-defined U.S. military expenditures and activities will weaken in the 1990s. In the absence of a reversal of these perceptions, then, the 1990s are likely to be a decade in which military expenditures are curtailed, even as pressures on the military to take on new roles and missions increase.