FLETCHER CONFERENCE 1999

Strategic Responsiveness

Early and Continuous Joint Effectiveness
Across the Spectrum of Military Operations

- COMPENDIUM -

Summary and Analysis

Transcripts

General Editors

Major Michael R. Fenzel, U.S. Army
Captain Christopher E. Hornbarger, U.S. Army

From a Conference Organized by

The United States Army
and
The Institute for Foreign Policy Analysis

UNITED STATES ARMY
THE CHIEF OF STAFF

September 29, 2000

The 1999 Fletcher Conference was a landmark event that provided a lively forum for debate and candid discussion as to how our national leadership might best establish and achieve our national security goals in the 21st century. The purpose of this publication is to provide a historical record of what transpired and to set the stage for future policy discussions and conferences on national security.

This compendium is a gateway to better understand the full spectrum of national security challenges that lie ahead for our country. The journey toward a stronger defense will begin by taking account of the debates and discussions in the larger national security community--which now includes the media, corporate America, Congress and the American public; each of these groups was well represented this past year. This is the first in what will be an annual series of such comprehensive studies by the United States Army and selected co-sponsors.

This document offers a logical transition to our next conference. The Fletcher Conference 2000 will occur November 15-16, 2000, in Arlington, Virginia. The theme of the conference – **"National Strategies and Capabilities for a Changing World"** - will set the tone for the event. From considering the impact of space and technology on defense planning to discussing the growing importance of coalitions and alliances to our national strategy, the exchanges will be both timely and critical in framing the issues of our national security posture. This next Fletcher Conference will undoubtedly prove another important forum for considering the future of our national defense.

Sincerely,

Eric K. Shinseki
General, United States Army

Contents

Introduction vii

Conference Findings, Recommendations, and Conclusions 3

Summary, Analysis, and Transcripts of Proceedings 9

Opening Presentation: Transforming National Defense in the 21st Century 11
Senator Joseph I. Lieberman

Panel 1: Understanding the Implications of the 21st Century Challenges 25
Senator John Warner
Lieutenant General Patrick M. Hughes
Mr. Robert D. Kaplan
Dr. Richard A. Falkenrath

Day One Luncheon Address: Department of Defense for the 21st Century 53
Secretary of Defense William S. Cohen

Panel 2: Perspectives on a 21st Century National Strategy and the Role of Military Power ... 71
Senator Warren Rudman
Dr. John P. White
General Klaus Naumann
Ambassador Joseph W. Prueher
General Sir Jeremy Mackenzie

Panel 3: Anticipating Today the Essential Capabilities for Tomorrow 93
Dr. Ashton B. Carter
General George A. Joulwan
Lieutenant General Thomas G. McInerney
General Michael P. C. Carns

Keynote Address: Beyond Joint Vision 2010 117
General Henry H. Shelton

Panel 4: Serving the Nation in the 21st Century 131
General Eric K. Shinseki
General James L. Jones
Admiral Donald L. Pilling
General Lester L. Lyles

Panel 5: Redefining Defense: Preparing U.S. Forces for the Future 159
Ambassador Richard L. Armitage
Congressman Mac Thornberry
Dr. Michael O'Hanlon
Dr. Edward L. Warner

Day Two Luncheon Address: Setting Defense Priorities for a 21st Century Transformation 183
Dr. John J. Hamre

Panel 6: Realizing True Jointness in the QDR Process and Product—How We Do It Right 195
Senator Jack Reed
Dr. David S.C. Chu
Dr. Jacquelyn K. Davis
Dr. Richard H. Shultz, Jr.

Biographies 219

Introduction

A conference entitled *Strategic Responsiveness: Early and Continuous Joint Effectiveness—Across the Spectrum* was held on November 2–3, 1999. The goal of the organizers and co-sponsors was to gain a more precise understanding of our national security priorities and to build a broader consensus as to our requirements across the broad security spectrum of military operations. In an effort to address the daunting challenges ahead for the Armed Services, the organizers and co-sponsors brought together a broad array of talent and expertise that included current and former policymakers, senior military leaders, members of Congress, internationally renowned security specialists, corporate executives, and the media. The diverse group of speakers and participants presented a wide range of perspectives, issues, and policy options.

Central to the conference were several basic premises: The United States will remain the driving force for peace, prosperity, and democracy. The United States faces an uncertain and increasingly complex international security environment characterized by new asymmetric threats such as weapons of mass destruction and information warfare. The Armed Forces must be prepared as a joint force to meet the new security challenges that will differ dramatically from those of the Cold War era. At the same time, the Services must be able to respond to threats and crises ranging from smaller-scale contingencies to major theater wars. The Services must also maintain power projection capabilities to support and enhance overseas presence, which will remain a critical component of U.S. strategy. The array of requirements and emerging challenges has compelled the Department of Defense to embark on a course intended to enhance the mobility and lethality of our Armed Forces.

"Strategic Responsiveness" must be an essential aspect of our future defense strategies. Strategic responsiveness is based on a joint military concept that would enable the Armed Forces to place an adversary at a decisive disadvantage through the rapid exploitation of the operational initiative before the opponent can act. The United States must be able to apply overwhelming military power based on the rapid convergence of forces from all the Services wherever they are needed. Forming force packages that contain the correct combination of mission-tailored capabilities is a task essential to achieving victory in contingencies ranging from peacetime operations to full-scale conflict. For this purpose we must develop new strategies and capabilities.

In convening the conference, it was our intention to develop sound recommendations for the policy-making community and each of the Services through the candid exchange of views in an open, collegial forum. This compendium is a summary of conference findings and recommendations, introduction to and analysis of panel presentations and discussions, followed by the conference transcripts—panel by panel. In the pages that follow each session begins with an introduction of the topic for discussion, brief summary points of what transpired, followed by a presentation of views expressed and an analysis of what transpired. The compendium includes a concise conclusion highlighting the conference's essential "take-away points."

Conference Findings, Recommendations, & Conclusions

Conference Findings & Recommendations

Strategic:

1. America's national security and military strategies must help shape the evolving security environment of the new century if we are to maintain our position as a world leader. We must identify and prioritize the array of threats confronting the nation and dedicate the necessary resources in support of our national security strategy. The United States must pursue technological innovations that will allow us to develop new capabilities against a broad spectrum of threats. We must also exploit the information revolution and the revolution in business affairs to provide the flexibility to adapt to a rapidly changing world.

2. In light of America's numerous military engagements around the world, future intervention must become an object of national debate. An open and candid exchange will give us our best chance to ensure that sound decisions are made. Whenever possible, dissenting views must be allowed to flow forth to ensure that all sides of an issue are fully explored before an intervention is initiated. Our leaders must recognize that military force will be only one aspect of any solution and that future crises will require the sustained application of all elements of national power.

3. Procurement spending must continue to rise incrementally if we are to maintain our technological edge over potential adversaries. The Department of Defense (DoD) has reversed the declining trend in procurement budgets from the projected $41–$43 billion per year to a current budget earmarked to rise to $60 billion by 2001. This upward trend must continue, and Congress must ensure that necessary steps are taken to preserve our technological edge. Given current threats to our vital interests, the defense budget must make room not only for research and development (R&D), but also for upgrading and replacing existing systems. Our current missions must be balanced with the strong need to innovate—neither can be sacrificed.

4. We must make the difficult modernization decisions that may require forgoing some big-ticket items and purchasing other systems in smaller numbers. Pitting modernization against readiness creates false choices. Forcing trade-off decisions such as the mortgaging of future readiness for current readiness is counterproductive. Instead, defense planners must be prepared to make difficult choices in modernization programs. The United States must be able to generate necessary savings to maintain readiness while at the same time prepare for a true transformation. Rather than pursuing large-scale production runs that may be unaffordable under present budget constraints, we can save substantially by purchasing modern weapons in smaller buys.

5. The shrinking budget for defense R&D, particularly in the area of basic science, must be reversed. Technological innovation will remain the force behind the military's transformation. Beyond funding increases, the R&D process must shed its previous disconnected practices and become more integrated with Service-specific and joint requirements in order to maximize technological innovation.

6. A robust defense industry will be indispensable to the impending transformation of the U.S. Army and the other Services. Declining defense budgets together with the post–Cold War defense industry consolidation have led to declining equity values and internal problems resulting from rapid downsizing for defense firms. By providing stable procurement budgets and rethinking its relationship with industry, the government can offer defense firms much-needed stability. Failure to do so is likely to produce a hemorrhage of scientific, engineering and managerial talent and expertise to more profitable sectors, with adverse consequences for defense modernization and innovation. Steps to ease regulations and accounting rules, as well as greater efforts to procure defense-related items from commercial vendors should be taken immediately.

7. The Armed Forces are saddled with an enormous, Cold War–era infrastructure that drains funding from the warfighters. Proposed base closures have encountered political opposition that has proved to be virtually insurmountable. Nearly forty additional bases should be closed, in addition to those that remain from past BRAC rounds, to stem the loss of resources from our Services—resources that must be invested in future modernization needs.

8. The enormous consequences of weapons of mass destruction (WMD) incidents justify the increased effort and expense to prepare for this looming threat. The United States must press ahead with counterproliferation programs. A national missile defense (NMD) that protects all 50 states should be deployed as soon as technology permits. As required not only for NMD, but also for theater missile defense (TMD) to protect allies and U.S. forces deployed overseas, greater investment in research and development should be made. We must also heighten awareness of WMD threats among allies and friends and extend counterproliferation capabilities to them as well. Continuing efforts should be made to control "loose" Russian nuclear weapons and prevent the outflow of WMD technologies and capabilities.

9. The growing threat of chemical and biological weapons will force a transformation in the Armed Forces and put greater emphasis on increased cooperation between DoD and other governmental agencies. Joint Forces Command has already embarked on efforts to enhance civil support for WMD contingencies and consequence management—coping with the consequences of a WMD terrorist incident—in the United States. Continuing efforts will need to be made to achieve maximum synchronization and cooperation among the various civilian and military authorities, including those at the federal, state, and local levels.

10. U.S. military operations will continue to derive greater legitimacy from multinational participation, and the unique contribution of our allies will continue to be a decisive planning factor. In light of the continuing decreases in defense budgets among NATO-European countries, however, long-term allied interoperability will not be achievable. If the present downward trend is not reversed, our allies will be even less capable of contributing effectively to alliance/coalition operations. Further efforts must be made to encourage European allies to invest in modern defense capabilities for the 21st century.

11. The Armed Forces must relentlessly pursue joint capabilities and platforms and make greater efforts to shed redundancies. The development of joint doctrine and training, especially at the Joint Task Force (JTF) level, will help bind capabilities and platforms together. The DoD is also investing in the Joint Forces Command as the lead agency to conduct joint

experimentation and determine future requirements. At the same time, we must recognize that some level of overlap and redundancies will be required to provide maximum depth to joint operational capabilities.

Operational:

12. The Army has proclaimed that "Everything Is on the Table" as it pursues transformation. If the Army is to transform into a more responsive and strategically dominant force, it must be willing to make tradeoffs. However, there are legacy systems that have served the Army well and have the capability to be decisive on future battlefields under the auspices of "campaign forces." As decisions are made to determine which Army programs should be cut, which weapon systems are no longer relevant, and how units are to be structured for the future, the utility of all current and planned systems must be dispassionately evaluated. The Army's war-fighting requirement demands that current capabilities be maintained until an adequate replacement in the form of the projected "objective force" is available.

13. The current Army vision to be able to deploy a brigade anywhere in the world in four days, a division in five days, and five divisions in 30 days does not go far enough. Given the virtually limitless possibilities for technological advancement and innovation in the next 25 years, our goal should be to deploy a brigade on the ground anywhere in the world within two days. This takes into account not only the need to have a forcible entry capability but also to maintain the required logistics. Greater technological efforts should be especially focused on the requirements directly related to versatility, lethality, agility, and sustainability.

14. Land-based fire support has been allowed to atrophy in the Marine Corps. A recent review of Marine Corps ground-based fire support systems strongly suggests that post–Cold War artillery cuts have left the Marine Corps with serious deficiencies in this area. The HIMARS rocket system (which the Army plans to field for its light divisions) is a potential solution in conjunction with the expected fielding of the Lightweight 155-mm Howitzer. These expeditionary systems will allow the Marine Corps to gain the maximum fire support in the early phases of a combat operation.

15. Marine Air-Ground Task Forces (MAGTF's) would provide an ideal test bed for experimenting with concepts that could be subsequently extended to the wider joint arena. MAGTF's are uniquely suited for experimentation due to their inherent capabilities as self-contained task-organized units. Because each MAGTF consists of a headquarters, ground combat, aviation, and combat service support element, it can adequately simulate the other military Services (using similar equipment, tactics, and procedures), without requiring the large scale participation of the other Services.

16. Even less in the early 21st century can the Air Force make the strategic assumption that forward basing will be available or accessible in future operations. We must assume that future adversaries will resort to access denial tactics, including the threat or use of WMD to impede the utilization of ports or airfields. Our allies may also be coerced into denying access to their bases. Therefore, the Air Force should reassess its reliance on tactical platforms and fully embrace the development of longer-range capabilities. Using the Air Expeditionary Force (AEF) as a management tool does not solve the nodal attack problem that currently exists and will continue as long as forward basing remains an operational planning imperative. The Air

Force must look beyond the current dependence on nodes to launch operations and concentrate on strategic platforms.

17. The Navy must prepare for and invest more fully in littoral operations. Future joint missions will require that naval forces work more and more closely to shore—they must be well positioned to take advantage of the growing precision of joint weapon systems and sensors in order to project power deeper inland. Although the Navy has devoted considerable effort to mine warfare and littoral anti-submarine warfare techniques, higher priority and investment must be given to such capabilities in this transformed security setting of the early decades of the 21st century.

Conference Conclusions

The strategies and force structures set forth in the 1997 Quadrennial Defense Review have become increasingly unsustainable and outdated. As presently constituted, the ability of our Armed Forces to support the national security strategy of shaping the security environment, responding to threats to important interests, and preparing for the future is seriously in doubt. The exacting demands of cyclic crises and small-scale contingency operations have left the Armed Forces mired in high operational tempos with rising operations and maintenance costs. Our focus on the numerous military engagements worldwide today, however important they may be, impedes efforts to develop new capabilities to counter emerging threats. This severe mismatch between the current strategy and future requirements must be corrected—it will require a transformation in our Armed Forces. Innovative approaches to formulating new strategies and sustaining resources will be necessary to bring about such a transformation in the rapidly changing security environment of the 21st century.

Our Armed Forces must fulfill three highest priority operational imperatives if they are to effectively meet emerging challenges:

Near-Term Readiness: The Department of Defense is overwhelmed by the sweeping demands of the current national security strategy. The numerous military interventions abroad have severely challenged our ability to respond adequately to other possibly larger-scale contingencies. Although militarily successful, Operation Allied Force revealed important shortfalls and deficiencies in near-term readiness that must be remedied, while severely challenging the key assumption underlying the 1997 QDR that the United States could fight and win two nearly simultaneous major theater wars. At a minimum, near-term military readiness will require additional and sustained funding for operations and maintenance, weapon and equipment upgrades for tried and true systems, and greater precision munition inventories.

Taking Care of People: The Services must continue to attract and retain the highest quality personnel in order to remain the world's most effective military force. Problems of recruitment and retention must be addressed as urgent priorities. Ensuring that the best and brightest join and remain in the military starts with quality of life improvements, including better pay, more predictable deployment cycles, and rigorous training focused on key tasks. While the Department of Defense recently addressed the pay issue, the other two problems persist. The current unacceptably high operational tempo is placing severe strains on families and morale. To prevent shortfalls on the proving ground from becoming disasters on the battlefield, training at our bases and national training centers must improve. We must tailor skills to meet specific contingencies while we train our forces against the backdrop of uncertainty and strengthen our ability to attract and retain personnel for the 21st century Armed Forces

Preparing for the Future: Based on the changed global security setting of the new century and emerging challenges, the United States must devise a defense strategy that accelerates modernization while maintaining force readiness across the security spectrum ranging from high to low intensity contingencies. To support such a strategy, we must develop innovative operational concepts as well as leverage emerging developments in science, digi-

tization, and space technologies. We must achieve greater overall military effectiveness by maximizing responsiveness, lethality, agility, deployability, mobility, and interoperability. We must recognize joint and allied capabilities as critical force multipliers. Major investments in integrative technologies will be needed to enhance the performance of next-generation platforms across the Services and to improve our ability to work more closely with allies and coalition partners. Joint and combined operations, however, will be made more complex and challenging by the growing transatlantic and transpacific gaps in capabilities resulting from the Revolution in Military Affairs. Our resource allocations must be targeted on equipment, manpower, and technology to ensure that the Armed Forces can carry out current responsibilities and prepare for future challenges. Last and most importantly, securing broad public support and understanding of our national security strategy will require a clearly articulated vision of the military's mission priorities and force structure requirements. This report, together with the conference on which it is based, articulates many of these priorities and requirements.

Summary, Analysis, and Transcripts of Proceedings

Transforming National Defense in the 21st Century

Opening Presentation
Senator Joseph I. Lieberman

Tuesday, November 2, 1999—9:00 to 10:00 a.m.

Summary of Proceedings

- Future defense transformation as set forth in the last Quadrennial Defense Review (QDR 97) remains inadequate.
- According to the National Defense Panel (NDP), a Congressionally mandated independent study on U.S. defense and national security, a more radical approach to preparing for the future is necessary.
- The NDP determined that current force structure would be inadequate to defend national interests 20 years from now. A new strategy that considers new capabilities is desperately needed.
- A commitment to doctrinal changes, jointness, and technological innovation will be the key to a true transformation for the Armed Forces.

Analysis of Proceedings

Despite the fact that the Defense Department has accepted transformation as a fundamental policy goal, future plans mandated by the 1997 QDR were essentially a restatement of the status quo. Nevertheless, the current force structure of the Services will become increasingly less able to deal with new threats in a rapidly changing security environment. The periodic crises and overseas deployment decisions of recent years have inhibited the formulation of a military strategy designed to address future threats sufficiently. The Services are mired in high readiness, operations and maintenance costs while modernization programs have lagged behind. Most notably, the defense budget for science and technology, the basis for military innovation, has dropped to a precipitously low level.

Without fundamental changes, the current force structure and level of readiness will be unsustainable. Unless the Defense Department takes action now, our forces will be smaller and less modern. The "alternative worlds" described by the National Defense Panel (NDP) provide a more forward-looking prescription for the transformation of America's military strategy. The Panel posited four distinct and plausible futures (international stability, baseline projection of the current international order, classic balance of power between hostile alliances, and chronic chaos) that might influence security planning in 2010–2020. According to the NDP, while the range of potential threats has grown substantially, our ability to develop forces to defeat these threats has also increased. If we act now, time is available to prepare for the future. In order to exploit this window of opportunity, the United States must reevaluate the military's approach to transformation.

In light of existing political and military constraints, the current doctrine of applying overwhelming force is not likely to be a feasible option in most future conflicts. Instead, the Services will be constrained in the use of force to attain political and military objectives. This will require greater lethality and also a better understanding of enemy vulnerabilities. Future military operations will be based on joint and combined operations. In order to achieve true jointness, the Services must clarify the priorities of *Joint Vision 2015* and accelerate its implementation. The Defense Department must also improve the process by which future military requirements are identified. Current efforts undertaken by the newly formed Joint Forces Command are spearheading a new path for QDR resource decisions. This Command must be given sufficient resources to succeed with the complex tasks assigned to it.

Dr. Robert L. Pfaltzgraff, President, Institute for Foreign Policy Analysis, opens the conference.

Transcript

Pfaltzgraff: We have structured the conference to address a series of key issues and questions. Including, briefly: first, the new and likely threats and challenges that the United States will face in the early 21st century. Second, what will be the role of military power in 20th [*sic*] century national security strategy? Thirdly, how will the U.S. Army, together with the other Services, all represented here today and tomorrow, be able to anticipate the essential capabilities for tomorrow? Fourthly, how will we be able to ensure successful integration or cooperation, whatever it may be, between the Services while we eliminate unnecessary redundancies? And equally important, how will we be able to achieve greater alliance cooperation? Fifthly, how do we reconcile competing demands as we undertake change in three primary areas: modernization, human resources, and readiness? And last, but not least, in light of the foregoing, how can we move most effectively to maximize the unique opportunities and to overcome the challenges that we will face in the 2001 Quadrennial Defense Review?

In short, what are the requirements both in joint and alliance coalition operations if the United States and its partners are to provide the force package containing the appropriate combination of capabilities across a broad spectrum encompassing peacetime operations and smaller contingencies as well as major theater wars?

On behalf of each of the co-sponsors and organizations therefore, I extend a cordial and warm welcome. We look forward to productive presentations, debates, and discussions during the next two days.

I would now like to turn the podium to Major General Robert St. Onge, who is Director of Strategy, Plans, and Policy, Office of the Deputy Chief of Staff for Operations and Plans. Thank you.

General John M. Keane, Army Vice Chief of Staff, introduces Senator Joseph I. Lieberman as opening speaker.

St. Onge: Good morning, ladies and gentlemen. On behalf of the Secretary of the Army and the Chief of Staff, the Fletcher School, and the Office of the Secretary of Defense–Net Assessment, I welcome you and all of our guest speakers, panel members, and audience participants to this 1999 Fletcher conference. Additionally, I would like to extend a special welcome to the more than 20 officers and diplomats representing our allies from across the world. This is the 29th annual conference in a series designed to promote discussions and understanding of national security objectives, strategies, and priorities. When you review the exceptional list of speakers, panel members, and this august audience, I think it's pretty certain that we'll accomplish exactly that.

It is my honor to introduce to you the Vice Chief of Staff of the Army, General John M. Keane, who became the 29th Vice Chief on 22 June of this year—an infantry officer who has commanded at every level from company to corps—most recently served as the Deputy Commander in Chief of Atlantic Command. General Keane.

Keane: Well, good morning everyone. Ladies and gentlemen, it's really a distinct pleasure for me today to introduce our opening presenter, Senator Joe Lieberman of Connecticut. Senator Lieberman is a lifelong resident of the great state of Connecticut. He received his bachelor's degree in 1964 from Yale University and his law degree from Yale Law School in 1967. For 10 years, he served as a Connecticut state senator. And from 1982 to 1988, he was the state's attorney general. In 1988, he was elected to his first term in the Senate and in '94, he won reelection with the largest margin of victory in the state's history.

Senator Lieberman is a ranking Democrat on the Governmental Affairs Committee. He's also a member of the Armed Services Committee, the Environmental and Public Works Committee, and the Small Business Committee. He has served as the chairman of the Democratic Leadership Council since 1995. Senator Lieberman is a man of deeply held religious convictions. He's a dedicated family man. A person who embodies American values and lives his personal and public life in accordance with those values. He has worked tirelessly to advance the cause of freedom and respect for individual rights around the world.

He led and supported bipartisan efforts regarding the use of American military power in DESERT STORM and again in Bosnia and Kosovo. He is at the forefront of the move to transform our military forces for the challenges we face today and also for the 21st century. He has co-sponsored legislation with the former Senator Dan Coats on joint experimentation. And he teamed with Senators Robertson and Santorum to make the quadrennial review process a permanent part of the institution. He is a published author, having written four books on a wide variety of topics ranging from nuclear proliferation to a history of Connecticut state politics.

He is a husband, a father, a grandfather, and, as we all know, a true great American patriot. What an honor it is to have Senator Lieberman open the Fletcher Conference. Ladies and gentlemen, please, join me in a warm welcome for Senator Joe Lieberman.

Senator Joseph I. Lieberman (D–Conn.) urges the Department of Defense to move beyond its cautious evolutionary approach to change—"talking the transformation talk without walking the revolutionary walk."

Lieberman: Thank you. Thank you so much, General Keane, for that gracious and generous introduction. Thanks to all of you for the warm welcome. I want to thank you particularly, General, for mentioning the fact that I've written four books. Because, believe it or not, I've been up late and up early trying to write a fifth one that somebody asked me to do. But I also note that you didn't mention the names of my four earlier books. One of which was a study of the efforts to control nuclear weapons after the Second World War, which was called *The Scorpion and the Tarantula.* Comparing the U.S. and the Soviet [Union] during the Cold War to a scorpion and a tarantula.

I was once introduced several years ago in an event in Connecticut where the introducer was not as wise as you were. He tried to mention the names of the books and said that one of the books that I had written was called the *Scorpion and the Tarantella.* Very different idea. Thank you so much. It's great to be here, General Shinseki and Dr. Pfaltzgraff.

Ladies and gentlemen, this is an extraordinarily well-timed conference, but also the program is really impressive with the assortment of leaders and thinkers that you've brought together—leaders who are also thinkers, I guess I should say—to help guide us as we consider how to go about transforming the world's most powerful military force.

I want to play the part that an opening speaker should, which is the part of provocateur. I do so, I assure you, with great respect for and pride in the American military. And I do it in the

spirit that runs through so much of our society today, particularly the private sector where change brought about by innovation and technology is so pervasive. And the spirit is that it is when you are at your most successful that you have to work the hardest, push the most forcefully, act with the most impatience to make sure that you remain as strong and successful as you have been.

And our military, thankfully, has been extraordinarily successful. It's not just that we're not at war today. We are, as we all in this room know, the dominant military power in the world by far. As such, I want to suggest that we have the luxury of thoroughly and thoughtfully deliberating on what the threats of tomorrow will be and what changes we need to make in military policy and practice to meet them. But those deliberations are going to be futile and potentially even fatal if we do not think critically about the status quo and the future ahead of us, if we do not challenge prevailing assumptions of today, if we do not prevail in carefully identifying the challenges of tomorrow and then working together to meet them.

This is a consequential lesson that I have come to learn over the years from my experience on the Senate Armed Services Committee with a wonderful group of colleagues of both parties as we've tried to grapple with the conflicting messages we were getting over our future security needs. And frankly, as we were kind of drawn by the day to day pressures and requirements of the authorization cycle of crises that occurred and didn't always have the opportunity, didn't have it sometimes at all, to step back and look out over the horizon. The world around then, as it is now, was changing rapidly with new threats emerging and old conceptions about warfare receding.

Yet the defense program sent to us by the Pentagon continued to be too much a statement of stasis. Looking very much as it did during the Cold War. With outside experts warning us of the serious flaws of this approach, which General Keane has been kind enough to note, Senator Coats and I, along with Senators McCain and Robb, decided to try to shake things up a little bit. We sponsored legislation tasking both the Pentagon and an outside panel of experts to separately consider the current and future challenges and recommend the military force we will need to respond to them.

As you know, the Quadrennial Defense Review was the assessment of the Pentagon. The National Defense Panel was the assessment done by the panel of outside experts who were specifically charged to be bold, to think outside the box, and to look skeptically at today's conventional wisdom. In this instance, perhaps rare in Washington, we were not seeking consensus. We hoped the results from these two assessments would in fact clash and would spark a broad debate about military transformation and help us in the Congress better do our job. Well, in so far as the clash was concerned, I'd guess I'd say mission accomplished.

These panels did in fact produce two fundamentally and constructively different evaluations. The QDR's conclusion was that, although the future military challenges will likely be different, the two-major-theater-war construct with some modifications is and will continue to be the proper standard against which to gauge our capability and our preparedness. By this standard, the QDR concluded the current forces and weapons are satisfactory and will continue to sustain our military dominance if modernized in kind.

The members of the NDP disagreed. They asserted that, and I quote, "we are at the cusp of a revolution in warfare," end quote. "And unless," and again I quote, "we are willing to pursue a new course, one different than that proposed by the QDR, then we are likely to have forces that are ill-suited to protect our security 20 years from now." Indeed, the NDP questioned the

Senator Lieberman asserts that the U.S. military remains optimized for Cold War missions and concepts, even though we can expect to do very different things under very different conditions than in the past.

advisability of continuing to use the two-war standard and of continuing to procure some of our current core weapons, including large deck carriers, the Army's Crusader, and some short-range tactical air systems.

It proposed instead that we establish an immediate strategy to develop a fundamentally different military. Funding systems that have capabilities essential for future effectiveness and terminating systems that will have decreasing value. This was the first of what I would call an official articulation of transformation. And I must say that I think that the NDP got it just about right. The dizzying pace of global change means our military will have to confront very different challenges in the future. Including large-scale urban warfare, space warfare, electronic informational warfare, and chemical, nuclear, and biological warfare.

But of course this new world also brings with it great opportunities, and we are best positioned to take advantage of them if we will. The eye popping, mind boggling advances in technology we are engineering today are paving a path not just to a revolution in military affairs, but to a complete paradigm change in the way of war. A shift that will make us stronger and I think safer in the new century ahead. But let me now elaborate a bit.

Dramatic strides in a wide range of scientific disciplines combined with the exponential growth in the capacity of communication or in information systems make military capabilities that seemed fantastic, literally, just a few years ago, not only possible, but I'd say even probable in the years ahead. Probable, in fact, with the increasing speed and range of precision munitions and with our growing ability to make strategic, operational, and tactical decisions based on unerring near real-time information.

It's not science fiction anymore to expect to protect ourselves from missile attacks, for instance. To project power with unprecedented speed over vast distances. To destroy a large, but technologically inferior, force—not even in days to weeks, but perhaps within hours. Beginning only minutes after the decision to do so. With advances in nuclear power, hydrolysis, and hydrogen storage enabling us to create virtually unlimited sources of on-site power, our forces may soon be capable of indefinitely and independently operating without long supply lines and vulnerable support bases.

With advances in robotics and miniaturization, our forces on the ground may soon be capable of fighting with far fewer people and therefore running the risk of far fewer casual-

ties. All of which is to say that, in time, the traditional land, sea, and air battles that have determined our current force structure and that drive current systems procurement may well occupy a much smaller part of our military operations. If that is true, as I believe it is, it is certainly in our best interests to work together to plan accordingly for it.

Now the good news is, and I think the intellectual battle here has been won, the defense establishment has made it clear that it accepts transformation as a fundamental policy goal. And that's evident from a growing number of important official speeches and documents, including one made recently by General Shinseki. The Secretary of Defense has said that our defense policy is transformation and that the strategy to implement it is to "shape, respond, and prepare now." The QDR states, and I quote, "We must meet our requirements to shape and respond in the near term. While at the same time, we must transform U.S. combat capabilities and support structures to be able to shape and respond effectively in the face of future challenges," end quote.

And transformation as a goal is clearly at the core of *Joint Vision 2010*, which was declared during General Shalikashvili's time as Chairman and has certainly been carried on under the leadership of General Shelton. The bad news is that our actions and resourcing are not keeping pace with the intellectual conclusions and rhetorical pronouncements. While Pentagon civilian officials and Service chiefs all see their future forces as being fundamentally different than those of today, they urge that change be cautious and deliberate.

So we continue to place the highest priority on current readiness, keeping our organizations and weapons prepared to deal with the threats they were designed to deal with while trusting that incremental and evolutionary improvements will allow them to adapt to deal with different threats as they emerge. Consequently, our resource allocation is still too much like it was during the Cold War. Each of our Services currently spends 60 to 80 percent of its funds on the readiness—operations and maintenance—of current forces, and 20 to 40 percent of its funds on modernization tasks for improvements, often incremental improvements, procurement, testing, and evaluation.

The budget for science and technology, notably, which is the military of the future, is less than 2 percent of the overall military budget. Under currently proposed future year budgets, in fact, that number will drop to 1 percent. That's not transformation. Transformation is change on a scale sufficient to effect a revolution in both thought and deed. And rapid enough to outpace our rivals who may act, as General Shali[kashvili] said, asymmetrically and at least maintain and, ideally, widen our future military superiority. What we are doing now, if you'll allow me to say, is talking the transformational talk, but we're not walking the revolutionary walk.

And all of this, as so much in life, comes down to choices and priorities. And the hard reality we have to face is that it's going to be very difficult, if not impossible, to go ahead with this cautious evolutionary approach and achieve the ends that we all share. Either in terms of the fiscal cost today or the risk that such an incremental approach poses to our security tomorrow.

Let me consider briefly the former—the affordability of the current force. While they have described the problem differently—"death spiral," in the words of Under Secretary Gansler—"train wreck" in the words of a recent CSIS study—the situation described and the likely outcome is the same no matter how you slice it.

Our current force is large and the major systems are aging. As they continue to age, they cost more to operate, obviously. Newer versions of today's weapons systems are more and more expensive to procure. Making it impossible to recapitalize the existing force at its

current size. Thus ensuring the overall force keeps getting older and even more expensive to operate.

At the same time, the cost of attracting and keeping people is rising dramatically. The estimates of how much it will take to pull out of this spiral are daunting and sobering. For example, CSIS estimates that by 2020, it could cost almost $700 billion a year in FY99 dollars to fully support the QDR force. And the likelihood of getting that I don't have to tell you is small. Now some urge us to solve this dilemma by increasing the defense budget. Committing 4 percent of GDP is often mentioned as a goal. I thoroughly agree that we need to spend more and I have worked very hard with other members of the SASC and Congress to reverse the decline in defense spending that began in 1986.

But the truth of the matter is, and I can tell you as a veteran of these particular conflicts, that there simply and sadly is not a large enough defense advocacy group in Congress, at a time of peace, to secure the kind of substantial increases needed to meet all these demands. Nor is there frankly strong enough public support to change that dynamic on Capitol Hill. National polls that ask what to do with any surplus money left over after balancing the budget find very few Americans who say we should spend it on national defense.

And so I think it's almost inevitable that our forces will become smaller as well as less modern unless we act now to reformulate our spending priorities and then, if you will, walk the transformation walk in a revolutionary way. Which is to say at this point, I think it's much more important to focus on how we invest our defense budget than on how much there is—understanding that I and others in Congress will continue to argue that we need more. We must now adopt bold change as our defense policy and move with a greater sense of urgency to secure those elements that are necessary to achieve it. I want to talk about just a few of those elements that I think are particularly central.

The first is achieving a shared vision of the future and dealing in a way that is decisive with what we want our military to be able to do.

Next is acting quickly and authoritatively to decide which weapons, organizations, and concepts will advance our military effectiveness and then adopting policies that incentivize innovation and processes and research priorities that facilitate change.

And finally, increasing the priority of R&D—research and development—and overhauling the R&D process to build a better foundation for future capability.

It's critical that we reach a consensus on our expectations for our military. After all, as the great Yogi Berra once said (and I do this for General Keane because I know he's a fellow Northeasterner anyway), if you don't know where you're going, you may end up somewhere else. Our military is optimized still too much for Cold War missions and our concepts for using military force reflect our past experiences, understandably, and our traditional mission focus. We don't know where or when we may commit our military in the future, but we do know that we will ask it to do very different things under very different conditions than we have in the past.

We know this because of the obvious changes in the strategic and operational challenges we already face in the new geo-politics of today and in the new capabilities that will enable both our forces and our opponents to do things different. Take, for example, our primary security mission—which is to defend our homeland against attack. During the Cold War, that meant fighting conventionally outside of the U.S. while deterring strikes against our own territory. And that was sensible. We couldn't defend directly against nuclear attack.

Today, the range of potential attacks against our territory is growing, but so is our ability, remarkably, to directly defend against those threats. In the future, we'll probably ask our military to project power not just to defend national interests, but as we have seen again in recent years, also to promote American principles. That means acting not just to defeat an opposing military force, but also to prevent or reverse, for instance, humanitarian catastrophes. And that has implications that need thorough exploration.

Two come quickly to mind. The first concerns our doctrine for applying force. The current doctrine of overwhelming force is not desirable politically nor necessary militarily in all these cases. While we've got to be prepared to act alone, we will also want to and tend to act with our allies. And their views about force and its application may be different from ours in these circumstances. As we've seen recently. Accordingly, we may have to focus less on achieving maximum possible force and more on achieving what my senate colleague Carl Levin has termed "maximum achievable force." In other words, not just achieving maximum possible force, but maximum achievable force.

By this, I think he means that a variety of constraints will likely exist that will determine what means we can use and where we could use them. However, since we can never allow maximum achievable force to fall below the level of necessary force, we need to utilize the rapid advances in technology to increase lethality and to know better our opponents' vulnerability so we can achieve devastating effect through the selective and graduated application of force.

The second concerns what forces we will need. Deciding what systems we must build and how to organize our forces of course flows from the decisions we make about the first point and on the growing potential for new capability through technology, different organizations, and imaginative ways of using them. The Services today are, to their great credit, beginning to take steps, serious steps, to transform themselves.

I noted the recent comments of General Shinseki. On October 12, the Chief of Staff of the U.S. Army announced his intention to begin to transform the Army from a heavy force, as it was generally configured during the Cold War, to one that will be more effective against the threats that now seem most likely and most dangerous. His goal is clearly to make the Army more strategically relevant by making it lighter, more deployable, more lethal, and more sustainable. And I thank and congratulate him for that. The U.S. Air Force has begun to reorganize its units into air expeditionary forces to be more responsive to the need for air power by the war-fighting commanders.

These are very positive and encouraging steps. However, I remain concerned that they are not coming fast enough or going far enough. Fundamental change is very difficult to effect anywhere. Especially in organizations like the Department of Defense that are not only large, but are successful. That's the hardest time to bring about change. But in this time, it is necessary. While each Service is moving to reorganize and, in some cases, to consider new weapons and potentially new ways of operating, they still seem to be acting mostly alone with relatively little coordination or even, if I can put it this way, exchange of observers.

This is a problem. Because to successfully transform our military will require that we move to the next level of jointness. And that clearly is the focus of this conference. I'm struck, perhaps this will merit a footnote in some future military history, that the notion of strategic responsiveness and jointness has made it onto the mug that is on the table in front of you. Save it.

By now, virtually every respectable thinker believes that future operations will be increasingly joint, interagency, and combined. And that while competition among the Services can assist in determining how best to exploit new capabilities or solve emerging challenges, there just has to be greater collaboration. Colonel Robert Killibrew, a former Deputy Director of the "Army After Next" project, stated this very well when he wrote, and I quote, "The next stage of jointness will be interdependent force structures. Technology is less of a hurdle than cross-fertilization of Service programs. Increasingly, new ground, maritime, and aerospace systems must be developed jointly." End of quote.

In order to do this, I think we've got to make two reforms a high priority. First, we should refine *Joint Vision 2010* and accelerate its implementation. It's a strong working document. We have a critical need to reach a joint consensus on the key strategic and operational tasks that our future forces must execute and the type and level of opposition to plan for in executing those tasks. Right now *Joint Vision 2010* gives planners general directions to pursue, but it does not specify to the Services what [are] their key tasks or the priority of those tasks.

Second, we should modify our process for developing military requirements. From the stream of hearing testimony before the Senate Armed Services Committee, I must tell you that I don't see a real process, a real joint process that does tradeoff analysis and makes decisions among major service weapons that perform identical or overlapping combat functions nor one that does not consistently subordinate joint priorities to Service priorities. The Joint Requirements Oversight Council, which many hoped would do this, has not fully done so. It needs to be strengthened.

And that leads me to a more difficult question which in this age of rapid change and uncertainty is an important one. And that is how are we to know what a very different military should look like? How will we know when we're making the right kind of progress in transforming ourselves? It's not an easy question. Secretary Cohen and General Shelton, encouraged and supported by legislation Congress passed last year, established a very promising process to answer that question.

On October 1 of 1998, they charged the Commander in Chief of the United States Atlantic Command, Admiral Harold Gehman, and his deputy then, General Keane, to put in place a joint experimentation process to objectively determine which new technologies, organizations, and concepts of operation would be most likely to lead to future military superiority. In the time since, Admiral Gehman has done a superb job of implementing this process. And just a month ago, I was very pleased to note the Secretary and the Chairman reiterated the importance of joint experimentation by redesignating the United States Atlantic Command as the United States Joint Forces Command.

I thank and applaud Secretary Cohen and General Shelton for this commitment to transformation of the U.S. military and for their courage in making some of the tough choices needed to get it done. It's a very good beginning. But I must add that Joint Forces Command has not yet conducted its first major experiment and it has not yet made its first recommendation that threatens a core service weapon or role. We cannot judge its effectiveness until it has done so and until we see if there's an impact on resourcing decisions.

That's when the rubber will really meet the road. We all will watch that closely and inevitably with some impatience. And when that moment of challenge comes, I hope we in the Congress, you in the Pentagon, and those outside who care about and follow our military policy will be supportive of the work of the Joint Forces Command.

Finally, I want to raise a concern that I think could actually stop our transformation in its tracks. No matter how well all the rest I've talked about is going, we could hand our opponents the advantage in the area of greatest strength, which is technology. And what I'm talking about here is what I alluded to before briefly and that is declining defense R&D spending. Especially for fundamental science, which has been the wellspring of our national military and commercial prowess.

In the past half century, the Department of Defense has funded the bulk of basic science. Including, remarkably, 58 percent of this country's Nobel Prize laureates in chemistry and 43 percent of America's Nobel laureates in physics. Recently, however, in the post–Cold War downsizing, DoD has been drawn into focusing more and more of its attention on the urgent needs of the present. Consequently, it has not been able to nurture the sources of its longer-term technological strength. And so DoD sponsored research and development has actually declined 30 percent over the last six years. And it's projected to decline again next year.

The government's civilian research portfolio is simultaneously losing its vigor. Current projections are that it will drop another 15 percent in value over the next five years. Such declines are alarming and they are consequential. With a 30 percent drop in military R&D behind us, another 6.6 percent decrease slated for next year, and steady project cuts in federally funded civilian R&D in all areas except health research ahead of us, we've got to ask ourselves: where's our technological and, therefore, our military superiority going to come from? Private sector R&D, I'm afraid, will offer very little help.

Industry obtains its new ideas from the same pool of government-funded research as everyone else. Seventy-three percent of the papers cited in industrial patents are from government-funded research. And as you know, a lot of it has been DoD funded research. Industry of course does conduct its own R&D, but it is overwhelmingly and increasingly concentrated on the final stages of product development. When the military leverages its R&D efforts off of industry, it is leveraging only or primarily this final stage. Both rely on government sponsored research for the intellectual groundwork up to that point. So we've got to reverse this unfortunate course and quickly or we will not have the technology that we assume we will have over the next 20 to 30 years.

Increasing funding for science in and of itself will not solve the problem. R&D does not advance military innovation unless it is a connected process with each stage integrated and networked to further maximize technology advantages. DoD innovation remains organized around an older, disconnected R&D model. And now that each stage is under-funded, the Pentagon's innovation engine, once truly the envy of the world, is, I'm afraid, slowing. The defense innovation legislation that Senators Roberts, Santorum, and Bingham and I worked on during this past session, this current session, is designed to reverse that deceleration and develop a fully integrated approach, and we're optimistic that it will help in doing so.

So in summation. In the process of military transformation, there will be winners and losers. We will need to disinvest in programs that have great bureaucratic and political power in the Pentagon and in Congress. And we will have to change beliefs that lie at the core of great organizations that have been successful and that will therefore be resisted. Naturally it's not going to be easy, but it is important. And I think as we approach these challenges, we can take some comfort from the historic fact that this is not the first revolution in military affairs. Others have successfully managed similar challenges in the past and I am confident we will, too, working together in our own time.

It is our turn now and our responsibility to go forward and meet the future. As Sir Francis Bacon said centuries ago in words that are still relevant today as we begin a new millennium, "He who will not apply new remedies, must expect new evils." Thank you very much. Have a wonderful conference.

Pfaltzgraff: Senator Lieberman will take a few questions from the audience. In posing your question, let me make a logistical comment. There will be a microphone that has to be given to you or located adjacent to you, that we have people who will do that, but also the camera. Because this is being beamed into the Pentagon auditorium and therefore we want to make sure that we have audio and visual capabilities. So who would be the first questioner for Senator Lieberman? Yes. Please identify yourself and wait till the microphone comes over and the camera. The camera's coming.

Rosen: Hello, Mark Rosen of Booz, Allen, and Hamilton. First, I applaud the need for increased speed and extent of transformation. One concern. The concern is you can infer from your speech, Senator, that we need to pit readiness today versus transformation for tomorrow. And you could infer that it's two major theater wars (MTWs) or something else. But I would argue that's a false choice perhaps because you could even have three or four MTWs, three or four war capability. Not a force sizing mechanism, but capability. And that maybe the problem is how we measure and define readiness. Maybe we can continue to maintain readiness, that's the price of being a superpower, and still do the tough transformation.

Maybe the real bill-payers out there are in modernization versus modernization. And look at some of the big-ticket items out there and the relevance of those and not pick readiness today versus readiness tomorrow. I just am concerned about a false choice. It's the essential nature of a superpower to maintain readiness. We can do that and still make the tough choices for transformation.

Lieberman: Well, as I said at the outset, an opening speaker has to impose some false choice or tough choice or provoke. I understand that on the ground or in the office it's harder choices. I must say though that I do feel that, because of our strength, if we are forced—and these are not singular choices: They occur in thousands of different ways, some large, some small—that I think we have to be prepared, because of our strength, to take acceptable risks in the current time in order to guarantee our security in the future.

So I guess the way to state it is not that the choices were false, but I may have posed them more absolutely than is real. There will always be a spectrum, and Congress will never be willing to get us to a point where we're not ready for current threats. My own sense is that we're tipped too much toward the current readiness now and not enough in the future.

But you make another good point and this is being wrestled through in the congressional authorization and appropriation processes, which is that the other choice is about what kinds of modernization. And that's part of what I was trying to say. And again, it's not easy because it involves a lot of large, successful interests. But sometimes those choices will be, for instance, between modernizing existing systems or doing less and going to bold transformation or modernization. Sometimes it will be because technology changes so rapidly. To modernize, but not actually build, if you will, in enormous numbers because of the extent to which the budget is constrained and we expect technology to change. And

of course part of what we're learning and we've got to continue is to build platforms—we've done this better and better, I think—to build platforms that have parts that are effectively removable and replaceable by more modern parts as they develop. So a good point, but I guess I don't want to leave you with the impression, another impression that I meant to give, which is that we're strong now. And my fear is that unless we implement a transformational strategy, we're not going to be that strong in the future.

Krauss: Yes, hi. I'm Dr. Michael Krauss. I'm a member of the Army Science Board, Senator Lieberman. I worked for Amazon.com for about a year and I'd like to make the point about logistical transformation within the military. The thought process here is to use the web as quickly as we can in its relationship to supplying and sustaining our forces. That is a transformation that is ongoing in commercial industry globally. It eliminates one of the timed requirements that we have in deploying our forces. I'm wondering what your thoughts are on transforming the logistic structure of the DoD and wondering how commercial industry may be able to help.

Lieberman: I think that the question makes the statement, and I don't have much to add to it. Any of you and a lot of you are not only consumers of modern transformational services in the commercial sector, but have experienced them and been involved in offering them as you have, Doctor. And I just think we have a lot to learn. Things are changing so rapidly. I was at a program in Connecticut yesterday morning about the new economy and about what we in our state could do together to take advantage of the new economy and to sustain economic growth. And, you know, the life cycle of products is, let alone delivery systems, is incredibly short.

And, well, as you know from history, so many developments that occur in science or in the commercial sector work their way naturally into the military. And I think, therefore, we have a lot to learn at every stage; it's not a total—you can't just automatically transfer everything from Amazon.com to the U.S. Army, but we have a lot to learn from everything happening out there and we have to accept a mandate to try to change as rapidly as the world around is changing. Again, because if we don't, certainly in pursuit of asymmetrical advantage, our opponents will.

And as you know, we've already begun to see that in some of the engagements we've been involved in in recent years. You see it on a relatively primitive level, but it's logical and it's, for our opponents, it's essentially irresistible. So it's going to happen and we've got to be ready for it.

Pfaltzgraff: Perhaps that is the note on which we should thank you, Senator Lieberman, for this outstanding opening presentation which really sets the stage for what we plan to do in the remaining day and a half.

Lieberman: I'm sorry I have to go to the Hill. I think it's going to be much more interesting here.

Pfaltzgraff: But we do want to make sure that you take with you one of those strategic responsiveness mugs to which you referred. So thank you very much, Senator Lieberman.

Understanding the Implications of the 21st Century Challenges

Panel 1
Senator John Warner
Lieutenant General Patrick M. Hughes
Mr. Robert D. Kaplan
Dr. Richard A. Falkenrath

Tuesday, November 2, 1999—10:15 to 11:45 a.m.

U.S. national security in the early 21st century may be challenged in ways very different from those faced since the end of the Cold War. Others argue that 21st century challenges will look much the same as those we've faced through the 1990s: continued high operational tempo, service members maintaining peace, rebuilding nations, handling refugees, and helping with disaster relief—as examples. In either case, the trends toward a multi-polar international system, diffusion and empowerment of non-state actors, and the emergence of new problems will make necessary novel approaches to diplomacy and the use of military power. Developing a common understanding of the factors that will shape national security priorities will provide the essential framework to address these challenges.

Summary of Proceedings

- Accelerating technological change, together with the emergence of new actors and issues, will continue to transform the 21st century security environment.
- Domestic politics—particularly the expectation of casualty-free warfare—will increasingly constrain the United States in the use of military capabilities overseas.
- A fundamental reassessment of the roles and missions of the Services is needed to guide future force development and decision-making concerning intervention.
- Although information dominance will be indispensable, it is not a substitute for preponderant power on the ground. Therefore, the United States must maintain adequate forces equipped and prepared for a wide variety of tasks.
- The Armed Services face the risk of strategic overextension, the cumulative effect of the numerous small-scale military operations that have characterized the post–Cold War period.
- The United States, the only power with global reach and responsibilities, will continue to bear most of the military burden on behalf of the international community.

Analysis of Proceedings

This new century will introduce forces bent on terror and destruction that stem from the interaction of mass democracy with post-Industrial Revolution social conditions. Although

information technology will undercut authoritarian regimes, the widespread notion that democratization is a cure-all for the world's ills is unfounded. The wars in Yugoslavia, the current predicament of Russia, and other problems with abrupt democratization provide evidence to support this theory. Lacking certain prerequisites such as a vigorous middle class, many countries quickly degenerate into "hybrid regimes"—oligarchies operating behind the façade of democracy. A gradual transition from authoritarianism to representative governments would help solidify popular support for democracy based upon growing public participation, market economies, and rule of law. More likely, however, in the years just ahead will be the emergence of greater numbers of regimes lacking the political, legal, and economic requisites for democracy. Such regimes will face conditions in which ethnic conflict, lawlessness, civil strife, terrorism, and political fragmentation will be rampant.

The proliferation of WMD and delivery systems will place frightening new weapons in the hands of rogue states and non-state antagonists, allowing them to confront the United States with asymmetric means. Unable to challenge directly the overwhelming military power of the United States, hostile actors will make use of such capabilities. The spread of information technology, expertise, and the ability to procure WMD will permit a broader range of actors to possess such weapons.

The primary threats to U.S. interests will take two forms. First, North America is increasingly vulnerable both to missile attack and to terrorist action. While the probability of WMD strikes remains low, they directly threaten vital U.S. interests—the security of the United States itself. Second, WMD-equipped actors could target American forces or those of allies. The fear of such attacks could either deter U.S. intervention or intimidate allies into opting out of future coalitions. More disturbing, accelerating technological change will contribute to the complexity of the future security environment. The proliferation of information technology will link people as never before, while providing a new basis for empowerment. The outgrowth of this process is increasingly a set of "distributed global competitors," state and non-state actors scattered around the world but linked electronically via the Internet and other means. Preparing to counter such asymmetric strategies is critical to U.S. defense strategy in the 21st century. Defense planners must maintain conventional power, measured in numbers of personnel and military hardware, even as they maximize benefits from the Revolution in Military Affairs (RMA) and develop measures to counter and otherwise cope with asymmetric warfare. The Armed Services must remain engaged in the "right-sizing" of forces, based on the appropriate mix between traditional military equipment and new systems spawned by the ongoing RMA.

Domestic politics, particularly public expectations of casualty-free warfare, will be a major limiting factor on America's engagement in the world and possibly undercut U.S. staying power in potential conflict flashpoints. Such a preoccupation on our part will give added incentive to those who seek to preclude or limit U.S. intervention by threatening or actually inflicting casualties on our forces. The countervailing and conflicting requirements of U.S. global strategy and the persistence of a strategic culture that contains minimal tolerance for casualties will produce a growing dilemma for the United States as a 21st century superpower. It will therefore be especially important for policy makers to muster broad public support for U.S. national security strategy.

Another issue that must be addressed more effectively is the over-extension of our Armed Forces. The cumulative effect of the numerous small-scale contingency operations and of accompanying high operational tempo on our military personnel has adversely affected retention

and recruiting. Equipment shortages in Operation ALLIED FORCE in 1999, including cruise missiles and electronic-warfare aircraft, were ominous signs. Moreover, the willingness and ability of allies to reduce the military burden on the United States remain in serious doubt. Despite disparities between U.S. and European military capabilities dramatized by the Kosovo campaign, there is scant evidence that NATO European countries will boost their defense budgets to redress this imbalance. The United States will likely continue to shoulder the bulk of the military burden on behalf of the international community, but this must change if we are to meet our many commitments.

Transcript

Pfaltzgraff: There are of course several key challenges that come immediately to mind as we think about the international security landscape of the early years and decades of the 21st century. The first would be the eventual rise of other great powers or what are termed near peer competitors. Secondly, the collapse of states and the greater incidents of intrastate conflict. Thirdly, weapons of mass destruction and their ongoing proliferation. Fourthly, the dynamics of the domestic setting in the United States, which also shapes the landscape within which we operate. And finally in this all too short list, information warfare including cyber terrorism, of course, as well as other forms of terrorism.

In order to set the stage for understanding these and other challenges and their implications, we have here an outstanding panel which has a great deal of diversity of perspective on it. Let me mention that Senator Warner has been delayed and expects to be here by—Oh, there he is. Senator, welcome. Then Senator Warner is with us. Wonderful. We will go in the order in which we had planned then.

First, we have Senator Warner who is Chairman of the Senate Armed Services Committee and has served in the United States Senate since 1978. Among his many previous appointments, which I will not list here, many of them I listed in the program, I should only point out that he was Under Secretary of the Navy and subsequently Secretary of the Navy.

Next on the panel, we will hear from Lieutenant General Patrick M. Hughes. He is presently President of PMH Enterprises, which is a consulting firm. Previously he served as director of the Defense Intelligence Agency between 1996 and 1999, and held many other important appointments as he rose through the ranks of the U.S. Army.

Thirdly, we will have a presentation by Robert A. Kaplan who is correspondent for the *Atlantic Monthly* and is the author of seven excellent best-selling books, including *Balkan Ghosts* and most recently *Ends of the Earth*. And I might add he is about to publish another book which is called *The Coming Anarchy*, which is a collection of essays that he has written. Mr. Kaplan's articles have appeared in many places, including the *New York Times*, the *Wall Street Journal*, the *Washington Post*, and the *Boston Globe*.

Finally as our panel member this morning, we have Dr. Richard A. Falkenrath who is presently Assistant Professor of Public Policy at the John F. Kennedy School of Government at Harvard University. He is the author or co-author of several books and many journal articles. His most recent book is *America's Achilles' Heel: Nuclear, Biological, Chemical Terrorism and Covert Attack*.

So with that outstanding panel, we turn first to Senator Warner for his presentation. Senator, welcome.

Warner: I'm caught between votes, as we say. First, in my lapel is a little indication I voted today in Virginia. And I left that on for this reason. To me it's symbolic of why we're here. I was able to cast that vote this morning because of successive generations of men and women of the Armed Forces of the United States who historically have saved this great republic of ours in its 210-year-plus existence. I never forget that. I also never forget that twice I was given the opportunity, first in the closing days of World War II at age 17 and then during the Korean War, to proudly wear the uniform of the United States.

My service in both of those periods was very insignificant. But nevertheless, it gave me an insight into the life of the person that serves in uniform. And whatever I have done in 21 years on the Armed Services Committee, and now as privileged to be the Chairman, is to try and give to this current generation and future generations of young men and women in all the uniforms the opportunities that I and others had and, indeed, where I can, either openly or surreptitiously, even more. And this year we were able to achieve the first positive incremental change in funding in 14 consecutive years of declining defense budgets. We were able to get roughly $8 billion into the overall defense budget over and above inflation.

Senator John Warner (R–Va.) questions whether Americans, enamored of technology, have the "staying power" when committed to an operation that entails significant casualties.

But that didn't come by accident. Many participated. I, but one. I want to credit the Chairman and the members of the Joint Chiefs who on two occasions came before my committee. And exercising the special prerogative that we have, namely that, yes, you'll give your name, rank, and serial number and you will also give us your program and what the Secretary of Defense and the President have instructed as the policy, but you'll give us your personal opinion. And every one of those individuals, beginning in September a year ago and again in January in two successive meetings and innumerable private consultations, those chiefs boldly and bravely told me and my colleagues on the committee "we need added funds here, here, here, here," and gave us the explicit numbers.

When the administration was confronted with that, suddenly the train began to leave the station towards additional defense spending. Then I had the task as Chairman to figure out what was the engine that was going to pull that train through the perilous valleys and passes and, indeed, over the mountain to make it law. And we coupled on as the engine the pay raise. And therein we had the votes, and that train did come into the station and was a

very strong piece of legislation increasing the long overdue benefits, both in pay, retirement, and otherwise.

Second point I wish to make today. Again, I draw a little on my very modest association with the active military. I went down to Quantico Friday night, just three or four nights ago, to address the 50th reunion of my basic class. We had about 170 that turned up. And the theme of my remarks was the last war. Not the forgotten war in which a number of us participated in Korea, but the last war, being Kosovo. That operation, while it extended longer than we anticipated, nevertheless was casualty free in terms of combat losses.

Two airmen, brave airmen, were rescued by heroic circumstances. We did lose a number of individuals in the work-up, the training, and the preparatory action to go in. But America only remembers the last war. And now the consciousness across this country and indeed in the Congress of the United States is: if we do it again, we can expect a comparable situation. And my classmates and I sat there and were reminded of the forgotten war in Korea when over 50,000 lost their lives and there remain today seven or eight thousand unaccounted for and missing. America has forgotten that. America now thinks that with modern technology we can achieve everything.

America is basically asleep with regard to the precarious situation on the Korean peninsula where our group, most of them, went 50 years ago. And that situation could erupt on a moment's notice. And within 72 hours, it could be up to 10,000 casualties, military and civilian, right along that precarious dividing line between North and South Korea. And then I posed the question how would America react to that situation? Is there the staying power in this nation? Is there the staying power to see it through?

I spoke on the floor of the Senate this past week along with many others on behalf of my dearest friend, John Chaffee. John and I, this November, would mark the 30-year period where we have been partners. It was 30 years ago that Melvin Laird, then Secretary of Defense, put together his team: Chaffee as Secretary of the Navy, I as Undersecretary. And we went into that situation in the peak of—that is 1969, we finally took up our duties in the Pentagon—the peak of the war in Vietnam.

I can recall, and I reviewed this with Secretary Laird as we went back and forth to the historic funeral on Saturday, some of the details of that precarious period in the spring of '69. And when one day, it was a Saturday, he called down to Chaffee and me and said, "You guys get down to the Mall, take a look, and come back and tell me what you saw." We quickly recognized that in our blue suits and ties that would not work out. We put on some old khakis, some tennis shoes, got an old vehicle, and drove to the Mall.

And there John Chaffee and I witnessed a sight we never have forgotten. Over 1 million young men and women were demonstrating, largely peacefully, but nevertheless demonstrating against what they thought was a war that was totally inequitable to their interest and to their generation. And I remember as we drove back in the car, Chaffee reminisced with me about his days on Guadalcanal as a rifleman, as the platoon leader at Okinawa, indeed a company commander in Korea. And he said in all of those instances when we kind of hit bottom, and we all did hit bottom, we thought of the folks back home and how they stood so solidly behind us in the prosecution of those conflicts and the risks we individually and collectively were taking.

We went in and we talked with Secretary of Defense Laird at great length. Laird had been in World War II as a sailor. He was wounded at Okinawa. He was an officer aboard a destroyer. So these men had seen it. These men understood our United States. And this is the thought that

haunts me today: what is the staying power if, once again, we're committed where we've got to take significant casualties? And I'll close with one other observation just to throw out ideas I hope are discussed.

Last night I visited with the new General Secretary of NATO, Robertson, who did a wonderful job during the Kosovo action. He worked in very close partnership with Bill Cohen. I worked with him throughout that conflict. And on the occasion of the 50th anniversary of NATO here in Washington, the last thing they did was to introduce and sign and promulgate the new strategic concept for NATO. It's written as well, I suppose, as craftsmen can to disguise what it is they really want to do. But NATO grew up on the concept of Article V that an attack on one is an attack on all and we will be there like a band of brothers to defend whichever nation befalls that attack.

But this new concept lays the foundation to go beyond the geographic area of the 19 nations. Much like we did in Kosovo. And we've got to come back to the central question first as military people, if you've got a plan to defend your 19 nations and your strategic plans are laid out and you've got this much lift and you've got this much transport, be it ground, sea, or air, then what happens when you hold your original 19-nation strategic plan in place while you lift part of those forces and you go elsewhere?

And we saw it in this Kosovar operation where the United States supported 70 percent of the lift, 50 percent of the tactical mission, and much of the strategic guided missiles. And the other nations, seven of them that actually got into the combat with this, simply did not have in number commensurate with ours those assets. And I do not see on the horizon, as I told the Secretary General last night, the plans in place for those nations to begin to acquire the equipment to pull a load comparable, proportionate, to ours should another conflict hit NATO and particularly if it should be out of area. I've taken more of my time than I should. I thank you very much.

Hughes: Good morning. My presentation is dependent on visual cues. So if you'll bring up the viewgraphs, please, I would appreciate it. Next viewgraph, please. The trends as I see them now do not fit our traditional context. Change has occurred, as you know, and you've lived through it and that certainly will continue. Next viewgraph. My personal view is this is one way to characterize it. No bear, but many snakes. We have a new era in front of us. I would like to refer to it as the technology information or "techno-info" era in which great uncertainty abounds.

And one of the key points I need to make to this audience today is, in my view as one of your senior intelligence officers, capability does not match the threat. In some cases, it doesn't match because there's greater than the threat requires. And in some cases, it doesn't match because it is inadequate to meet the needs of the future. Next.

What we have now, in my view, was essentially put in place in terms of its design 20 years ago and much of it was built 10 or more years ago. So my message to you today is we are behind. And not only technology and application, but if you look forward to the future, we are behind the state of the art by two technical generations at least. Next.

There's some good news and some bad news here. Our enemies are essentially in the same circumstances. Or potential enemies. The bad news is they are not standing still. And very selectively within their economic abilities and circumstantially, they are seeking technologies and capabilities which will give them some circumstantial advantage. Next.

The technology trends are listed here. It would take too long in this forum to discuss each one, but I would like to just mention the first: micro-technologies or nano-technologies, which are sub-micro. And the effect of that has been, as you know, that everything that was large and heavy and slow could now be made small and light and fast. And that change alone has literally revolutionized our circumstances. If you take all of these other technology trends and add them together, they are collectively impacting not only on the United States but on the entire global condition. Next.

One example of this trend line which I think you will agree has been well publicized is the interaction between the nations on this viewgraph, the technology transfer that has occurred, and the resulting strategic, operational, and, indeed, tactical threats that have resulted because of that. And the Korean Peninsula, as the Senator mentioned, is one good example of that where we are now immediately vulnerable from intra-theater and tactical missiles from North Korea which, conceivably, would be tipped with weapons of mass destruction. That circumstance alone ought to send alarm bells not only through our community, but through our social order. Next.

My personal view, and this is my view, is that we have about eight to 10 years before the next wave of challenges and threatening conditions emerge which will threaten our vital national interest and our homeland. In the meantime of course, we have "lesser included" problems to deal with. Next.

What does this mean? Well, it means, and I know I'm speaking to the choir here, we must change and we must modernize and we must indeed adapt to the future. Next.

My personal view is the U.S. has no true peer competitor now. However, we may have one in the future. My guess is that it will probably be an alliance or an amalgamation or group which will seize the day for some reason and oppose us selectively and circumstantially in a way that will threaten us in vital terms. Next.

What's missing right now is a problem for us. Because it is very difficult to portray the future without imagining it. And we don't have the current threat we used to depend upon to posture our forces against so that every person, citizen, leader, and military professional could clearly understand. Next.

However, we need to point out to everyone that many dangerous conditions persist. And indeed, since we are the global power and since we are depended upon, once again I'll refer to Senator Warner's comments, as the country capable of projecting power against enemies, large and small, we are indeed looked to to answer the needs of the future. And major powers, indeed there are a number of them, are important, but they're not our only concern. Next.

Our future, as you know, will include involvement in many different circumstances, some of which will be because we could not ignore them or could not abide them. Next.

The future in my view is conditional and circumstantial. And this is a non-traditional answer to give for we involve ourselves. It depends. It depends a lot on politics, circumstances, and conditions. And sometimes it depends on economic determinism. For whatever reasons when we become involved, we have to meet the need. Next.

There are key reasons for conflict and these reasons, by the way, do not lend themselves to being solved by the application merely of military force alone. And that's a key point I would like to pass along to you. As important as our community is, as vital as it is to the protection of the United States and our security interests around the world, we are not in this game alone. All the elements of national power and international power have to be brought to bear to succeed. Next.

There are important ongoing problems. You know all of these very well. I will mention the last one as something that has given us difficulties in understanding and dealing with. Because criminal activities are now melding into national security concerns. Indeed in the case of the national drug problem, you can see it right before your eyes today. I think this will come to be more important in the future as criminal activities tend toward more involvement, greater impact on issues of national security. Next.

Proliferation is a significant problem of weapons of mass destruction and of conventional capabilities which are directly threatening to us. Next.

The emerging threats are the ones that I need to communicate directly to you today as something we'll have to focus on. We cannot discount the rise of alliances. Indeed history is filled with examples of individual nations, taken separately, who we did not view as a vital threat, but when they assembled together and used their collective force and power against our interest, they were indeed more than we anticipated. Next.

The emerging global security environment is extremely complex. All of it, taken together, is leading us toward a very uncertain future. And I know that's a problem, especially for the military professionals and the civilian leaders in this room to try to quantify and describe to others so that they can understand it. Suffice to say if each of these topical areas could be expanded upon and discussed among you, perhaps you might find at least the beginning of the pathway toward the future. Next.

The changing nature of warfare is also critical especially to the U.S. Army. Asynchronous and asymmetric conditions abound. There are indeed some notable exceptions. And, once again, Senator Warner touched on the issues of the Korean Peninsula which would indeed, if conflict occurred there, be very time sensitive, immediate, and would be very symmetric to the conditions on that peninsula. Small territory, relatively short time lines, large capable conventional and unconventional forces arrayed linearly and postured for immediate conflict. Next.

The U.S. is vulnerable to many conditions, but one that I want to highlight is that we are vulnerable to the idea of simultaneous occurrences causing large war effect. Indeed, some of you are literally tired because you have worked through so many of these lesser included conflicts. You have worked yourselves into near exhaustion. And I use the metaphor here being nibbled to death by ducks. And indeed, I think it's a worthy example of what can and perhaps has begun to happen to us. Next.

Should we be more like police and less like big war warriors? Not in my view. We have to keep our eye on the ball. The reason we exist is big war. But we have to somehow compose ourselves to be adaptable. Next.

This viewgraph is somewhat complex, but gives you the idea that we're going to move from regional competitors, in part because of changing conditions and in part from the effect of technology, toward a set of distributed global competitors which are going to be more difficult to deal with than the small regional issues have been in the past. Next.

These categories of conflict I think you know very well. I'll just say that we find ourselves often in the lower left hand corner of this viewgraph, in the non-traditional application of military power toward peacekeeping, nation building, operations other than war, and the kind of circumstances that we have not trained, equipped, or even conceived of doing in the past. Next.

The questions now are will these conditions persist? And my view is, yes, they will. However, the future is going to be extremely complex and we cannot lose sight of the big war possibility which is indeed our reason for existing. Next.

The future is elusive indeed. Reality is much different from what one might be able to imagine. And the key is that imagination. I would urge everyone in this audience to try to bring out of your imagination the possibilities and use those instead of what you see immediately before you. Next.

The possibilities we can't ignore are listed here and I would just point to the bottom one as perhaps the most important. We have long postured ourselves against two major theater wars or major regional contingencies. My view is there could be more, and the idea of simultaneous occurrences of two or more events should be an operational concept we attend to in our planning and conceptualizing for the future. Next.

The future course indeed is different. There has been a blurring of distinctions. The general can talk to the private through automation and telecommunications. And even worse, the private can talk to the general and the general may answer the private. And this has radically changed our condition. Next.

This means we have to take a different approach. Indeed, in part it's a mechanism of the application of force and in part the mere administration of our Army and our military. Next.

The future force cannot completely overcome the need for physical power merely by information dominance. We have to find the right balance. Next.

And the issue of finding that balance is rightsizing somehow. My view is that that should be an adaptable, modular course which I believe the Chief of Staff and the Vice Chief of Staff and their team have put forward now and that's what they're about and working on. And I think they're on the right track. Next.

A way to approach this is to try to decide on function—what it is you expect the Army and the American military to do—and then, and only then, devise the form. Next.

Imagining and conceptualizing the threat is what this is all about. And a place to start is to imagine the consequences of a variety of events that we can all postulate. Next.

Indeed, consequence management in my view is perhaps the critical task of the future. To somehow come to grips with the emerging potential for conflict, deter it, prevent it, solve it, intercept it, interdict it, and, if we have to, fight and win it quickly. Next.

The threats in my view are conditional and circumstantial as I told you. Everything is very unclear. Next.

I believe that most of the conflicts we're likely to be involved in will be short, relatively, and will be relatively small. Peacekeeping is an example of the alternative. It will be along and, on occasion or collectively, our peacekeeping forces will be broad in scope and mission. Next.

Weapons of mass destruction, in my view, must be anticipated not because, that's such a blinding flash of the obvious, but because they exist and there are people who will use them. Next.

The impending changes forged by technology in these new circumstances are going to affect everything. In fact, they already have. I hope some of them will be positive and there will be less war. Next.

These critical uncertainties, however, are facing us now and some of them are very difficult to deal with, like shifts in regional power and unconventional warfare trends. Next.

The critical uncertainties also include these things that we cannot control. In some cases, acts of men. In some cases, acts of God. Next.

I do think there are many positive trends and the main one is we have a community of nations that does seem to work together. Some would wish that it were more successful at times, but you cannot deny that it's there. Next.

New technology is changing things and will continue to change everything. Much of that change can indeed be positive. But I need to point out that dual use circumstances for the very best, the most noble purpose, can indeed be used as a weapon against not only people, but against the social institutions that bind the fabric of our global condition together. Next.

My conclusions are: we've got a lot of competitors out there and more will arise. The world community is going to continue to struggle with the problems you see on this viewgraph and you know so well. Next.

The bottom lines are I see general instability on the horizon, but I see every good reason to believe we can control most of it. However, we must start now to prepare for that eight to 10 year out emergence of some kind of alliance or coalition which will present a true threat to our vital national interest. Next.

The dangers remain. The Army's very important because the Army brings with it the infrastructure to produce staying power and it is the sustaining combat force on the land. Next.

I like this quote. As an intelligence officer serving in the Army and in the joint community for many years, I was always hoping to deliver certainty. I never could. Thank you very much.

Kaplan: Thank you very much, General Hughes. Good morning. If I was standing before you a hundred years ago and trying to talk about the threats of the 20th century coming out of the 19th century, it would be very difficult for me to do so because three words did not exist in any dictionary a hundred years ago: totalitarianism, fascism, and inflation. The point is, the problems and evils of the next century may not even have names yet. Nevertheless, the only respectable futurology is the study of history. So we've got to try to look at the past to try to get some sort of a model about what's going to happen so we will be somewhat less surprised.

And I think the best concept on this was written by Arnold Toynbee in his study of history in the early part of the 20th century. Toynbee defined then that the basic problems, the basic political and military instability, of the 20th century came from the way that mass movements or democratization in Europe or Japan chain-reacted with the Industrial Revolution to form fascism in Italy, the Nazi movement in Germany, militarism in Japan. Because remember, Hitler, Mussolini, the Nazi party, the fascist party in Italy, these started out as democratic workers' movements on a street level. It was impossible to predict how exactly they would evolve. And yet none of these leaders, Tojo, Hitler, and Mussolini, could have become what they were without the Industrial Revolution as a backdrop. Railroads, telegraphs, ships, tanks, aircraft carriers.

So using that as an example, I would say that the biggest challenge we face is the way that mass democratization in one form or another, not through Europe, but throughout the world now, will chain react with the post-Industrial Revolution to produce new kinds of evils and new forms of instabilities.

Now let me talk first about the problems of democracy and then about the differences between the Industrial Revolution and the post-Industrial Revolution because that is key because the problems that we're going to face in the next decade or so are going to be different than the ones we faced in the 20th century.

The problem is that democracy and technology are both value neutral. They don't necessarily make a country or a society better or worse. It depends upon the circumstances in which they evolve and are applied. And the problem with democracy is that it tends to work best when

it's instituted last. When you already have a society in which you have a sizable middle class that pays its income taxes, when you have workable institutions manned by bureaucrats whose families have been literate for two or three generations, when the big problems and issues of a society have already been agreed upon, like where the borders are, what ethnic group, if any, controls what territory. When these things are agreed upon and in place, then you could afford to have weak new democratic governments with minority parties in control in the parliament who can argue about things that are considered by the media as primary issues, but in fact are secondary issues. Like the budget and things like that. But the problem is that throughout the world now, societies are democratizing where none of these prerequisites are in place. And just some examples.

Robert Kaplan asserts that democratization is a destabilizing force that will create problems for the American security establishment and for many peoples around the world.

A few decades from now, somebody's going to write the history of the wars of the Yugoslav secession in the 1990s. And one of the concepts that that historian is going to say is they were a consequence of democratization. The breakdown of an authoritarian system in which elections in each republic, either brought to power or legitimized in power, politicians who pursued an ethnically based policy of one sort or another.

Rwanda was a case where the democratization of the society with the formation of a cabinet and political parties fast-forwarded the movement towards genocide. And that is because in societies, and see them throughout the world, where 94 percent or 98 percent of the population are peasants, people have no way to divide up their vote by class or economic interest like we have. So they can only divide up their vote by ethnicity or territory. So that political parties in all of these places merely harden already existent ethnic tensions.

Algeria, another example. Exploded into civil war after an election. Tunisia. A place that has been quiescent, where our fleet can land, because the only elections that are held there are fixed elections. Armenia and Azerbaijan. Two societies who brought democratic leaders to power and promptly got their countries into a major war in the early 1990s. Venezuela. A country that has been democratic since 1959 and has almost nothing to show for it. Gate communities, private security police everywhere, and an elite that has all of its money in Miami bank accounts.

On the other extreme is Chile. A country which had a very lethal military dictatorship in the 1970s but is now the most developed economy in Latin American. In other words, it's not

that democracy is bad or not desirable, it's that it's not going to make societies and, therefore, the world more stable. And probably the best example is China and Russia.

Russia is the way it is directly because it went cold turkey from a totalitarian system to a democratic system. It became a perfect petri dish for the manipulation by disease germs like organized crime groups. Had Russia had the advantage of having several more years of Gorbachev's capitalist trending authoritarianism, it would probably be a much more stable and prosperous place right now.

China is the way it is. A country that in the last 17 years has seen a more dramatic improvement in economic and personal freedoms for more people than ever before in recorded history precisely because it has remained an autocracy. Had China gone democratic with only 10 percent of its population middle class and with ethnic disputes throughout the western and southwestern part of the country, China would probably be much less stable now, much more dangerous now, and the average Chinese would not have all the personal freedoms that they have.

All right, here's the real problem with the world we're facing. Societies are not more stable because they hold elections or they don't. Societies are more stable when they have a sizable middle class. But 90 percent of the world's births are in the poorest countries or in the poorest sectors of society in wealthier countries. So while middle classes are increasing in absolute numbers around the world, in relative terms, they are getting thinner and thinner and thinner.

So what we will see, I believe, in the next decade or so is the continued emergence of what I call hybrid regimes. Mixed regimes that go by the name of democracy and all of our elected officials go along with the lie for diplomatic reasons, but behind the scenes they're governed by military, security, and oligarchic business elites. Peru is an example of that. Jordan, Turkey, in one form or another, Bulgaria and South Africa increasingly. And I was going to say Pakistan until a few weeks ago where democracy had a mercy killing.

Let me say a word about Pakistan. I've been to Pakistan 11 times. What happened two weeks ago was actually the best possible outcome. Because had the system gone on longer than it did, you probably would have seen a coup by the Islamic Jihad. A very ruthless religious group which has huge support throughout the country. Or you would have seen a less able lower level officer take power. As it happens, the person who took power, though the media didn't report this, he's a Turkophile. He speaks fluent Turkish, Pervez Musharraf, and his role model is Mustafa Kemal Atatürk. And given Pakistan's situation, Atatürk is a much more useable and practical role model than Thomas Jefferson, for example.

You define a system not by what it calls itself—all these places are going to call themselves democracies—but by the way the power relationships actually work behind the scenes.

A word about the Middle East. The peace process is meaningless in terms of thinking about the next 20 years. There has been a *de facto* independent Palestinian state existing on the ground since December 1987 when the *intifada* started and groups of Israelis felt unsafe and insecure traveling through the West Bank and Gaza. They'll go trekking in Nepal, but they won't go to Ram Allah. The peace process tells us what we already know. It's not going to change anything on the ground.

What is really going to change in the Middle East is that for the last five decades, you've seen great social and economic change—urbanization, development of middle classes, etc. But you've seen very little political change. You still have more or less the same one man

"thugocracies" in power from Morocco to Iraq as you had in the 1950s. Eventually though, as this generation of dictators pass from the scene, political change is going to accompany economic change.

And what you're going to see across the swath of the Middle East are many messy Mexico style scenarios. Where instead of one autocrat to deal with in terms of getting a peace settlement or dealing with terrorists, you're going to have 40 or 50 lower level officers, corrupt politicians, all that are going to be convinced. Because you will have some messy, disease variant form of democratization in all of these places. And that will only make the Middle East more unstable, more dangerous to deal with.

All right. So you can see the problems with democratization. It's a concept we like in the abstract, but in reality, it will only make more problems for the American security establishment and for many peoples around the world.

Now about technology. As the previous speaker alluded to, the Industrial Revolution was about bigness. It was about big aircraft carriers, big tanks, railroads, big this, big that. You needed to own geographical space in order to take advantage of the things that the Industrial Revolution offered. So it was perfectly conducive to great centralization of power. And because there will always be a small minority of states that will have bad or evil leaders, it allowed evil leaders to have a concentration of power never before seen in history. So you had phenomena like Hitler and Stalin.

But the post–Industrial Revolution is about the defeat of matter, it's about smallness. It's people who do not own geographical space, who have been the losers in various fights for territory, [but] can also take advantage of what the post–Industrial Revolution has to offer.

And because of the spread of computers and the Internet, we're seeing this spread and diffusion of knowledge. And whenever knowledge spreads, you also get the vulgarization of knowledge. Meaning knowledge, technical ability, all sorts of facts and useable information is put into the hands of millions of badly educated people. And if we've learned anything from history, it's that well educated people don't cause disasters, uneducated people don't cause disasters. It's badly educated people. Half-formed men and women. Like Mengistu Haile Mariam in Ethiopia or Hitler and Stalin, others. People who have had some smattering of an education and then get big ideas into their heads. We should be trembling at the information that's going into the hands of people who can't handle it.

People say the computer's going to bring us all together, it's going to liberate the world. People said this after Gutenberg's Bible. And Gutenberg's Bible, moveable print, led directly to the religious wars. So again, all of this chain reacting with democratization, you can see how this can make for a world of more subtle evils, crime groups, terror groups. And I think more kidnapping is going to be a growth industry, I believe.

In terms of the military, we've heard a lot in the media about "spies are now *passé*." That after the Cold War we don't need intelligent agencies. I think the greatest spies are just being born now. I think the 21st century will constitute the golden age of intelligence. And that is for several reasons. Technology is going to make vast amounts of information that people in security services will have to analyze. It will provide all new avenues for spying and for counterintelligence, too.

And as I just said, because of the way democracy is going to chain-react with technology, you're going to have breakdown in a lot of places where we're going to need to know intention, human intention. What these guys are going to do with these weapons. What's in their minds?

And there will be no substitute for human intelligence for that. We're going to see as we've heard this morning—

Note: Approximately 10 seconds of the transcript is missing in this location due to an inaudible segment on the conference proceeding audiotapes.

Kaplan:—effectively by Western corporations than by exporting elections. And a perfect example of this is the former Eastern Europe. Places like Rumania, Bulgaria. Where there has been no drop in corruption in politics in the last few years. But it is Western companies in Bucharest, in Sofia, who are exporting to their employees new ways of thinking, new ways of doing things along a Western model. I think the political organizing principle of this new emerging world is going to be the city-state. I think we've always had great cities throughout human history, but nations are more or less a phenomenon of only two or three hundred years.

I think if you look at a map of China, you could easily see it subtly dividing up according to a number of vast urban regions. In such a world, what can be foreseen is only what changes gradually or not at all. So we're going to increasingly use things like climate, resource, space, culture, and historical patterns to provide some sort of framework, to be less surprised about what's likely to come up.

Let me use the quick example of China. China's environment: 66 percent of the Chinese population lives in flood zones. China only has one-fifth as much water per person per capita as the average person in other countries. China has built more dams to control floods, but these dams are poorly maintained. And 70 percent of the industrial output are currently in flood zones protected by dams. So increasingly, China's leaders are going to have a wider and wider margin for error and a narrower and narrower margin of success. It's going to be harder and harder to be a leader in a developing country in future years.

Two last things. One is that the U.N. is not going to grow in power. The U.N. is only important and powerful in the poorest countries in the world. In countries that basically have no power. The biggest increasing influence on most developing countries is going to be corporations and financial markets. And that's for a specific reason. Because if you're Nelson Mandela, if you're Pervez Musharraf in Pakistan, you have only one thing to think about ultimately. That is how do I make my geographical space conducive so that outsiders will come in, invest in the country, build factories, soak up some of that high 30 percent youth unemployment which is what makes my country so unstable and so poor to begin with. So increasingly, leaders throughout the developing world are going to have their domestic policies driven by what global corporations want.

And finally, one last thing before I use up my time. That is the only way to avoid tragedy is to cultivate a sense of it. Only if you constantly think in tragic terms is it possible to avoid these things. That was the problem with World War I. You had political leaders in England, France, and elsewhere who had just come off several decades of prosperity, of rising economic growth rates, 5, 6 percent a year in many countries, of peace for several decades. Remember, in 19th century Europe, except for the Franco-Prussian War which lasted only nine months, between Napoleon's fall and the outbreak of World War I, there was no real major conflagration.

So leaders in England, America, France, elsewhere lost their sense of the tragic and that is why they blundered into World War I.

Thank you very much.

Falkenrath: Good morning. I'm honored to be among you. First of all, we have such a broad scope in this panel that I had to make a decision to narrow it down somehow. So I'm going to focus on just one aspect of the issues raised in the previous two speakers and that's weapons of mass destruction. First slide, please.

I'm going to start by giving you a very brief overview of the problem. It's familiar to many of you, so I'll move quickly. Second, even though everyone agrees weapons of mass destruction rank among the foremost threats to U.S. national security interests, I still think it's useful to review why that's so. We sometimes forget and internalize it, that we don't forget on the reasons we care. But I'll be brief. I will though spend a little bit more time focusing on what I think are the two most important reasons why we care about weapons of mass destruction and that's power projection and the homeland. Those are of course related. Now given the scope of this panel and that we have the whole conference in front of us, I'm only going to talk about threat. I'm not going to get into issues of response although perhaps that will come up in the discussion. Next slide, please.

Richard Falkenrath, Assistant Professor of Public Policy, John F. Kennedy School of Government, Harvard University, asserts that biological weapons pose "the single greatest threat variable and greatest long-term danger to the U.S."

Obviously, there's three kinds of weapons that we worry about: nuclear, biological, and chemical. Next slide, please. We also worry about ballistic missiles. A few basic points about these. I don't want to spend a lot of time on it. But first, that these are technologies. They are a permanent fixture of the international system. They cannot be done away with by diplomacy. They're also growing increasingly accessible. There's no question that there is an accelerating diffusion of destructive power. And that relates to the dissemination of these technologies and also, importantly, to progress. To the fact that people are smarter. The information systems are more efficient. People are richer.

So despite all of our non-proliferation efforts, which I support, we essentially have an inexorable trend towards increasing accessibility of mass destruction technologies. Now of these, I think the single greatest threat variable and the greatest long-term danger comes from biological weapons. Which are, perhaps, the least understood. Our military and domestic preparedness for biological weapons use is quite poor and we've got an ongoing, accelerating biological sciences and technology revolution. It started with the identification of the double helix in 1954 and now is a booming sector of the economy.

To make a few points about biological weapons. Just pause to think about that part of the problem. First is we've got very little experience with the real destructive power of biological weapons because they've essentially never been used. There's basically one incident where a biological weapons aerosol was released against a civilian population. And that happened in the Soviet Union in 1979, the Soviet city of Sverdlosk. And the lessons of that are instructive. Sixty-nine people died out a cone of about four kilometers in length. And then livestock continued to die out for another 40 kilometers. But the amount released in that accident was somewhere between a few milligrams and a gram. So an extremely small amount of anthrax bacteria accidentally released, not trying to kill someone, had that sort of effect. And think in your minds what happens if you're talking about not a few milligrams, but a few grams or even a kilogram and you multiply that out and you add intent. You're talking about an extremely destructive weapon. Biological weapons are diseases. They're disease-causing pathogens that are invisible, odorless, and tasteless when suspended in the air, and their effects are delayed. This combination of factors makes them the ideal terrorist weapon.

Now from history, we know the incredible destructive power of biological weapons. They occur naturally. This is plague, these are diseases. The Spanish flu epidemic of 1918 killed 20 million people. Twenty million people in a few months. The single biggest demographic event in human history. The discovery of the New World and the introduction of Old World diseases into the New World killed off some 60 to 90 percent of the Native American population over a course of a few centuries. So we've obviously got a huge problem here. It's a huge vulnerability here. Put it that way.

Now I ask you to reflect on a very simple question. Why has biological weapons use been so rare in history? Can you think of any other technology that has not been put to offensive military purpose soon after its introduction? Think of steel, think of internal combustion engine, think of the aircraft, think of guns, TNT. What's different about biological weapons that make them so rare? What is it that makes their use so infrequent and what's stopping people from using them? Because it's clear they have not been stopped by their inability to cause these acts. The technology is relatively simple and is clearly within the ambit of most states. So I ask you to reflect on that.

And also, I wish to make note of something Senator Lieberman said when he talked about our diminishing R&D budgets. I would say in no area is it more serious than in the biosciences. So this is a simple but disturbing idea. Which [is] it's possible that our greatest vulnerability as a society comes not from our military vulnerability, but from our epidemiological or immunological vulnerability. All right, next slide. I apologize for the poor resolution.

This just shows you who's got these weapons right now. At least who we think has them. And as you can see, they're quite widely held. They're all over the world. And importantly, they're held by most of the countries that we think it's likely we will get into some conflict with. Now this estimate is based on unclassified estimates. What a program means varies a lot. So the Russian biological weapons program is not clearly the same as the North Korean biological weapons program. But nonetheless, this gives you a picture. This is a real problem. This is not fiction. It's not a fantasy. And it's something that we need to take very seriously.

This chart does not talk about non-state actors, terrorist groups. And we now know that this is part of the problem that we have to worry about very seriously. There's been one incident where nerve gas was used in the Tokyo subway and another incident where we sus-

pect Osama bin Laden was seeking to acquire chemical weapons. So we cannot rule out the non-state threat. And I think Mr. Kaplan's point on this, on power no longer being based solely on the possession of geographic space, is exactly right. Now, next slide.

As I said, virtually everyone agrees weapons of mass destruction rank among our top threats to our most vital interests. Let me just review why. The first is power projection. Given our great military power, the United States, I'm talking about here WMD, the most likely means by which an adversary could disrupt our military operations. I'll return to this issue.

Second, the homeland. Given our geography, which is incredibly fortunate historical circumstances, essentially weapons of mass destruction are the only means, I think, by which an adversary could cause significant destruction in the American homeland. Which of course is our most vital interest. And here we're talking about ballistic missile threats and we're talking about covert delivery of terrorism.

Dr. Falkenrath: the big threat that weapons of mass destruction pose to U.S. power projection is neither casualties or expense, but their potential to deter crucial allies and even the U.S.

Third, the problem states. Virtually every state in the international system that we have a problem with, we also have a problem with their weapons of mass destruction programs. This issue suffuses our diplomacy and our foreign policy with every other nation we've got issues with. Consider China, Russia, Pakistan, Iran, Iraq, North Korea, Libya, Syria. Not only are the weapons of mass destruction capabilities of these states part of the threat these nations pose to us, they also complicate our ability to achieve other objectives. And for those of you who haven't seen it, I urge you to look at the report by Bill Harry on North Korea, which makes this absolutely clear.

Finally, regional instability and the destructiveness of war. Even if another nation's weapons of mass destruction do not directly threaten us, perhaps on the Indian subcontinent, for example, we still need to worry about the possibility of regional instability and of war because we are a nation with global responsibilities. We cannot think solely in terms of direct threats to us. We must also think in terms of regional stability. So I would just suggest to you this is why we care about weapons of mass destruction and I think it's useful to be reminded. Now let me spend a little bit more time on two aspects of this: power projection and the homeland. Next slide.

Power projection is the *raison d'être* of our military forces. This is clear. We don't have very serious overt or conventional military problems on the American continent. All of our

potential adversaries now and, I think, in the foreseeable future are WMD capable. I think, as I said before, weapons of mass destruction are the most likely and most effective asymmetric strategy. This was the fundamental lesson of the Gulf War. Now it didn't materialize in the Gulf War fortunately, but it was a wake-up call for us. Much has been written and said about asymmetric warfare in the past decade and I think for good reason.

But as I look to the 21st century, I really don't see much change in this basic calculus. In fact, I think it's going to get worse. And it stems essentially from the fact that we are very powerful in the conventional military sense and we've got global commitments and responsibilities that other states and occasionally non-state actors choose to oppose. And as those states think through how could they possibly oppose us, it's clear that the conventional or symmetric response will fail. So what are we left with?

Now I think the threat, the specific threat to U.S. power projection manifests in several ways. Obviously, it can raise the cost in human and financial terms of executing our mission. But more importantly, I think it can deter our allies from participating. And for those of you familiar with NATO, I think you'll be aware that our NATO allies at least are not where we are in terms of the appreciation of this problem. I think even more likely it can deter host nations whose territory is essential for the conduct of our missions.

In many ways, these states are the soft underbelly of U.S. power projection. We need the territory of Saudi Arabia, we need the territory of South Korea and, to a lesser extent, Japan to project power into those regions. And if they're deterred, we're deterred.

Finally, and this is the most disturbing, is we, ourselves, might be deterred from pursuing our interests in a regional contingency. Something short of total warfare, something short of a threat that clearly challenges our most vital interests. And the interest is not that the U.S. will not take casualties as I think is sometimes alleged and incorrectly in the public debate. The issue is really more that sometimes the interests that we're pursuing in a regional conflict are less than vital. It's not like World War II. It's not even like Korea. Where because the stakes for the U.S. are not as strong as they were when we face existential threats.

The ability of an adversary to deter us by raising the potential cost is real, and we need to grapple with that and we need to face it full on. That preventing ourselves from being deterred is part of our strategic task in the future. And this is an odd turn of logic since we're usually thinking of deterring other people.

Now the homeland. Last slide. This has got a huge amount of attention in the last couple of years. You're all aware of it. We spend a lot of money on it. Four and a half billion on various forms of missile defense, $10 billion a year to counter terrorism, of which $1.4 billion on just WMD terrorism preparedness. As I said, the threat is both missiles and covert delivery. This is an issue that the media is obsessed with. Huge number of academics have worked on books on it, myself included. Large numbers of commissions have looked at it. The homeland defense is I think one of the key issues of the late 1990s.

In my judgment, this will be an enduring occupation of our national security establishment into the 21st century. And it comes from two facts. There is no more vital interest than our homeland. This is clear. And the second is destructive power is diffusing at an accelerating rate around the international system. And you combine those facts and you cannot but be very concerned with issues of homeland defense. We are not in this era in the 20th century and the 21st century, we cannot rely on our oceans to isolate us from all potential threats. This is obvious.

So I suggest to you this is not a fad, it's not something that will pass, and it's not something that any particular branch of our national security community, be it intelligence or the armed forces or whatever, can exclude itself from worrying about.

Now although I think it's a serious issue, I think we need to understand that this threat is a low probability, high consequence threat. And this is the key metric I think that you need to bear in mind. There's really no doubt that the consequences of a WMD attack on an American city would be severe. Well beyond anything any of our public leaders ever want to have on their conscience or their political record. But there is grave doubt about how likely this is. And there's a huge debate. And it's really on this issue on likelihood or intentions that the debate turns and that your own threat assessment of this particular problem should turn.

In my judgment, we have to conclude that it is a low probability threat because it's been so rare over time. There are very, very few attacks like this. Terrorists by and large do not choose to kill up to their technological potential. Our state adversaries are strongly deterred by our retaliatory capabilities. So we have to recognize there is a serious motivational barrier to carrying out mass destruction attacks against the U.S. homeland. So in my judgment we have to conclude that this is low probability. I do not believe it's inevitable. But I also think we have to conclude that the likelihood is rising and that, given the severity of the potential consequences and the importance of the issues, it's likely enough to take it pretty seriously.

I'm going to leave you with one final thought—a more general challenge of the 21st century and it's not specific to weapons of mass destruction. And it has to do with strategic surprise. The military professionals in the room will readily appreciate the importance of surprise and the advantage that taking initiative incurs for the adversary. Surprise is a function both of lack of warning, but more often our scholarship tells us, the failure to respond to warning when given.

And here's the dilemma we face. Our strategic nuclear retaliatory capability and our enormous conventional capabilities give us good reason to believe that our ability to deter most adversaries out there, be they state or non-state, is quite strong. Deterrence of most threats that we have to worry about is very strong. This leads most of us to have a fairly low expectation that deterrence will fail. That in fact our deterrence, the prevention, the first line of defense, really will fail. That's why most people go through their daily lives and do not expect conflict to break out and do not expect a sudden attack or terrorist incident or whatever.

I would suggest to you that this low expectation of deterrence failure in fact increases the probability that we will be surprised when it happens and that surprise will greatly aggravate the consequences we suffer. And the reason it increases the probability of surprise is effectively adversaries who want to take us on need to surprise us to succeed, and we tend to disbelieve that our enormous deterrent capabilities could fail. British legend has it that a 50-year civil servant retired in the late '40s, early '50s and at his going- away party he bragged to his colleagues that for 50 years he'd been warning, advising foreign secretaries and prime ministers that there would be no major European war. And he was wrong only twice.

And it's part of the problem. Which is batting .960 is not good enough when you're dealing with threats of this magnitude to the national security. So I leave you with that. I think weapons of mass destruction are a key aspect of the challenges we will face in the 21st century and we also, at the same time, have to grapple with our exaggerated expectations of our own security. Thank you.

Pfaltzgraff: Well, we have had a vast array of issues that we have had put before us now. I might mention that Senator Warner had to go back to vote on the Senate floor. So had to leave us shortly after he arrived, after he made his remarks. We now have the opportunity though for discussion and questions to the remaining panel members. Who would like to begin? Let's take a question hopefully from on this side of the room. Then we'll take one from this side of the room. Now wait till the microphone arrives and that you're on camera. Please identify yourself.

Gorka: Thank you, Professor Falkenrath. Sebastian Gorka from the RAND Corporation. I have one question for Dr. Falkenrath. I'm not sure whether I got the message, the overt message of your presentation clearly because you spent a lot of time taking the biological threat very seriously and at the end you mentioned the key question of intent and the power of retaliation that the U.S. has against even non-state actors. So if you could clarify for me exactly where you stand when it comes to biological weapons overall, I'd appreciate that.

And just three technical questions which I'd also appreciate a comment on. Recent workers have done quite a lot to lessen what we think the danger of biological weapons are in three areas. Firstly, dispersion. It really is not enough to throw a bag of volatile agent off the back of a Cessna airplane flying over New York. It doesn't work that easily. Secondly, persistence of biological agents. As you pointed out, these are living organisms. And therefore, their persistence especially sunlight and in normal environmental conditions is very limited in comparison to chemical weapons. And lastly, the immense lethality to the user. If you looked at just Aum Shinrikyo, the people deploying the weapons there were petrified of being killed themselves. And for very good reason. These are very dangerous to the end user, not just to the people they're targeted against. Thank you.

Falkenrath: I'll take the technical questions first. I didn't mean to give the impression that this was easy to do or that anyone out there could do it. The research we've got actually shows that Aum Shinrikyo failed at the biological weapons it attempted very dramatically. The two points you make are correct. It is hard to disperse these things, that's obviously the most important technical barrier, and the persistence of the agent is a serious problem although it can be dealt with if the attack is carried out at night.

The point here is these feed into the low likelihood of this problem. It's part of the reason. The technological difficulty of carrying out the attack reinforces the motivational barriers as I would put it. But it's not impossible. It is really not impossible. It is something that we figured out to do in the '40s, using 1940s science and much more primitive biological understandings at the time. We declassified large numbers of our weapon systems. They're available. You can go get them in Widener Library. So I don't mean to diminish by any means or exaggerate the ease by which this can be done.

But it is incorrect, I think, to assume that just because there are some technological hurdles to be accounted for that we don't need to worry about the problem. This is what I mean by low probability, high consequence. Lots of different factors, you noted some, I noted others, feed into the low probability of this. But if it happens, the consequences will be so severe that we will regret very much that we have not done more.

Pfaltzgraff: Please, over here, on this side.

Audience member: This is a question for Mr. Kaplan. You mentioned the switch into the post-industrial age. And my question is there are a lot of countries right now that you are talking about, sort of so-called third world countries or emerging countries, that haven't gone through the industrial age yet. Do you think that age can be skipped? Because I'm unclear that that can happen.

Kaplan: My experience in developing countries is that, to a certain extent, to an important extent it can be skipped. And the best example of that is not computers, which require hard wire systems for batteries, etc., it's through the whole cell phone revolution that is really starting to change. It's already changed dramatically life in the Balkans. It's changed dramatically life throughout the Caucasus. In Georgia, in Armenia, in Azerbaijan, in Pakistan, in Romania, in other places that in many ways are basically unstable, undeveloped countries to a greater or a lesser extent, incredible numbers of people have cell phones. They've totally been able to skip that whole problem of collapsing hard infrastructure. And this is increasingly true throughout much of sub-Saharan Africa. So I think it will be a mixed bag. In some aspects, they'll be able to go right to post-industrial. And particularly in the aspects that spread knowledge, that diffuse knowledge that I was speaking about.

Pfaltzgraff: By the way, if other members of the panel would like to comment on answers, please feel free to do so. Let's turn, however, to another question from whomever. Who would like to be the next to pose a question? Please, back here.

Hill: Lieutenant Colonel James Hill. Both Senator Warner, and a number of times in public forums lately, there's been a lot of pressure to move a lot of the military responsibility for things happening around the world to our allies. General Hughes, you commented that you thought that our future threat would be a coalition. At what point 10 or 20 years down the road, are we then—is this pressure arming potential adversaries?

Hughes: My view is the conditions are ongoing now or about to occur. But on the friendly side of things, we obviously conduct the business of the U.S. military most often as part of a coalition or alliance. I don't see that changing in the foreseeable future. The wags among us and the cynics might tell you that's primarily for political reasons. To give legitimacy in a broader nation-state context to what we do than if we did it alone. My personal view is that that might be part of the issue, but there's a much larger circumstance at work here and that is that our allies and our partners bring real capability which we cannot fully duplicate and therefore it's a very good thing for us to be part of that alliance or coalition for real practical circumstances.

You can look out in the future and imagine a coalition of alliance forming against us and I think that exactly the same thing is true. That association will bring strength, it will bring greater capability, it will bring clearer opportunity for those who might wish to oppose us now and in the future. And that's my view.

Pfaltzgraff: Next question? Please.

Mann: Hi, I'm Paul Mann from *Aviation Week*. A question for each of you. In view of all the strategic and threat assessments we've heard this morning, is it your tacit assumption that

strategic arms control as we've known it in the 20th century under START I and START II and the ABM Treaty and so on has become *passé*? That in the 21st century, strategic arms control is obsolete?

Hughes: Well, I'll begin. My personal view is that arms control is something we ought to devote a lot of time and energy to. It is not *passé* and it is still possible to do it. However, technology control is a more difficult problem. And if a nation-state wishes to build arms and to use them beyond building them out of some form of control we can depend upon, then we have a rogue state or a threat. I think that we ought to accept the fact that that's going to occur. It probably doesn't have much to do with the idea of trying in advance of that eventuality to control as much as we can of true weapons of mass destruction and true threats to the human condition.

Pfaltzgraff: I think that other members of the panel will want to comment on this very interesting question. And I would suggest that in commenting they might reflect upon the likelihood, in keeping with their own presentations, that the actors of the future are increasingly going to be non-state actors for whom arms control agreements have never been designed. I don't want to go out of my role as chairman here or moderator, but perhaps that would be an area for reflection. And maybe beginning with Bob Kaplan and then Richard.

Kaplan: Both E.H. Carr, who was a political philosopher in the early 20th century, and Raymond Errond, a French political philosopher in the mid-20th century, both emphasized that international agreements are only useful when they reflect actual power relationships on the ground. Otherwise, they are just a fancy, a chimera. An intention and motivation will always be much more important than any signed piece of paper. That doesn't mean agreements are bad or they make the situation worse. They may make the situations better. But ultimately if somebody has the motivation to do something and it will increase his or her or his or her group's power to do so, then they will do so—arms agreements or no arms agreements.

Also, because increasingly we will have more non-state actors, we'll be dealing with groups who have lost out in the conventional power struggle to begin with, and will therefore have any less respect for what the great powers come up [with]. Historically, great powers have always tried to limit weapons development of other people. When we say we want to put a stop to the growth of nuclear weapons, we think we are being altruistic. And we may be. But we're also acting like great powers have always acted throughout history. To keep our advantage where we have our advantage.

Falkenrath: I think the unusual circumstance was how important strategic arms control was during the Cold War. I mean, that was really an exceptional period. Because of *détente*, because the bipolar system had settled out, strategic arms control, SALT and that, became central, high political issues between the superpowers. Today, as a much more normal circumstance, it's become less important. But it still has a role. For one thing, both we and the Russia have a lot more nuclear weapons than they really need. I think it's very hard to justify the current size of the U.S. strategic arsenal. And certainly we can't justify or we don't want the Russians to have a strategic arsenal of their size.

Now I'm actually not in favor of abolition, although many serious people, including many in this town, are. I'm not. But I think we can go smaller safely. That's really not the key issue

though. The key issue is, first, proliferation of non-state actors; second, further proliferation of states that don't currently have nuclear weapons; and third, the increasing arsenals of those that do. India, Pakistan, and China being the most important cases. We very clearly do not want China, Israel, India, or Pakistan to grow their nuclear arsenals. And so one of the questions we face is how useful are our own weapons reductions done in the context of strategic arms control or future agreements to achieving those goals?

And that's the intellectual debate that's going on right now. There's profound disagreement within this town and in the security studies community as to how important our own reductions are to achieving those objectives. But clearly, as we think about the balance of the problem today, it is in further proliferation, increasing arsenals of states that already have nuclear weapons capability, and, I think, last note, the diffusion of Russia's nuclear technologies and materials which are enormous and very poorly secured.

Pfaltzgraff: General Hughes would like to add a comment.

Hughes: Just something brought up. The non-state actor issue. I think it's important to note that we have had examples of non-state actors using chemical and biological weapons. No examples as far as I know of a nuclear occurrence. But to carry the thought of strategic threat a little further, the idea of information warfare and a challenge through our information dissemination control systems is certainly in the sub-national category. I appreciate very much the moderator mentioning this and it's clearly an issue.

I know of no approach right now to try to reach real agreements to control all of this in technology terms. But when it comes to the development and use of weapons, I personally would like to see such agreements continue to be at least attempted. And I have some modicum of faith, despite what Mr. Kaplan says here, that some of them might work.

Pfaltzgraff: Okay, we have time for one or two more questions. Who would like to be next. Yes, right here. And then we'll go over to the questioner on this side.

Happer: I'm Paige Happer. I'm Assistant Secretary of the Army for Acquisition, Logistics, and Technology. One could say that one of the effects of the end of the Cold War has been a great increase in globalization and in particular an increase in the freedom of trade, of information flows, and of capital flows. I know Dr. Falkenrath is an economist and all of us are amateur economists. But how might for good or ill those increasingly free flows affect both the development of adversaries and the development of threats?

Falkenrath: And I think other members will also want to take on that question. It's a good and very hard question. First, I think globalization doesn't have as much to do with the end of the Cold War as it does with technology and particularly the emergence of a global information infrastructure. And that's a separate issue. I think by and large globalization helps us. Because what it does, I think,—and I'm sure Bob's going to disagree with this—but I think what it really does is accelerate the rate and also the efficiency with which the successful model of a liberal democracy can be disseminated.

And I think it becomes pretty clear that when you've got free flows of information, it's much harder for tyrannies to preserve tyranny. Now this is not to say this will immediately

lead to a more peaceful world. It's absolutely clear, as Mr. Kaplan has pointed out and also quite a bit of scholarship, that the process of democratization produces instability. This is clear.

But what's hoped for and what there's some evidence to believe, is that once you get there, once you have a democratic system and a reasonably large middle class and enough people to hold liberal ideals that in fact states like that are less likely to go to war with one another. This is a very long-term process and I understand the scope of this panel is a century, so I feel that I'm permitted to talk in these broad terms. But basically I think the transition of globalization as a sort of enabling factor, the transition to more democratic systems and more liberal systems will be destabilizing. But once you get there, hopefully interstate conflict at least will be less likely.

Pfaltzgraff: Would other members like to comment? Bob?

Kaplan: Yeah, let me comment on this in two kind of different ways. One is that globalization is a word, a kind of synonym, for a very soft, weak form of an American imperium. In other words, that the countries in the world that are able to use globalization are countries that are good business investments in one sort or another. That they are somewhat stable, they may have natural resources. They're not run by awful dictators. They've got something there which allows for the free flow of capital.

In other words, our model after the Cold War in this grand area is kind of the reigning model. But it's such a weak form of imperialism that it doesn't even go by the name Americanization. It goes by the name of globalization. And the countries that are left out do not have a competing model. They're just in a strong or in some intermediary form of dissolution or weakness or chaos or something. And we know what these places are. Much of Sub-Saharan African, the Caucasus, and other areas. And this kind of American, this grand American area that Dean Acheson wrote about can be expanded to some extent and it could also contract, depending upon the decisions we make.

So that's one way to look at globalization. Another way to look at globalization is it's really strengthening at perhaps the speed that we haven't seen before the power of corporations. Now corporations have always been powerful. America started as a corporation—the Jamestown colony. These were corporations first. But we've never really seen corporations have so much technological and power in terms of their ability to influence governments as we've seen now.

Now this is a very long-range trend. In the feudal age, nobody could imagine a modern state because it hadn't happened yet. So it could be that corporations are in a very early process of transforming themselves over a hundred or a few hundred years into a new form of political community. That is very hard to imagine now because it hasn't happened yet. And the third thing I would say about globalization, yeah, it does increase some basic agreed upon values that all good people can agree upon. Some basic values. Protection of minority rights, human rights, like that. But it also increases the general instability that we spoke of, too.

Hughes: I'd like to offer a moderating observation. I agree generally with the comments that have been made here. I've spent a lot of time in the past few years traveling in countries

that are having difficult circumstance and challenge and in some countries which enjoy nouveau wealth. And I have to tell you, ladies and gentlemen, the differences between those who have and those who have not are as stark and as distinct as I, personally, have seen in my lifetime. And I'm not sure that globalization is changing that much. People who can take advantage of the circumstance, are. People who can't, aren't able to.

Pfaltzgraff: Richard?

Falkenrath: General Hughes is exactly right. Globalization is increasing inequality. There's no question that this is one of its effects on all of the societies it impacts. It's probably making, on aggregate, everyone richer, but it's increasing inequality. I wanted to say though to Mr. Kaplan, I'm not comfortable with the characterization of globalization as a weak American imperium. And in fact, I think except for the most remote, rural parts of the world, there is no escaping it. There is no place, no economy anywhere that's engaged in any sort of commerce or information exchange beyond barter or very simple subsistence agriculture that can escape it.

I was in Saudi Arabia a month ago and this is a country that grapples with the problem of wanting to preserve a very old, traditional culture, and yet realizes that to compete internationally it must come to grips with the rapid change in the international system. Both in terms of the permissiveness of its own societies, the role of women, and the effectiveness of its companies. It is inescapable what's going on. And I think it's both too generous and ungenerous to the American government. We couldn't have thought this up, as it were, if that were an option.

Pfaltzgraff: Okay. Bob, you have the final word on this. Then we have two more questions before we break.

Kaplan: One fact to kind of emphasize. That for every $65 earned in rich countries, one dollar is earned in poor countries. And what I meant by like a globalized area and an unglobalized area, I was making distinctions. Because you have to make distinctions to have a discussion. And so these are the two extremes. I would also say that most successful imperialisms in history emerge more than they are thought up.

Pfaltzgraff: We are going to run out of time soon. However, let me adopt a somewhat different technique for these questions. What I'm going to do is to ask, I believe there are three of you now who would like to ask questions, to ask your questions, briefly hopefully, and then to give the panel an opportunity to respond as the final comment from the panel to these questions. So we had a questioner over here, as I recall. Would you please stand up and identify yourself? Here comes the microphone.

Bean: Thank you. Lieutenant Colonel Bean. Question I had was initially for General Hughes. In the opening comments, Senator Lieberman mentioned that future forces would require us moving to the next level of jointness and more collaboration at combined and interagency levels. You mentioned in your remarks that the emerging threats cannot be solved by military force alone. I would be interested in your observations on what that next level of jointness might be.

Pfaltzgraff: Okay. Keep that in mind. Now we'll come to the next questioner. And please, the microphone should be brought over to you in a moment. It will get there in a short time and you'll be on camera.

Rothrock: Thanks. I'm John Rothrock, colonel Air Force retired and with the Institute for Defense Analyses. My question has to do with the increasing class identification, narrowing class identification of the all-volunteer armed force. What sort of, if any, strategic vulnerability do you think that that constitutes for the U.S. in terms of pursuing an activist globalist policy around the world? Thank you.

Pfaltzgraff: Okay, very good. Next question right here. Right up here, please, Lisa. The microphone is on the way.

Apgar: Thank you. I am Sandy Apgar, Assistant Secretary of the Army for Installations and Environment. We have an enormous infrastructure, probably the largest organized real estate portfolio in the world. It's both fixed in location characteristics and illiquid financially, but appears to be worth about twice our entire equipment stock. To what extent is strategic responsiveness either helped or hindered by this infrastructure?

Pfaltzgraff: Now are there any other questions around that, someone? Is there someone else who would like to ask a question? Please. Yes.

Eden: Rick Eden, RAND Corporation. I don't know if you're aware of this, but the words strategic responsiveness are very large right in front of you. And I'd like each of you to specifically address what that means over the course of a century and whether our notion of when we respond and how we respond, is it going to be predominantly military or, perhaps this also picks up the question from the opposite side of the room about jointness? I just think the words strategic responsiveness might be a 20th century term that may not last for a hundred years. I'd like each of you to address that.

Pfaltzgraff: Well, that's certainly a challenging question for you. With that series of questions, I think we have enough time to keep you occupied till well after lunch and yet we don't have time for that at all. So let's begin with maybe three-minute answers, if we can. Four or five minutes at most.

Kaplan: I think the importance of intelligence gathering and intelligence assessment groups in our government is going to increase dramatically and be part of that strategic response. Last thing, don't assume that democracy is the last word in human political development. Remember, in the 4th and 5th century B.C. around the Mediterranean world and North Africa, which then constituted the settled part of the globe, we had a different form of globalization. It was called Christianity. And it started out as one idea being interpreted one way that had a better worldview, a more humane worldview than the pagan system which it transplanted. But as Christianity spread its roots and its ideas into different soils and different geographies and different cultures around the Mediterranean littoral, it divided up into rites and sects and heresies and the 5th and 6th centuries were even more violent than the 4th

and 5th. So don't assume that globalization will lead to an agreement around the world on universal principles.

Pfaltzgraff: Okay. General Hughes.

Hughes: My view on the jointness issue is that we're on the right track and, indeed, I think we're making progress at about the right rate. I believe strongly in the imperatives of the military departments. And, indeed, where are we going to get soldiers if not from the Army? And marines if not from the Marine Corps? But I do think at some point military units and the application of military power must be administered by a joint activity, a joint control to use all of the elements of military energy and civil power together.

So I'm in favor of the trend towards jointness as it is now practiced in the U.S. military and I believe there is an application that can be made to our social fabric where the economic, political, cultural, and other facets of national power along with the military can be applied in a coherent fashion. I think we ought to try to move toward that. With regard to the vulnerability that might be created by an all-volunteer force, I came into the Army during a period of conscription and the draft. I think it had the great strength and good reasons for me to believe that Army then was more connected to a social order than our Army today.

I personally believe in a form of universal military and social service that is justly and honestly administered and that will connect the young people of our society to the foundations, the principles, and the institutions that are necessary for our society to continue. So some form of service. One option of which could be U.S. military service in the active or the reserve forces would be a good thing as far as I'm concerned. The infrastructure that you mentioned, sir, is very difficult to come to grips with. Some of it is necessary to retain. It gives us the advantage of having a home base in an environment and an area in which, without it, we would be hamstrung and it would be very difficult for us to act.

So I believe that the basing issue, especially overseas, and the determination of which bases to keep under what conditions is a vital problem for the future. Tough to solve, I know, but I think we have to have a physical presence overseas.

And the last issue, strategic responsiveness. My personal view is that we will respond to threats on different levels for different reasons perceived by political authority to be good enough to send our military forces to meet whatever it is that's threatening or challenging us. It's very simple. It is indeed now, and will be in the future, a political decision.

Pfaltzgraff: I think that you will all agree that this has been an outstanding opening panel for our conference. The members have in many ways supplemented and complemented each other in their various expertise and understanding. We have all been greatly enriched by this discussion this morning. So I would on our collective behalf thank each of you for the contributions that you have made to this conference.

Department of Defense for the 21st Century

Day One Luncheon Address
Secretary of Defense William S. Cohen

Tuesday, November 2, 1999—12:45 to 2:00 p.m.

Summary of Proceedings

- The U.S. military is transforming from a heavy, forward-deployed force of the previous decade to more a mobile, rapidly deployable force as set forth in *Joint Vision 2010.*
- The Department of Defense is continuing to strive for a balance between the demanding elements of *shape, respond,* and *prepare* as embodied in our national security strategy.
- The United States must devise a realistic strategy that ensures long-term interoperability in joint and combined operations.

Analysis of Proceedings

Despite tremendous progress, difficult tasks confront the United States military as it prepares for the uncertain future. First, we must maintain a balance between the three major elements of our over-arching national security strategy—*shaping* world events, *responding* to threats and crises, and *preparing* for the future. For instance, the Department of Defense must ensure that it does not invest in readiness at the expense of procurement while remaining capable of handling a spectrum of missions ranging from war to peacekeeping operations. Operation Allied Force is testimony to NATO's operational flexibility to engage in warfighting, humanitarian, and peacekeeping missions. Second, we must craft a realistic long-term strategy that ensures interoperability between our Services and our allies. Indeed, the Kosovo crisis highlighted the centrality of coalitions in future conflicts. Third, due to the rapidity of change in the evolving security environment, the most important hedge against uncertainty is to maintain a decisive edge for our military.

The Department of Defense must provide the Services with the necessary organizational tools to excel with innovation. In order to pursue the military's transformation strategy, the Services should reward creativity in the ranks. We must also devise flexible and creative procurement and investment strategies by leveraging private sector practices. For example, the production concept of "just in time" and logistics techniques of companies such as Federal Express are being incorporated into the military's conduct of business. Such progress would represent an important step forward in fostering creative tension within DoD itself and between DoD and the contractor community.

Transcript

Pfaltzgraff: It's my pleasure this afternoon to introduce the Secretary of the Army, the honorable Louis Caldera, 17th Secretary of the Army. He became so on the 2nd of July, 1998.

Mr. Caldera previously served as the Managing Director and Chief Operating Officer for the Corporation of National Service. Before the Secretary came to Washington, D.C., he served for five years in the California state legislature where he represented the nearly 400,000 residents of the 46th Assembly District. Please join me in welcoming Secretary Caldera.

Secretary of the Army Louis Caldera introduces Secretary of Defense William Cohen.

Caldera: Good afternoon, General Shinseki, leaders of our Defense Department, general officers, distinguished guests, ladies and gentlemen. This afternoon I have the high honor of introducing my boss, our nation's 20th Secretary of Defense, the Honorable Bill Cohen. Secretary Cohen is a three-term veteran of both the House of Representatives and the United States Senate and has served as our Secretary of Defense since January of 1997.

I have had the distinct privilege of working for Secretary Cohen the past 16 months. And in that time, I have seen firsthand the tremendous wisdom that he has accumulated in over 25 years of public service, including 18 years on the Senate Armed Services Committee and 11 years on the Senate Select Committee on Intelligence. He was one of the principal drafters of the 1986 Goldwater-Nichols legislation and its reforms of the Department of Defense and he continues to be one of the leading architects of our nation's foreign and defense policies.

Secretary Cohen truly understands the promise and the potency of the ideals of the United States within the community of nations and the leadership role that our nation must play as we approach the 21st century. I have had the opportunity to travel with Secretary Cohen to visit our soldiers and have seen firsthand his commitment, not just to their readiness and to their training, but to the welfare and well-being of our soldiers and their families. Working to bring about the creative solutions that provide our armed forces the predictability and the stability that they deserve.

I've seen him employed for the benefit of our service members and our nation. The trust and the respect that he clearly enjoys among his former colleagues and within the administration. His strong leadership and steady hand have earned this department the trust of the American people in our ability to take care of America's sons and daughters and to safeguard the high ideals and the precious freedoms that make our nation unique among all others. We have all seen and benefited from the fruits of Secretary Cohen's boundless energy as he travels the globe representing America, reassuring our friends and allies, ensuring that our security interests are well met—not only for today, but far into the future.

Secretary Cohen has compiled a remarkable record of accomplishments as Secretary of Defense. Winning the first defense budget increase in a decade. Including the largest increase in military pay and an increase in retirement benefits that let our brave men and women in uniform know that our nation honors and respects their service and their sacrifice. Guiding our nation's armed forces and national security team with steely resolve during Operation Allied Force and making the Revolution in Business Affairs and the Revolution in Military Affairs a reality.

He has set a course for change within the Department of Defense to meet the new challenges and the new threats of a changing world. Within the Army, that course for change is reflected in the vision that General Shinseki and I recently chartered. To transform our Army into a lighter, leaner, more versatile, more lethal, more agile force, able to contribute to the work of our nation at all points across the spectrum and setting a goal to be the leaders in developing joint operation concepts.

As our Army is called to do the boots-on-the-ground work that only land force components are capable of, across that full spectrum of operations from humanitarian assistance to peacekeeping to engagement with other nations to high intensity conflict, we know and our soldiers know they can count on Secretary Cohen for the compassionate, principled, and intelligent leadership they so richly deserve. Ladies and gentlemen, it's my honor to introduce to you our 20th Secretary of Defense, the Honorable William Cohen.

Cohen: Secretary Caldera, thank you for that stirring introduction. I was almost anticipating that you were going to call me a compassionate moderate. But I do want to thank you for the kind introduction and the leadership you have brought to the Army over the past year and a half. I know it's been a very demanding time, not only for the Army but for the entire department, and we really do appreciate your dedication and the vision that you have brought to both. So thank you very much.

General Shinseki, I can still see you under the klieg lights up here. But I want to thank you also for all that you've done in pulling so many together for this conference and your energetic start since becoming Chief of Staff of the Army, and also in your determination to truly transform America's Army. And I want to pay tribute to your efforts here today.

Distinguished guests. I believe Senator Rudman, if he's not here now, will be here later. I want to thank him for his ongoing contributions to the department and to analyzing the kind of changes that we are likely to encounter in terms of threats, and also some of the recommendations that he and others on the National Security Study Group will recommend.

Dr. Pfaltzgraff, we appreciate your effort also to make this conference such a success. Officers, members of the Armed Forces, past and present, ladies and gentlemen.

Today has been sort of typical for me. I began the morning by meeting with the *Atlanta Hawks*. And they were looking, I guess, for some word of inspiration from me, and I was looking up to them, explaining that as a young boy I had aspirations of becoming a professional basketball player, or alternatively, a Latin professor. And, of course, my colleagues in the Senate, maybe Joe Lieberman was one of them, remarked that I achieved both of my ambitions. I continued to dribble while speaking a dead language.

But it was truly inspiring to see those young men, who were barely getting under the ceiling in my office, and to talk about teamwork, to talk about discipline, to talk about self-sacrifice, and to see how those skills or talents or disciplines that I thought I had developed as

a young student, both in high school and college, served me well over the years, and how the same kind of principles apply to them on the basketball court.

Then I had to leave that meeting, which was really joyous to me, to be able to talk about my exploits as a basketball player. I'll tell you one quick story. I was substituting for *Boston Celtics* guard and later head coach K.C. Jones at an exhibition game one time and *Celtics* player Satch Sanders—for those of you who are old enough to remember Satch Sanders—he threw a bullet pass down the court. I went up to catch it, and it carried me right into the crowd.

After the game was over—I was wearing *Celtics* player Don Nelson's practice uniform because I was the mayor of Bangor, Maine, at that time, and I was setting up an exhibition game. They were one player short and they said, "We want you to play." So he gave me his uniform and the shirt was down over my elbows. He gave me his shorts, and they were down over my knees. I needed a haircut badly at the time, and I was wearing horn-rimmed glasses. And so when I went into the locker room after the game, one of the young kids came in looking for autographs. And he was going around to each and every one of them, he said, "You guys were great, but what was that Woody Allen act out there?" Such was the crushing blow of a young child to an aspiring basketball player.

Before I begin, also, I want to pay tribute to someone special here and that's former Deputy Secretary of Defense John White. John, you made the transition for me, coming from the Senate to Secretary of Defense, truly easy. And you helped to organize the office in a way that has served me well for the balance of my term, and I want to thank you publicly for it, and I'm glad to see you here today.

I will pass over everybody else in the audience that I see, some of whom I've had just great relations with over the years and want to continue that, but perhaps more about that later.

I'd like to talk a little bit about what General Omar Bradley once said. He said, "The most important element in the business of defense is the human relationship," and that's why I think these conferences are so terribly important, because you have an exchange of ideas. We have military, civilian, we have the Services, we have government agencies, we have academia, and, occasionally even, exchanges between wildcat reformers and the lions of the old guard. We are able to exchange this kind of information to the benefit of all of us.

I want to commend the Army and also the Fletcher School for making this event possible, because it does, in fact, enrich the dialogue and it helps all of us to examine exactly where we are and where we are going in transforming our military; transforming it through the Revolution in Military Affairs and the Revolution in Business Affairs. It's critically important to the success of our military in the future.

It was 10 years ago this week that there was one small change in a very simple, drab piece of architecture that vividly transformed the world as we knew it. The Berlin Wall crumbled 10 years ago, and in the following hours and days there were thousands of people who poured through Checkpoint Charlie. Students and young people, they were dancing on top of those graffiti-covered walls. The older people in East and West Berlin, they were weeping with joy and with utter disbelief.

But even more, I think, in that one instant the way that we perceived the fault line between East and West was reduced to rubble, and with it the strategic and geopolitical assumptions that had defined a generation. Because for the world at large, that day in November was a bright moment in which the enormity of change in favor of freedom, in favor of democracy, was on dramatic display. But for those who were involved in national security issues and de-

fense issues, I think the implications of that change possibly were viewed through a dark glass darkly, but at least through an opaque glass.

And I recall very vividly when Czech President Vaclav Havel came to a joint session of Congress. I will not forget that moment when he stood up before both houses and he said, "The world is changing so rapidly I have little time to be astonished." And indeed, if you think about what has taken place in just a very short period of time, less than a decade, it's astonishing. But we don't have time to simply think about being astonished. We have to calculate exactly what we are going to do with this rapid change that's taking place.

At that time, I think we could make an informed guess with respect to some quantitative measures about where the Armed Forces were heading. We had spent decades on building and preparing for a massive force-on-force conflict between forward-deployed forces. That was headed for a change. We knew that. During the 1980s, we had some of the biggest peacetime military budgets in history. That too was headed for a change.

But what did the future really hold in terms of qualitative changes—the character, the shape, the focus of our forces and the Defense Department as a whole? That was a lot more difficult to predict.

And rather than spending a peace dividend, we faced a costly and divisive peace. We saw regional disputes and ethnic tensions and asymmetric warfare. We saw the spread of cheaper weapons of mass destruction. All of that sharply increased. And within a very short period of time, we had more people involved in more deployments, on longer duration, of a greater variety, involving a large proportion of Guardsmen and Reservists, than ever before.

And indeed, rather than going from a marathon to a sprint, we went from a marathon to a decathlon. Not only did we have to reevaluate the emerging threats while taking on more and more deployments, we had to redesign our force structure while transforming the department itself and its ability to keep up with the very pace of change. And meanwhile, we had to retain the very best men and women that we could to handle all of these challenges.

And so in many respects, the departments and the Services spent roughly a decade adjusting to the sweep and the acceleration, the sheer acceleration, of these changes. We went through the Quadrennial Defense Review, the *Joint Vision 2010,* and other reappraisals. We laid the groundwork for a new consensus on how to face the future. And it's a force that's smaller. It's faster, more agile, more precise, network-centric. It's a force that's better protected, smaller in footprint, and more lethal in strike capability. In short, it's a force that has all the elements for full-spectrum dominance. And to support it, we had to have a department to operate with full-spectrum excellence.

So I must tell you, this transition has been anything but easy. I was in an interview recently with a distinguished member of the press. He said, "Well, your critics say you haven't really quite moved fast enough." But, in fact, we're taking a tremendous institution, and we have to reshape it and we have to reshape it in a way that's going to make sense for the future. And the changes may not be visible all at once, but they are taking place below the surface.

We knew that this was going to be the case from the very outset. I think it was the philosopher Thomas Kuhn who came up with the very idea of rapid paradigm shifts. He said that it took him 15 years between the initial insight that he had and the clear formulation of his ideas. He said, "I sweated blood and blood and blood," and he said, "finally I had a breakthrough." And I can look out into this audience and tell that many of you have sweated blood over the

Secretary of Defense William Cohen outlines the "staggering amount of work" still ahead: the Department of Defense can't afford to ease up on reform.

years since the end of the Cold War, and certainly in the past few years, to get the ideas right, to get the implementation right.

And it's been gratifying to me, certainly as a Senator, now as the Secretary of Defense, to work on achieving some of these changes. Some of these started when I was a member of the Senate, and we were just debating them. And many were regarded at that time as being too radical certainly to raise even as questions, not to mention as solutions. In the first part of this decade, we were moving from questions towards consensus. And since then, I believe we have moved rather significantly from consensus to concrete action, to actually implementing the changes with bipartisan cooperation from the Senate and the House.

That really is the reason—I think, the principal reason—that President Clinton asked me to serve in this position. He could have picked anyone. He certainly could have picked a Democrat to do that. But he asked a Republican. And I believe it may be the first time in the history of our country where an elected official from another party was asked to serve in a Cabinet position. And I think his motivation was made very clear to me: "I want you to help me develop a bipartisan consensus on national security issues." And I think by and large, we have done that.

The military on the flight lines and the front lines today—in terms of its capabilities, the fundamental character, the capacity for change—I think resembles the mobile, rapidly deployable force that's called for in *Joint Vision 2010* far more so than the massive forward-deployed forces of 1989. You just take a look around at what we're doing today and you'll see we are moving very rapidly toward 2010. We have crossed the threshold between the force of the last century and the force of the next. And every American, especially those who are in the military and leadership here today, should be very proud of that.

At the "tip of the spear," as we say, on the issues that ultimately matter most to those on the front lines in an operation or a deployment, each of the Services has made rather dramatic changes.

The Navy, through its Fleet Battle experiments, is dramatically improving the capabilities of its ships and aircraft, increasing the striking power by tying them together for network-centric warfare.

The Air Force, as you know, is transforming itself into an expeditionary force. It's going to better integrate our air and space operations with some predictability and put that back into the lives of our men and women who are serving.

The Marines are continuing to revolutionize their capabilities by honing their skills in urban warfare and by achieving better mobility through technologies like the tilt-rotor aircraft, the V–22.

In the past few weeks, Secretary of the Army Caldera, General Shinseki, they've embarked on a path of reform that's going to profoundly enhance the speed, mobility, and the lethality of our soldiers. And to complement all of these efforts, our new budget devotes substantial resources to integrating the Active and Reserve forces.

Behind the tip of the spear, which we are now sharpening, where the Services rely on the logistics, the infrastructure, the doctrine of the department as a whole, we've also made some pretty significant strides.

Not so long ago, there was no lead agency for experimentation and development of joint training and doctrines. Now we have one. We are strongly investing in the Joint Forces Command. We created it last year. We stood it up formally just a couple of weeks ago.

We wanted to redouble our efforts to reduce the costs of our acquisition process and to accelerate the development of new weapons and to eliminate redundancy. Well, today we have the Defense Reform Initiative. We are dramatically shortening and strengthening the link between our warfighters and the acquisition and logistics workforce. We have, for example, laid the cornerstone for on-line purchasing. We created a Joint Electronic Commerce Program Office to promote and standardize innovative approaches. We've made jointness one of the key criteria in evaluating new weapons and platforms.

It wasn't very long ago that we lacked a focal point for issues on homeland defense and the spread of weapons of mass destruction. Today we have a Joint Task Force for Civil Support which is working to maximize our effectiveness when we support federal, state, and local authorities during a domestic WMD incident. Today we have the Defense Threat Reduction Agency, which is pulling together all of our counter-proliferation efforts.

So these things are all taking shape now. They are going to be institutionalized. We are going to set in motion a process and a dynamic that is going to accelerate as we move into the next century.

Not too long ago we were beginning to grapple with the challenges of cyber-warfare. Today we have an integrated approach through our joint task forces and resources that we have consolidated at Space Command. And we're bringing some of that—and we did bring some of that—know-how together and to bear during Operation ALLIED FORCE.

Again, it wasn't too long ago that we were questioning the decline of America's defense spending and our commitment to improving the force's quality of life and readiness. Well, as Secretary Caldera has indicated, we have just succeeded in reversing that decline. We now have the largest increase in some 15 years in pay and benefits and programs.

So we are taking charge to really revolutionize the way we do business, but also take care for the people who matter most, and that's the men and women in uniform. Because if I can talk about all these new systems we are going to acquire, I can talk about the fact that we are going to hit the $60 billion mark for procurement. We are on line to hit that by 2001, in our next budget. It's something that a few years ago when I was in the Senate, it looked as if it would never arrive. We were hovering down around $41, $42, $43 billion and I recall former Chairman of the Joint Chiefs of Staff, General Shalikashvili coming up and John White and others and former Secretary of Defense Bill Perry and say, "That's the goal." Well, we are on the mark to hit that goal. So all of this has given us some breathing room to work on further transformation.

Have we completed it yet? The answer is clearly no. Does it mean we can afford to ease up on reform? The answer again, pretty clear. We can't afford to stop closing bases. We can't afford to stop pressing Congress to achieve these savings. We can't afford to stop trying to achieve the efficiencies that we are going to achieve through the Defense Reform Initiative. There's a staggering amount of work that we still have to do.

So I'd like to pose just a couple of questions, because you're going to ask me a few when I finish. Our over-arching strategy has become a mantra. You've heard me repeat it many times before: Shape, Respond, Prepare—the three words that sum up our entire strategy. We want to shape world events in our favor; we want to respond to threats and crises; and prepare our forces for the future.

So I think the first question should be: how do we continue to balance shaping and responding against preparing? Every administration that comes in is faced with this challenge. How do you achieve a balance between the shape, respond, and prepare? We found if you put too much on shaping and you don't have enough on the responding and you don't have enough on the preparing, you've got an imbalance. And sometimes you put more in terms of readiness, and procurement will suffer. Other times you put more money into procurement, readiness will suffer. So how do we do that?

The temptation, as we begin to refine the structure of the military that will dominate the next century, is to proceed by rushing towards modernization. That is, we want it all right now. And it calls to my mind, at least, the observation that instant gratification is good, it's just not soon enough.

On this question, the lessons of Kosovo, I think, are instructive. We have examined, we're going to continue to examine, where we were at the end of Operation Allied Force. But I think it's equally important that we remember where we stood at the beginning of that crisis, when we did not have the luxury of choosing whether to prepare for a force-on-force or asymmetric conflict; offensive or defense operations; large scale or small scale operations; military or humanitarian operations. And along with our allies, it became clear we had to do all of that. And by and large, we were prepared to do all of that.

When the time came we were able to handle the challenges, not only serially, but nearly simultaneously, and I think it's testimony to NATO's flexibility that we were able to rapidly transform the operation as the mission evolved from warfighting to humanitarian operations to peacekeeping.

The Department in 1999 was ready because good decisions were made on that balance between modernization and readiness along the way, back in 1990, '93, '95. And so I believe it's fair to ask those who focus only on the out-years, 2010 or 2020, whether the path they envision handles the readiness of 2001, 2002. These are the questions that we always have to balance.

In the years ahead, I think we have to ask some additional questions. Do we have a realistic strategy for ensuring interoperability across Services? Do we have a realistic strategy for ensuring interoperability across national boundaries with our allies and friends who join us in the coalitions of the willing? I mean, that's the reason why we put so much emphasis on the Cooperative Defense Initiative. I just spent a couple of hours with Saudi Arabian Minister of Defense Prince Sultan. Just a couple of weeks ago, I was over in the Persian Gulf, talking to every single Gulf country about the Cooperative Defense Initiative.

We have learned from the Kosovo experience that we had assets in the United States that others didn't have. We had secure communications that others didn't have. We had precision-

guided munitions that others didn't have. We have to have greater interoperability, and that's what the Defense Capabilities Initiative launched at the NATO summit really was about. It's why I issued much stronger guidance to our combatant commanders, and why they have authority to work closer with our friends and allies across a whole array of activities, and try to avoid simply developing these on an *ad hoc* basis.

I'll give you another example. Just last week I was in Egypt witnessing the BRIGHT STAR operation. It was truly impressive. I watched an Italian ship offload a British troop transport craft with American air cover overhead, for a mock invasion that included Egyptian, Greek, Dutch and Jordanian forces. That was an amazing sight to see, and it was carried off—I only saw the amphibious assault operation—but it was carried off without a hitch. To see the kind of reaction from the observers—and there were 26 observer nations, I believe, who were in attendance—to see their reaction of how is this possible just within a decade. All of these countries who might have looked at each other through the opposite end of a telescope or a gun barrel suddenly were now all working together with a common vision, a common strategy, some commonality, at least, of weaponry, but working together to build a bond that will serve all of us well in the future. So the reality of the 21st century is the United States will not sustain a more cohesive overwhelming force if we're not improving these coalition operations.

So we have to keep asking whether we're giving our people the organizational tools they need to excel in innovation, and whether we have created environments that reward rather than discourage change. And this is really a vital part of what has made us preeminent, as President Eisenhower said, "Men and women who dare to dissent." And so I see it at least as a very important part of my challenge to make sure that as we look through this transformation process that we don't stifle creative ideas, that we allow them to surface and indeed to flourish, if they can. And we want to encourage that kind of creative type of dissent.

Let me try to conclude this so we can get on to the questions and perhaps a few answers. I'd like to conclude it with a quote taken from William Manchester's biography of Churchill. He said, "Among the perceptive observations and the shrewd conclusions of leaders such as Churchill were the clutters of other reports and forecasts completely at odds with one another. All of it, the prescient and the cockeyed, always arrives in a rush. And most men in power sorting through it believe what they want to believe, accepting whatever justifies their policies and their convictions, while taking out insurance wherever possible against the truth which may, in fact, line their wastebaskets."

And so let me say to all of you who are here, we can never know the future. We can't predict with any kind of certainty the profile of our next adversary. We can't prophesize the order of battle. But we do know this: that the best way to prevail is to ensure that when that decisive moment arrives, our men and women in uniform have a decisive edge. They deserve that edge. They expect that edge. And the way which we give it to them is by allowing our creativity and our genius and our ability to think freely and to have these kinds of exchanges, to look into the future, to examine it, to fashion programs and policies that will serve them well. So when that time comes, they will be up to the task, as they have been in each and every past conflict.

Ladies and gentlemen, thank you for your patience. And I'll now entertain any questions you might have. Thank you.

Pfaltzgraff: The opportunity for questions for Secretary Cohen. Who would like to pose the first question? Please.

Rosen: I'm Mark Rosen. Booz, Allen, and Hamilton. I'd like to pose a question I posed to Senator Lieberman today. Framed slightly differently.

Cohen: Will you tell me how he answered it before?

Rosen: Skillfully. Simply, we know we need to make some tough choices and find bill-payers for transformation and it's oftentimes the case that we find solutions through force structure change. And I think there's wide consensus we need to do the tough change in force structure. But modernization, the other big pool of resources out there, is often ignored. And I'm talking about the big-ticket items. I'm overstating a little bit. But how do we develop the capability to make the tough choices to build joint capabilities, to make the tough choices of modernization? And is there some merit to joint modernization and acquisition?

Cohen: Let me try to put that in the context of perhaps tactical air as an example. One of the criticisms that I continually receive is, well, you didn't cut out any tac air procurement. I said, "That's right, I didn't." I came in immediately in 1997, the QDR was underway—been underway for a couple of months. We had maybe two and a half months to complete it, as I recall. John, we were going to complete it on time. And I looked at the question of modernization. The Navy had embarked on producing the F–18 E&F model. And they could make a very persuasive case that this was a significant upgrade and capability over what they had with the prior models. It gave it longer legs. I could go through all of the positive aspects of it. Didn't give it stealth capability, but it gave it the capacity to grow. I looked at that and said, okay, how do I weigh that against the Joint Strike Fighter which the Marines had signed onto, the Navy had signed onto, the Air Force had signed onto. How do I weigh that? And I looked at it and I said what I want to do is cut down the number of F–18 E&Fs almost in half. And I'm going to keep the line going. Why? I'm going to keep the line going because I need some kind of leverage to deal with the Joint Strike Fighter.

Joint Strike Fighter at that point was still in the design phase. We don't know exactly what the challenges are going to be for the Joint Strike Fighter in terms of price or in terms of what may be required in the event you don't have the F–22 to carry in terms of its characteristics and capabilities. So I lowered the number of purchases on the F–18 to give me leverage to deal or my successor leverage to deal with the Joint Strike Fighter. Because the costs might go up to the sky and we may impose greater burdens upon it. I can't predict that.

And I looked at the F–22 and I said we need a replacement for the F–18. We need a real air-to-air replacement for the next century. This one has served us well, but we need greater capability. I cut one wing out of the F–22 and I said this gives me some kind of balance. I'm hedging. There were some who said, well, just cut now and invest that money into research and development for the future. But the problem is I've got to deal with the present. And that's what I meant about how do you prepare for 2010, 2020, while still making sure you've got to deal with the challenges of 2001, 2005.

And so it's always a balance. There are many advocates who can say just cut now and put that into much more advanced research and development. You could cut out a manned air force, for example. Just go to unmanned aerial vehicles. That will happen at some point. We're not there yet. But in the meantime, you have to balance present against the future and that's what I've tried to do in the QDR.

Are there some systems I would like to cut out? The answer is sure. But you have to understand that I am basically the CEO of the largest corporation maybe in the world if you think about it. And I have 535 board of directors. And that's the reality. I mean, that's the reality. I'm not knocking it. I've been on the other side as well. But you have 535 members of the board of directors. And I have found myself in a situation where I wanted to move a couple of hundred people from one base. I immediately had a resolution introduced in the House saying you can't do it. So it's one thing.

You've got a lot of things to balance. You have to balance what you need in terms of capability. You also have to take into account that this is a big democracy and a vocal one and one that is, you know, a challenge to manage. And so no other corporation of this size would have such a situation. You'd have a CEO, CFO, etc., COO, and then you've got a board of directors and make a decision and carry it out. You cannot do that in a system like ours. So you have to take into account the political realities as well as the challenges that you will face from a strictly military point of view.

I think we're striking that balance. We are now achieving the $60 billion mark as far as procurement. We are taking care of readiness. We're going up and getting the supplementals to take care of some of the peacekeeping missions, which are very expensive. Be it in Bosnia or Kosovo or elsewhere, they're very expensive. And we've had the support of the Congress. And so we've gone through this period of people looking for a peace dividend to find that we've got a much more dangerous world in the sense that it's less predictable, there's more conflict, more ethnic strife, more types of missions that we're constantly being called upon to respond to.

East Timor is a classic case. We no sooner finished our effort in Kosovo than we had the situation in East Timor and we had our Australian friends say you've got to help us. And we want to be helpful to the Australians. They've been very helpful to us over the years. But how do we balance that? We've got to take care of Bosnia, we've got to take care of Kosovo. And so we ended up in a support position for the Australians and that's working. It's working. But everything requires some balance. Politically, militarily as well.

Pfaltzgraff: We should take a question from over here. Please, all the way in the back.

Krauss: Mr. Secretary, I'm Mike Krauss. I represent the Army Science Board and, in doing so, a member of civilian industry. I, too, posed a question of Senator Lieberman earlier, but this will be a different question. And the question relates to really a transformation strategy for logistics. Here the mantra of civilian industry can make itself felt most importantly in the kind of transportation, the kind of logistics infrastructure, and the kind of delivery systems that commercial industry brings to you. How are you thinking about that? How are you leveraging it? You've mentioned on-line ordering. One of the mantras I have is using the web-based capabilities in logistics and in transportation. What are your thoughts, sir?

Cohen: We are turning to the private sector, as a matter of fact. We have a number of commissions or committees or boards, from which we draw upon the talents of the key people in the private sector. We are moving from the notion of having enough just in case to have it just in time. We are looking to the logistics techniques of Federal Express. I like to promote L.L. Bean by way of example. But nonetheless, that's what we're moving to. To get rid of the

warehousing and to make sure that we call upon the private sector and emulate what they're able to do as far as their logistics infrastructure.

And we now are meeting with the private sector on a regular basis with the key people. And I'll add your name to the list if you'd like. But to take advantage of the kind of insights that you have brought to bear in the private sector, we want to emulate that for the military. And that's what we're doing, we're in the process of doing that now.

Pfaltzgraff: There was another question here before we moved back to the other side. Please.

Liston: Good afternoon, Mr. Secretary. Tim Liston, the RAND Corporation. You brought up the point about Kosovo and the glaring insufficiencies of the allies. You're also right to point out in your remarks to Congress and such that they did contribute, but their contribution was limited. I would like to know how you plan, besides going to the Defense Capabilities Initiative (DCI), the groups that you and Dr. Hamre set up regarding interoperability with our allies. How do you get from talking about it to actually getting work done? And I specifically am talking about the procurement budgets, the decreasing defense budgets of our European allies. How are you going to act upon that and try to convince them that this is indeed what they need to deal with—the problems and challenges we're going to face in the 21st century?

Cohen: That's a great question. What I tried to do prior to Kosovo was to talk about the DCI, Defense Capabilities Initiative. And what Kosovo revealed were precisely those deficiencies. And we had a great success story to tell, but we also saw in the lessons that we have learned to date where all the shortfalls were. It's interesting to see how the allies have reacted to that. I think that most now feel that, the deficiencies having been exposed, they have to respond. We will keep this pressure on by demonstrating what the United States is doing.

I never fail to point out at any of the NATO meetings, this is what I am doing—going up to Capitol Hill requesting substantial increases in budgets. I look across the Atlantic and I don't see a comparable commitment. What I see is reshaping your forces, which is fine, downsizing. We've gone through that as well. But I also see a decrease in defense spending. And I don't believe that you can achieve through efficiencies the kind of investment that's going to be necessary for the other members of the NATO countries to be able to have what we have. And I point out that I believe that ultimately can have some grave political consequences.

To the extent that I or any successor goes up to Capitol Hill to say we need to tax ourselves more to build a better force for the future, members of Congress are going to look across the Atlantic and say, well, what are our allies doing? And if they fail to see at least some kind of a comparable effort to modernize their forces, to make them interoperable with our own, to give them the kind of PGMs, precision guided munitions, to give them the command and control, communications that are secure, to do all that's necessary. If they find that's not being done, I think down the line, not today, not tomorrow, but somewhere down the line that's going to have a political consequence where members will say if they're not interested in reforming their militaries as we are, why are we expected to carry the load? Especially as we did in the first phases, I would say, of the Kosovo operation. We carried a much heavier load in the first phases by virtue of the stealth technology, the jamming capability, the PGMs, and other capa-

bilities that we have that they didn't have to a certain degree. So I think they're aware of it. You now have a new Secretary General of NATO who I'm going to meet, George Robertson, later this afternoon. And we're going to lay it out again.

We have a meeting coming up in December. We just finished a meeting in Toronto about a month or so ago in which I again raised the issue. Here's what we're doing. What are you doing? And to constantly draw the comparison of where we are and the kind of commitment we're making. Acquiring more C–17s, acquiring more virile vessels, etc. So what I have to do is to remind and also to be very, very clear on this concept called ESDI—European Security Defense Identity. Have you talked about that today? The Europeans are here and I see some of my friends here. Klaus. Good to see you, Klaus Naumann. The ESDI is something that the Europeans now are promoting quite actively. We're supporting it. Provided. Provided ESDI, that the European members of NATO don't wrap themselves around the rhetoric of a European security and defense identity and they acquire systems which are not compatible with the DCI, Defense Capabilities Initiative. In other words, we want to make sure whatever they invest in will work with our system, with NATO. Because otherwise we're going to have a situation where they are talking about a European Security Defense Initiative in which they acquire things which do not really narrow the gap between where we are and where we all need to be.

So that's something that we don't simply talk about. We lay out a program. We will talk about this this afternoon and how we can insist and measure each country's commitment to achieving the Defense Capabilities Initiative and what steps they're taking. But I believe there will be a political penalty to pay somewhere down the line in the event that the technological gap continues to grow. It will carry political consequences. So hopefully all of the NATO members that I deal with understand what they have to do. Now they have to persuade their parliaments and legislatures to support it. But that's a question of leadership on their part and hopefully the lessons of Kosovo, as they examine their lessons derived from Kosovo, will give them additional support.

Pfaltzgraff: I believe we have time for one or two more questions and we'll take this one here and then over there. Please.

Anderson: Good afternoon, sir. James Anderson. I work at the Heritage Foundation as a research fellow. We've spoken a lot this morning on the earlier panel about technology and transformation. It also seems, as you've suggested yourself in your remarks, that transformation is about people. And right now it appears that our military is experiencing some significant problems in terms of the recruiting and the retention dimension of this. For example, the Army missed by several thousand this year its number of recruits. The Navy is forced to deploy ships that are understaffed to the Persian Gulf. The Air Force estimates it will have a 2,000-pilot shortage by the year '01 or '02. Only the Marines, a much smaller Service, seem to be making their quotas. In this context, there has been that pay increase: 4.8 percent across the board. Something I agree with you, certainly that's long overdue. So my question to you, sir, what if it is the case that this pay increase does not make an appreciable dent in the recruiting and retention crisis? Are there other sort of non-financial, non-monetary incentives in terms of personnel policies or programs that would be useful in terms of addressing the recruiting/retention crisis?

Cohen: You're right to point to the problem as we have all acknowledged in terms of the recruitment and retention of the best and the brightest. We're going after a pool of young people who are very much in demand. We can't possibly pay what the private sector is willing to pay and able to pay. And frankly, most of the people who join the military don't do it for the pay. What we have seen however is, as a result of the pay raise, as a result of the changes in the pay table reform, as a result of going back to 50 percent retirement as opposed to 40 percent, that there has been a change in at least the initial reaction on the part of retention.

When I was out on the USS *Constellation* just a couple of weeks ago, I reenlisted 12 young sailors. I asked each of them what was the reason you decided to reenlist? They said the pay and the retirement benefits. We think that you're listening to what we need and you're responding. And so we've seen in the most recent weeks at least some change in the attitude. Now whether that's going to be sufficient to sustain that remains another question.

There are other items which we have to address. We still hear quite a bit of complaining about the Tri-care system, health care system. If you had to point to perhaps two other areas now that we've looked at pay, you would say housing and health care would be the two major things that we have to focus on. We have tried an innovative program as far as the housing is concerned. Trying to leverage again the private sector, to get the private sector involved in building housing for our men and women, and to do so in a way that can leverage it almost on a six or seven to one basis. Again, we're in the initial stages of that, but that is a key item that we can address ourselves to. And the health care system I think is probably the most dominant one. I would turn to everybody here in uniform and say what's the complaint that you hear most about, it's probably the health care system. And it's something that we have got to come to grips with. How do we make it more efficient? How do we eliminate the long lines? How do we eliminate the lack of satisfaction that people are experiencing? So I would say, in addition to what we've done, those are a few of the things.

In addition to that, I think we've got to make a different kind of an appeal. And you're seeing some of that take place in our advertising. I was concerned last year. I went to New York, my wife and I went to New York, and I kept saying, you know, I don't see much advertising on television except during the Super Bowl. I might see one ad for the Marines or the Army, but absent that, I don't see us really reaching out and touching people through the most powerful medium in the world. And so I wanted to know what was going on. And I found out that we had five-year contracts going to agencies and that's not quite an incentive when you're in that kind of business.

We've changed that. And so we now are also putting a different emphasis. Not simply on the college education because frankly that's not necessarily a big seller today because there are so many programs available from universities and colleges to pay for tuition, that the mere fact that we say this will help pay for your college education. We're competing again in a very tough environment. But we want to go back to [what] the Kassebaum-Baker panel recommended and that's appeal perhaps greater to the patriotic duties of our young people. To give them a sense of what life can and should be like in the military, to make them proud of serving their country, and to really appeal to a deeper emotional ideal.

And so that may not be enough to compensate, but we are trying to focus on those kinds of issues. To remind them and to thank them. You know, one of the greatest rewards that I get, I must tell you, when I go out and I fly all the way out to—I'll be in Kuwait or Saudi Arabia and take an hour or 45-minute chopper out to visit one of our carriers. What they really want to hear is for

someone to pay attention to them and say thank you. Thanks for the great sacrifice you and your families are making, thank you for the tremendous expertise you have and the dedication and patriotism. How can I help? What can we do to make your lives better? What can we do in the way of quality of life? What is it you're really worried about it? Is it your child back home that you haven't seen who's got a cold? Is he getting good treatment? How can I help you? And the more attention that we can pay from the leadership on down to deal with individual problems and to tell them we really care about their lives and we are really grateful for what they do, I think that makes a big difference.

And so we have leaders, Secretary Caldera, General Shinseki, and others, who are taking that issue and, from the top down, they are really going out and meeting with the soldiers in the field. Airmen, marines, and sailors, I mean, all of them are doing a great job in this respect. We hope to turn it around. It may not be enough and then we'll have to say, well, what else can we do? Is it more pay? Is it more benefit? What else can we do to compete? But I think that we're turning the tide a little bit on this.

As far as the airplanes, our pilots are concerned, the commercial opportunities for pilots are very attractive. And so we really have to work hard as far as filling those slots with our gifted pilots and we have to look at ways in which the Air Force is now reconfiguring itself into this expeditionary Air Force. So that it can put more regularity and predictability into the lives of our airmen and women. And if we can do that, then we have a better chance of at least lowering the operational tempo, the time away from home, the kind of pressure that's put upon them with too great irregularity. So what we're trying to do is reshape the way in which we do business militarily as well to reduce those kind of pressures on the people. Hopefully that will help.

Pfaltzgraff: Final question from over here.

Cohen: I knew I should have cut this off before.

Schemmer: Mr. Secretary, I'm Ben Schemmer from *Strategic Review*. I'd like to ask you about a threat that has not been addressed today. And that is congressional micro-management. While you were in the Senate, sir, you were in the forefront.

Cohen: I told you I shouldn't have . . .

Schemmer: You were in the forefront of efforts to reform the Pentagon through Goldwater-Nichols and the Nunn-Lugar-Domenici. Now that you're looking through the other end of the telescope, what should the American people expect Congress to do in the way of reforming that institution so that you and your successors can defend our country better?

Cohen: Well, when I was a member of the Senate, I think that we did some positive things in terms of the Goldwater Act. There was a case in which we felt that we needed to reform the way in which the Joint Chiefs were operating as far as consensus was concerned, to give more power to a Chairman, to give greater delegation powers to the secretaries. And I think we made a major change and I would call that macro-management, as opposed to micro-management. General Powell used to come up and I'd say, "What do you think of Goldwater-Nichols?" He said, "I like it." So Congress did something that was positive in that regard.

Secretary of Defense William Cohen and Secretary of the Army Louis Caldera.

Congress has done something positive in terms of Nunn-Lugar. Nunn-Lugar-Domenici. So there are big issues that Congress really should deal with. And to build that, I'll tell you what we did on the Goldwater-Nichols bill. We went out to a group of people in the world of academia. Put Andy Goodpaster, other experts in the past who served. Les Aspin was part of it, Sam Nunn was part of it, I was part of it. We worked with CSIS. We tried to take military experts and to build a case saying is this thing working? And let's put these experts together and say what would you do if you wanted to reform it? And so to build a consensus, but do it on the basis of expert advice. And that's what happened in Goldwater-Nichols.

And I think that that kind of an approach, when you have that relationship between academia, retired military, active military working together—say this thing isn't working, how do we make it better, the Congress can play a very important role in changing it. We had institutional rejection. It came from the Pentagon. The Pentagon was absolutely opposed to any change in the organization of the Joint Chiefs of Staff. And so there is a case that you can make saying, well, Congress has a very important role to play as well.

But I think when you get down to the micro-management, when every time a Secretary of Defense or anyone in the Department wants to achieve, quote, "efficiencies", and you have legislation introduced to block that, then you create a paralytic situation in which nothing gets done and we continue to carry excess overhead, we continue to do business in the good old-fashioned way. And it reminds me of that ad I keep seeing on television where you see a lot of older people who are saying, the heck with the Internet, we do business the old-fashioned way and the guy's head plops down on the table. And that's what we've got to avoid.

So I think that members of Congress, you had Joe Lieberman here, who was earlier today, Dan Coates was part of that group who said you've really got to start focusing more on jointness. You haven't done enough on this. And they put a lot of pressure and positive pressure on us to face up to that and now we're doing that with ACOM having been transformed in this respect. So I think Congress has a positive role to play and it's always a

question of balance. You may get people involved in a lot of details in order to protect hometown interests.

And I was there for 24 years and I was just as interested in protecting hometown interests. I wasn't quite as successful at that. The Dow Air Force Base went out of existence when I was in city council in Bangor and then Loring Air Force Base, etc. But that's their job, too. They're there to protect their interest and their state. But, hopefully, you arrive at a point where you get a majority rule, where you say, okay, we understand that you've got an interest that you need to advocate, but in the interest of overall national security, this has to dominate. And it takes a lot of cultivation, it takes a lot of effort, it takes a lot of time, but ultimately it has to be done because that's our system.

And all I can say is the focus ought to be on the big issues, on big reform issues, and stay away from the small issues which can only bottle up efficiencies.

Pfaltzgraff: I now turn the meeting back to Secretary Caldera who will offer concluding comments and thanks to Secretary Cohen.

Cohen: Thanks again, very much.

Caldera: Secretary Cohen, on behalf of the men and women of the United States Army, of all of those gathered here, we want to thank you for sharing your thoughts on the important subjects being discussed in this conference on strategic responsiveness. We thank you for your strong leadership of our Department of Defense and your dedicated service to our nation.

Perspectives on a 21st Century National Strategy and the Role of Military Power

Panel 2
Senator Warren Rudman
Dr. John P. White
General Klaus Naumann
Ambassador Joseph W. Prueher
General Sir Jeremy Mackenzie

Tuesday, November 2, 1999—2:00 to 3:15 p.m.

We are now confronting a security environment characterized by new sources of instability. At the same time, as a nation the United States seeks to develop a national security strategy that links our interests and values. Coalitions and alliances take on a new role within the framework of early 21st century international security. The challenge will be to ensure that our chosen course is consonant with national values and vital interests. We must ensure that our national security strategy and the role of military power can adapt to the challenges of a new century.

Summary of Proceedings

- As a result of advances in technologies and the proliferation of capabilities to states and non-state actors, the spread of threats and risks to American security will become more complex and diffuse.
- The economic impact on and relevance to security will grow as globalization, commercialization, and technological innovation accelerate.
- While technological innovation may have altered the means for the conduct of warfare, the essence of war has not changed. Conflicts will be unpredictable, protracted, and fraught with the potential for casualties.
- Jointness and interoperability are indispensable to future U.S. military operations.

Analysis of Proceedings

The absence of a direct and immediate threat to U.S. national interests affords a unique opportunity to shape and prepare for the future. For example, continued economic primacy will be an essential prerequisite to maintaining America's global influence. The United States must exploit the opportunities arising from economic globalization and interdependence. Given the prevailing trends in commercialization, the Armed Forces will have to leverage technology, equipment, and logistics from the private sector. By incorporating still more modern business practices, the DoD can become more responsive, flexible, and efficient. In particular, the military will need to adapt business innovations such as the greater use of e-commerce and other on-line capabilities to speed and streamline its acquisition practices. The Department of De-

fense will have to expand its purchase of technologies and equipment from the commercial sector if it is to benefit as fully as possible from the information revolution.

Given the major advances in technology, the capabilities of potential adversaries will increase in both sophistication and lethality. New asymmetric threats and the growing ability of states and actors other than states to threaten the American homeland and U.S. forces abroad must be integrated into U.S. strategic thinking. Indeed, the United States has already suffered terrorist attacks at home and abroad. Moreover, our adversaries will be increasingly able to strike our allies with WMD as weapons of first, rather than last, resort. We must increase drastically our efforts to deter and defeat the use of WMD in all its forms.

Despite the relative lack of public focus on security issues, military force will remain a critical instrument of statecraft. The essence of war will remain unaltered. Soldiers will have to engage in combat on the ground and casualties will undoubtedly mount. The threat or actual use of force must always be an extension of the national will, with clearly defined military and political objectives. Developing cutting edge military capabilities will be of continuing and sustained importance to maintaining current readiness and preparing for future operations.

The United States may be able militarily to act unilaterally in the future but the political costs of such action may often be prohibitive. Alliances and coalition operations will continue to characterize American engagement in major overseas crises and conflicts. However, coalitions may exert major limitations on our ability to achieve political and military goals. As in the case of NATO's intervention in Kosovo, democracies and alliances composed of democracies will use force only as a last resort. The requirement for consensus within an alliance reduces the likelihood of a timely response. In spite of the compelling need for greater interoperability in combined operations, the technological gap is widening between the United States and its allies. Top-heavy command structures and logistical redundancies have impeded alliance operations. Unless both sides take timely action to remedy such shortcomings, our combined military effectiveness will continue to suffer.

In addition to the transatlantic gap in advanced military technologies symbolized by the RMA, differing acquisition practices and timetables for procuring new systems, together with falling defense budgets, have been major obstacles to alliance interoperability. National restrictions on technology transfers; political barriers to purchasing foreign equipment; the inability to halt the downward spiraling of defense budgets in Europe; and technology gaps among European countries themselves, taken together, impede efforts to redress technology disparities. At the same time an even larger challenge is to gain a consensus on how the forces will be organized around common objectives. While technological interoperability among allies is critical, in the end it is people who determine how well coalition partners cooperate. At the present time, there is virtually no single piece of equipment that is shared by all NATO members. The perpetuation of debates on burden sharing could lead to a dangerously counterproductive bean-counting exercise intended to demonstrate how much each side has contributed to a common cause. It should be kept in mind that the vast preponderance of ground forces both in Bosnia and Kosovo is provided by countries other than the United States.

Transcript

Pfaltzgraff: It is with very great pleasure that I turn this session to our moderator, Dr. Jacquelyn K. Davis, who is Executive Vice President of the Institute for Foreign Policy Analy-

sis and President of National Security Planning Associates, our affiliate. Jacqui.

Dr. Jacquelyn K. Davis, Vice President, Institute for Foreign Policy Analysis, and President, National Security Planning Associates, moderates the panel on the role of military power as a component of national strategy.

Davis: Good afternoon. Today we're looking at a panel designed to explore the issues of the perspectives on 21st century planning and the role of military power. Over the last several years, we have witnessed the use of military power as the ultimate instrument of foreign policy. From the Tomahawk missile strikes against Sudan and Afghanistan to the daily strikes against Iraq to enforce the no fly zones in the north and the south, military power has been invoked for deterrence, coercion, and war fighting purposes. Sometimes it has appeared that the use of force was evoked in the absence of creative diplomacy. Other times it has appeared that the use of force has clearly supported U.S. and alliance interests and policy objectives.

The relationship between the use of force and our national security strategy and, for example, NATO's new strategic concept, needs to be more clearly understood as we enter the new millennium. As do the limits and opportunities of military power as the operational arm of the nation's or the alliance's security policies. This panel has been established to explore the issue of the role of force in 21st century security planning and to relate the use of the military instrument to America's and NATO's values, interests, and cultures in a dynamic and unpredictable security setting.

As the air war over Kosovo sadly demonstrated, fundamental differences between the United States and its allies are apparent over the use of force as an instrument of policy. And yet, despite the differences over air power philosophies, rules of engagement, and collateral damage considerations, the alliance did hang together. But it did so, some would say, at the expense of operational coherence and perhaps even cracks in the alliance's unity of command. To address these issues, we have with us today a distinguished panel. Each member of this panel is well known to the official and strategic affairs policy communities. So I will not dwell on their credentials. You can read about each panel member in the bios that are included in the programs for this meeting.

Suffice it to note here that former Senator Rudman co-chairs a commission that is tasked to examine U.S. 21st century security requirements. Dr. White, of course, was the former Deputy Secretary of Defense and has had extensive government experience exploring these issues and now, as a professor at Harvard, is still engaged in looking at issues relating to the future plan-

ning environment. Admiral Prueher is the former CINC of PACOM and last Thursday had his hearings to be the next United States ambassador to China. Generals Naumann and Mackenzie are highly regarded military leaders in their own respective countries and both are highly respected in the United States for their tireless efforts to strengthen the transatlantic partnership in NATO.

With that, I will turn the podium over to Senator Rudman, who will commence with the panel presentations. After all the presentations have been made, this panel will then entertain questions from the audience. Thank you, Senator Rudman.

Rudman: First, let me thank you for the invitation. I'm delighted to appear here in behalf of the United States Commission on National Security for the 21st century. We had hoped that logistics would allow this initial executive summary report entitled "New World Coming" to be on your tables. Somehow, that didn't happen. I would strongly recommend getting a copy for those particularly in positions of major responsibility. I'm going to talk about that today. I will leave it to others to address specifically the issue that you have put forth. But we were asked to come over here today and explain to you what we're doing.

A little background. What we're doing is actually the first comprehensive review of national security since 1947. That may surprise you, but the National Security Act of 1947, which changed the face of the American military, really was based on lessons learned from World War II. It was gathered from some of the early insights of what was to become the Cold War, and of course, to Americans, the realization for the first time that we were a premier world power and would be so for some time. As you look back from the point we're at today, many talk about this as being the American century and I suspect that it's probably an apt description.

Since that time, no one has really done what we are doing. We are looking at national security in the broadest way. Certainly military structure, military forces, what they can do is part of it. The role of diplomacy, what we need to change, what we're doing, the security of this country based on its economy and its global economic outlook, all of those things we're looking at. This panel that was put together by the President, then-Speaker Newt Gingrich, and Secretary of Defense Bill Cohen truly has some remarkable people on it who bring a lot of depth to the issue. People with some enormous experience. I am honored to co-chair this commission with Gary Hart.

I want to spend about 10 minutes telling you essentially what we've done. Essentially we have three parts. The first thing we were asked to do is render a report by the 15th of September, which we did, to the President and to the Secretary, which sets forth the assumptions and the conclusions we draw from those assumptions for the 21st century. Second, we will put a report out later next year which will set forth what we believe the strategy will have to be, based on those assumptions and those conclusions. Finally, the part that many of you will be looking at with great interest will be what we believe the structure ought to be in order to fulfill that strategy.

Although this is a very thin book and there are only 22 points I'm going to cite for you, I want to tell you that I've sat in a lot of conferences trying to hash out language, but I have never been through such an exhausting experience as sitting with this group.

Our staff director is General Chuck Boyd. General Boyd, four-star Air Force retired general, six years in prison in Vietnam along with my friend John McCain. He was head of the U.S. Air

Force, Europe. But beyond that, he's very smart. And he's a very cerebral guy who really said let's come into the century, guns blazing.

We walked into the final meeting and we had computers in front of every position of the 16 commissioners and up on the board was the language which we had proposed. We spent roughly a day and a half fighting over that language. It didn't look anything at the end as it did at the beginning, which tells you that you've got a lot of tough consensus-building here and I want to just tell you what we came up with. What we were asked to do is consider the world challenge to this country during the first 25 years of the new century. That's a pretty healthy charge. Whether we have succeeded or not, only time will tell.

Let me tell you what our essential view of the future was—14 points. Some of them may seem obvious to you, but they really aren't terribly obvious when you look at the alternatives. We decided that one of our assumptions would have to be that an economically strong United States will remain a primary, if not the primary, political, military, and cultural force in the world for the first 25 years. Secondly, that the stability and direction of American society and American politics, which is in doubt, will shape U.S. foreign policy. That science and technology will advance and become widely available, but its benefits will be unevenly distributed.

Next, that world energy supplies will remain largely based on fossil fuels. That the disparities in income will increase and widespread poverty will persist throughout the world. An extraordinary point when you're talking about stability. That the international aspects of business and commerce will continue to expand. In other words, we believe the global economy will only accelerate. That non-governmental organizations will continue to grow in importance and the United States will work with and strengthen a variety of international organizations.

That we will remain the principal military power in the world. That weapons of mass destruction and mass disruption will proliferate. Nuclear deterrent and defenses, therefore, become essential. That adversaries from cultures different from ours will resort to forms and levels of violence shocking to our sensibilities. And that America will find reliable alliances more difficult to establish and sustain.

Now with those assumptions, which are a mouthful to say the least, for those of you who want to look at them closely rather than take notes, we will make sure that these are available. Let me tell you about the conclusions and then let me just give you some personal views.

Number one, the American homeland will be vulnerable to attack and our military superiority will not entirely protect us. Many of you may recall about six weeks ago that Secretary Cohen wrote a piece in the *Washington Post* which essentially said that Americans ought to prepare for the fact that there will no doubt be blood shed on our own shores. Not from conventional warfare, but probably from terrorism. I can tell you as chair of the President's Foreign Intelligence Advisory Board that not only do I not doubt that, but that it is almost inevitable in spite of the best intelligence apparatus in the world.

Advances in technology will create new vulnerabilities for the United States. Technology will spread at faster and faster rates. That new technologies are going to divide this world as well as draw parts of it together. That evolving global economic infrastructure will create new vulnerabilities both for us and our traditional allies. That energy will continue to have major strategic importance through the first 25 years. That all borders will be more porous. Some will bend and some will break. That the sovereignty of states will come under pressure, but will endure. That fragmentation and failure of some states will occur with rapidly destabilizing effects.

That foreign crises will continue to be replete with atrocities and terror. That space will become a critical and competitive military environment. That the essence of war will not change. That U.S. intelligence will face more adversaries that even excellent intelligence will not predict. As we look at the entire evolution of the U.S. military force which tries to respond and prepare for these kinds of assumptions, we have a strategy as to how we think that ought to be done.

I will quote to you what I think was one of the great remarks made by a military leader I've ever heard and I wasn't in the room when he said it. In fact, there were no rooms at that time. It was in Korea and General Van Fleet was the commander of Eighth Army—had just taken the Eighth Army over from General Taylor. And Van Fleet, Ridgway, and Taylor were all highly regarded. Van Fleet gave a speech someplace which we all read about in the *Stars and Stripes* in which he said that he thought that the infantry fighting in Korea was more like World War I than World War II. Van Fleet, of course, was a veteran of World War I, World War II, and Korea.

Essentially what he was saying was that with all of the changes in technology and all the time that had gone by, due to the terrain and due to the nature of what was going on, due to the equipment that the soldiers had been given by their political leaders, that in all that time, you had had a regression where World War I and Korea were more alike than World War II and World War I. I thought it was a very interesting conjecture on his part. More than conjecture, conclusion.

Let me finish up by telling you that we're trying to do something that will help give you the ability to go on a path of change that will give us, as a nation, the ability to persevere as a leader. I know that you will be looking closely at what we say. We would hope that what we do will have a major influence on the incoming administration whatever that administration might be. I want to give you some early insights without telling you what we will say because that would be presumptuous. I'm not sure what we will say. But I am pretty sure, knowing this panel, what we will not say and I want to just lay that out for you.

We will not say that the Cold War is over and we're now safe and secure. We will not say the United States should retreat diplomatically or militarily from the world scene. We will not say that high tech is the answer to all future challenges and that all 21st century challenges can be dealt with from the air. We will not say that. You know, I could get into a long discussion with you about my view about what happened at Kosovo and many of you could too. I will tell you that I think that the United States Air Force did an extraordinary job. I mean, they deserve high praise. But in a way, that kind of spoils you. Because that's not apt to happen very often.

You know, being an old, and I mean that literally, former infantry officer, I've got to believe that in most places somebody is going to go in on the ground and dig somebody out. I just believe that. I don't think that's going to change, I don't think the commission thinks it's going to change.

We are not going to say that big wars and heavy combat are gone forever. They may be, but we can't take that risk. We cannot say that boots on the ground are a thing of the past. What we will say, I'm sure, is that we must remain a world leader. That our security, safety, and prosperity should not be taken for granted. That what happens somewhere else will in some way affect us. That our range of challenges and contingencies is wide and varied. That we will need agility and flexibility and imagination to deal with all of them. We'll have to be able to figure out how to be more proactive and more sustained.

But the use of the military should not replace effective use and tools of other forms of power. What we need is a serious in-depth debate in this country to make the concerns of today and tomorrow understood by all Americans. It is a great disappointment to me that in the 1996 presidential election and, to some extent, in the 1992 presidential election, the issue of military preparedness was not discussed. In a world such as the one we live in today, it must be discussed and some of us in this campaign are trying to make sure that it will be discussed.

Finally, I guess what we say that sums it all up is that the world remains a dangerous place full of authoritarian regimes and criminal interests, and I would add terrorist interests, whose combined influence extends the envelope of human suffering by creating "haves" and "have nots." They foster an environment for extremism and the drive to acquire asymmetric capabilities and weapons of mass destruction.

Norm Augustine, who's a member of our panel, concluded our hearing before the House committee with a wonderful quote from Darwin. And I'm always glad to steal other people's quotes. Here is the quote. "It is not the strongest of the species that survives nor the most intelligent. The survivor is the species most adaptable to change." And we hope to give you some tools to help you effect that change, which is your major responsibility in the coming century. Thank you very much.

White: Good afternoon. I want to thank the Secretary of the Army and the Chief for holding this important conference. I think it's really an impressive turnout and you are to be congratulated for that. I was struck in the QDR and have been ever since at the problems we face in terms of all of the uncertainty around us. We have now been living in an era for some 10 years for which we don't have a name. We don't know quite where we are and we certainly don't know really where we are going. We don't know what the future is going to hold.

There's a nice little story about Justice Holmes being on a train a hundred years ago and losing his ticket. And the conductor recognized him and said, "Oh, don't worry about it, Mr. Justice. I'm sure when you get home you'll find your ticket and you can mail it into us." And he said, "Young man, the problem isn't where's my ticket, the problem is where am I going?" And that's our problem. And I would submit to you that we don't know where we're going and the world will unfold and we will be faced with a great many surprises.

The one thing I do know with high confidence is that if we extrapolate the present into the future, we will be wrong. That will not be where we are going. And to try to go there would be a very big mistake. The second point I would make in that regard is that the changes around us, I think, are more fundamental and are accumulating at a faster rate than has been the case in recent history. And I want to talk a little bit about at least two of those changes and what they imply for us in terms of the U.S. military and the issues we're addressing here today.

The first of those changes is globalism. By which I mean a networking and interconnectedness and interdependency across continents. Globalism is growing, as we look at it across the world today in economic terms, in social terms, in environmental terms, technologically, and of course militarily. All of these changes, which we call globalism or globalization, introduce a dynamic that will make the use of military capabilities, particularly for the U.S., more, not less, difficult in the future.

These dynamics change the role of the various actors in the process. Governments, sovereign governments, will, I think it's clear, have less flexibility and control over their destinies than has been true in the past. At the same time, non-governmental organizations have grown

substantially in terms of their influence on affairs in which we have concerns. International businesses, which are getting beyond the borders of their original homelands and operating as international businesses, also have more autonomy.

For the Department of Defense and its military forces, that means more constraints, it means more complexity, and it means less opportunity to act unilaterally. It means the world is going to be more difficult and execution of military operations is going to be more complicated.

The second point I would like to hit on is commercialization. And by commercialization, I mean the vast transformation that has taken place in American and international business in the last 20 years. Today's economy is creating virtual companies where people focus on their core competencies. Where they outsource wherever possible, wherever it makes sense. Where they put heavy emphasis on innovation and technological change. And where they cooperate with companies one day and compete with them the next day. This is a world in which organizations are changing rapidly, the ways people are being treated and managed and incentivized are changing rapidly. And of course there's a great deal of new technology.

The DoD has to adjust to that new world as an institution. If we do not adjust to that new world, we will be isolated, we will be left behind. Because it is now our responsibility in terms of that world to deal with it on its terms. We've made a fundamental set of choices in this department that say that we will not rely on captive industry or other captive systems for providing us with our capabilities. Quite the reverse. We will buy effectively everything we need, from people through technologies to equipment, in a commercial environment and a commercial marketplace. That is a fundamental change from where we were obviously during the Cold War.

The result of that change is that we have to learn how to adapt and adopt these technologies which are really created largely for commercial purposes. We have to find ways to first capture the attention of their providers and then find ways to develop them in terms of our uses because they will not come tailor made to us as has been true in the past. And again, the issue is one of making sure we're not isolated by responding to this commercialization in ways which are adaptive for us and make our institutions adapt.

And that brings me to my third point which is the need for DoD to adapt. I can't specify for you adapt to what. I would submit that many people in this room can't specify for you what this organization ought to look like in the future. But I can tell you, I think, the kinds of attributes that it ought to have in the future. It ought to be more responsive, it ought to be more flexible, it ought to have a higher degree of both cooperation and competition inside it. It ought to value innovation and it ought to value efficiency. This is not a prescription for a particular form in terms of the organization and how we describe it. It is a set of attributes of how this organization ought to grow and change over time.

Now let me make a few comments in terms of the vehicles that we need to use and are using in order to make these kinds of changes. First of all with respect to what we collectively call the Revolution in Military Affairs. We have to provide the devices by which we encompass inside RMA, the way we choose to deal with asymmetric threats. Conceptually, organizationally, and operationally, we cannot leave asymmetric threats outside our vision of RMA. To do so is to make these requirements, many of which will be the most important ones in my judgement in the future, orphans. To put them outside our institutional solutions would be a very big mistake. And so we have to expand the definition of what it is we are trying to do with RMA.

Secondly, RMA cannot ignore the capabilities and limitations of our allies and likely

coalition partners. I hope that some of the other members of the panel will speak to this issue. It is not enough for us as the United States to continually expand our technological and related capabilities while ignoring the capabilities and limitations of people who we know are our friends and with whom we're going to have to operate both militarily and in terms of larger issues in this world. To do so will not increase our capabilities even on the battlefield, but rather will reduce our ability and effectiveness over time. I think we have to step back and recognize that there are ways that we have to adjust what we're doing to the world around us.

The third comment I would make on RMA is that it has to be done in conjunction with the revolution in business affairs. When we worked on the Revolution in Business Affairs in the QDR, we focused on the cost savings. I think in retrospect we focused too much on the cost savings. That in point of fact, RBA is in large measure a response to this commercialization that I talked about before. And that makes RMA and RBA companions in terms of this organizational revolution that the DoD is going through and must go through if we're going to be successful.

Two other points that I want to make have to do with Goldwater-Nichols. The first one has to do with the theme of this conference, which is so well set up here and on the coffee mugs and so on, and that is jointness. We in the future will have to be more joint. The Secretary talked about this earlier. It is a fundamental requirement that we have as we evolve in terms of our capabilities.

But there is another point about Goldwater-Nichols that I want to make as well and that is that we need to expand the concept of Goldwater-Nichols, what its goals are, the devices that it uses, from which we've learned we can be very effective, to other agencies inside this government other than the Department of Defense, and to other non-military capabilities and non-military functions. Functions that are now traditionally performed by the domestic agencies need to be performed overseas. The domestic agencies must export these capabilities to meet similar needs in contingencies overseas. Functions such as public health, public safety, consequence management, and so on and so forth are all desperately needed.

Not to supply them is to leave by default these requirements to be dealt with by the U.S. military. Something for which we are not trained and which become a distraction to us in terms of our fundamental mission and our operational capabilities and over time will degrade our military effectiveness. I think we have a major challenge to convince others in the government that the requirement out there is substantially larger in this context, in this new world, and we're going to have to evolve a much more complicated response to it through the support of the domestic agencies.

In conclusion, all these changes will require, in my judgment, a continuous, rolling, fundamental set of changes to the military institutions. Those institutions of course are principally the uniformed services. It is the uniformed services in our system that are the engines of change. And while, yes, you need the leadership of the Secretary of Defense and other senior civilian officials in order to make things happen, fundamentally change will have to come from the uniformed services. That's where the mission is, that's where the people and the institutions are, those are the institutions that have to be changed and molded for this new future. And therefore, the senior leadership in the uniformed services have to carry this obligation to effect change.

It will not be easy. It is a major challenge. But only through such leadership will we be able to adjust to this ever-changing world that we face going forward. Thank you very much.

Naumann: It's a true privilege to be here and I appreciate very much that at least General Mackenzie and myself can offer some European views to this discussion. And of course it's a pleasure to be on the podium with old friends from former days.

To answer the question what the role of the military will be in the future is only possible if you have a clear-cut picture of what the first decades of the new millennium will bring to all of us. I have to confess, despite the fact that I agree with the assessment provided this morning so splendidly by General Hughes, I do not know exactly what will happen in the next 25 years and my crystal ball is slightly blurred. But I could offer three points which I believe will be true.

First, I believe that some 50 percent of the weaponry we may use in the year 2025 are not yet invented today. Secondly, the United States will probably still be the only superpower with unmatched military capabilities, able to act more or less at any place and at relatively short notice. But it could well be that you would be a superpower vulnerable to attacks by non-state actors using military means, including weapons of mass destruction.

General Klaus Naumann: The U.S. and her allies will face problems with conflict prevention, deterring non-state actors, and coping with asymmetrical threats. Only a trans-Atlantic approach will offer a solution to the proliferation of WMD, and the United States need not be concerned over the concept of European Security and Defense Identity.

Third, the United States will need allies to act militarily and politically. You may have the military capabilities to do it alone, but I think you would make a mistake if you acted politically alone. And you need these alliances in order not to over stretch your commitments. You need allies who are willing to share the risk and burdens of military intervention. Since, and that is my belief, most, if not all, future interventions will be coalition efforts. And I think this needs to be taken into account when we will shape tomorrow's forces.

Most of the deficiencies of coalition warfare, which we saw recently during the operation in Kosovo, can and will be overcome. But coalition operations conducted by democracies will not allow us to use overwhelming force. And one other deficiency will remain, as well, as an inherent weakness of coalition operations conducted by democratic nations. Namely, the ability to act in time. That is, preferably, preventatively. And I think this ability of democratic nations will remain marginal.

I believe we will continue to see conflicts like we have seen them after the end of the Cold War. I think they will continue to haunt us. And in all these conflicts, the natural ally of the

United States will remain Europe. Which, after all, is the only group of nations which share with you the same values. If you look at all your other alliances, you will not find a single alliance where all members share the same values. And these nations, by the way, carry at the moment some 80 percent of the burden of the deployment to Bosnia as well as to Kosovo.

We have to deepen and to widen the cooperation and we have to strengthen the European capabilities as part of NATO's capabilities. As long as these efforts by the Europeans are undertaken, there should be no reason on your side to be concerned if the Europeans talk about European Security and Defense Identity. After all, it was our big success in 1996 that we persuaded all Europeans to do this within NATO. And I would really urge you not to bash the Europeans for embarking on ESDI, but to encourage them to carry on. Since if you bash them, they will believe, okay, the big dog doesn't want us to do more so we lean back. Don't do this.

This renewed Atlantic alliance will have to cope with two giants, I believe. One which will primarily be the United States' task—to cope with China. And the other one, we have to address together. That is, to deal with an ailing and psychologically wounded giant, Russia, whose future nobody can predict at this point in time. But it seems that the relationship between the West and these two so different giants will be one for which there is little risk of a real military conflict.

There is a lot of evidence that these two big countries will have to solve so many domestic problems that they will not pose a real military risk to the United States or to NATO. There is little evidence that they will be able to field forces which the United States and its European [allies] together could not defeat. Hence, we should seek cooperation with these two countries in order to reduce the risk of a confrontational relationship. But no one can rule out that new alliances may emerge from the simultaneous renaissance of nationalism and religion we are confronted with if you look in our world of today.

The security problems we will have to cope with will be caused by the following reasons. First, the ever-widening gap of welfare between the rich, but over-aged nations of the industrialized world and the poor, but young nations in the developing world. The presumably unabated growth of population in the poor countries and the concomitant lack of potable water and other vital resources. The inclination of the poor to pursue policies which may include the use of force, to strive for weapons of mass destruction, and the temptation to believe that the rich can be defeated by "anathematical" threats such as terrorism.

We will see the continuing desire of many poor nations to acquire weapons of mass destruction. And we will see the phenomenon that we will see the parallel and simultaneous existence of three different stages of societal development and their associated forms of conflict. We will see simultaneously the pre-modern, the modern, and the post-modern societies. And we will see the wars which these societies fought in the past.

We shouldn't be too concerned about the pre-modern and the modern society type of war, but I think we have to think through what war means in a post-modern society. And I could imagine that we will see non-state actors using military means fighting each other on national territories or attacking national territories in a non-state actor effort. So the answers we have to find I think are not so difficult with respect to the pre-modern society. Although for us military, it will mean that we have to fight the very trivial, let's say tribal, warrior at the lower end of the spectrum. In the modern world, it is war we are used to. And in the post-modern world, it may be the non-state actor.

Consequently, the role of the military and the military power will change to some extent. It is not only for us to protect our nations against the traditional military threat. We have in addition to

protect our nations against the weapons of mass destruction. And there I think we, the Europeans and the Americans, have to work together since that is the only possibility to address, for instance, the threat posed to all of us by the proliferation of missiles and weapons of mass destruction. Only in a transatlantic approach we can find the solution for that.

For the Europeans, this will mean that we have to seek cooperative solutions. We will presumably embark increasingly in Europe on multinational defense approaches since the more expensive parts of the ticket can no longer be paid by individual nations. And this of course is a difficult political decision since it means to some extent to be prepared to transfer sovereignty to an international body. And in NATO, this means that we have to harmonize these two different approaches: the multinational approach of the Europeans and the national approach of the United States of America. Not an easy task for politicians, but why should we envy them for what they want to do?

The non-state actor will presumably pose the biggest problems because they are hard to detect, hard to identify, and very difficult to deter. In many cases, these risks will blur the line between military and police. It will be most advisable to seek solutions which would allow common responses and which might see closest cooperation between police and military forces. I believe this is a new area in which the military may play a role, but it is also an area where traditional military forces can hardly be applied.

What does it mean for our national strategies? So allow me to end with a few conclusions. First, the United States and its allies may continue to be able to deter any aggression against one of them or all of them through deterrence. But they will face problems in conflict prevention and in deterring non-state actors and they will have difficulties in coping with asymmetrical responses. I think these are the three Achilles' heels of our defense establishment.

Secondly, strategy should continue to consist of a combination of preventive defense, selective engagements, and cooperative security. The latter being pursued primarily through projection of stability efforts such as Partnership for Peace is one. Third, such a strategy requires forces which are capable to conduct joint operations primarily in coalition or alliance operations. They need to be flexible, ready to deploy at very short notice. They need to be lean and agile. Able to fight under austere conditions far away from their bases back home. And they should never forget the need to sustain those operations.

The use of force will not be a favorite decision taken by our politicians, but it will be unavoidable. We, the military, should insist, should politicians intend to go for the use of force, first on the clarity of political objectives and, secondly, on the preparedness on the side of the politicians to see it through as soon as they enter the route of military operations. If you take these two points and look back at the recent experience in Kosovo, you will see that we did get it right entirely and particularly in these two points.

The problem for the use of forces will remain that we will probably not be in a position to apply two principles of war which are dear to all of us. At least we learned them as young lieutenants in our respective war academies. First, to achieve strategic surprise. And secondly, to apply overwhelming force. This will not be possible in coalition operations. And there's another unpleasant reality. No technology will ever guarantee us a war free of casualties or fatalities. And there's little evidence that we will succeed to enforce our will against an opponent who has accepted war by fighting him from a distance. We have seen this in Kosovo, by the way, as well. And that's a point where I disagree with what Senator Lieberman said this

morning. Whatever technology you will have, it will not be possible to bomb someone into surrender who is determined to accept war.

At the end of a conflict, there is always a need for boots on the ground. And I'm not saying this since I am in an Army-dominated environment at this point in time. Your allies harbor no illusions in this respect. It may be time consuming to get them to act, but when they are determined to act together with you, you can rely on them. That they will stay on course even if they have to take casualties. And I'm saying this as perhaps the youngest nation joining these out of area operations. But I had no doubt during the Kosovo war that Germany would stay on course even if some of our pilots had been shot down.

We have to do all this in coalition operations, but we should have no doubt and should harbor no illusions. We, the military, will not really shape the events of the future. The events of the future will be shaped by international business which will increasingly reduce the traditional role of the national state which we know. Military deployment will remain the last resort of politics. Applied on a case-by-case basis and probably always in coalitions.

It will be a challenge for all of us to be ready and to be trained in these three different forms of wars which I alluded to earlier: the pre-modern, the modern, and the post-modern war. And I don't envy those of you who are in active service to train the forces to be ready at short notice for this wider range of military missions. But on the other hand, I am convinced as I always was, as long as we stay together, one team, one mission, we will succeed. Thank you.

Prueher: I would like to add my pleasure at being a part of this panel with people some of whom I've known a long time and respect a great deal. And also I'll probably speak for all of us that we're glad to be here and trying to do a little bit to maybe skew our nation's Army and support our friend, Rick Shinseki, who is both the leader and the steward of this Army through this period. It's great to be here with you.

I need to give a little disclaimer. Jacqui gave some of it. For those of you who are familiar with our vibrant democracy and our processes, I am between a Senate confirmation hearing and a vote today. So if I'm a little mealy mouthed on some of my answers or some of the things I say . . . I've completely amended my remarks today, but please forgive me and understand that a little bit.

The one other point I'd like to make is just I was thinking a little bit as Klaus was talking about the discussion of NATO expansion. And in the Pacific a year or so ago, we had the first ever CHOD's conference, the Chiefs of Defense Conference, which we modeled after what NATO had done. And we had this meeting and a couple of the chiefs of defense asked me what's going on with NATO expansion. And I said, well, just last month, General Naumann was out here because he looks at Hawaii as the western most part of NATO. And I had to explain to them a little bit that he was only expressing his sense of humor about this.

But so today I'd like to make five points and fairly short ones and ones that have been made already before in various ways, but maybe we can take one more look at it. For those that study history, history, as John White pointed out, doesn't go in a straight line. And for those of you that are engineers and look at systems, it goes basically in a sine curve and it may be damped or it may be an undamped sine curve. And so what we are seeing right now is a time on the sine curve where our nation enjoys quite a bit of transcendence both economically and militarily. I think the fact that history does go in sine curves helps give us a little sense of

humility about the articulation of hubris that occurs in the nation and in the world today. So that's something where I think that humility will stand us in good stead.

But first, let's think about security in general. A lot of us have used the quotation that Joe Nye gave us about security being like oxygen. That as long as you have it, you don't think about it. When you don't have it, for those of you that have tried to swim underwater or been held underwater or something like that, when you don't have it, it's the only thing you can think about. Our nation and a lot of other nations in our world these days have grown up with a general sense of security throughout the lifetime of most of the voting populace for those that have voters. For the last 40 or 50 years, we've had general security.

A lot of you have spent time in the Balkans, a lot of you have spent time on the Levant and the Mediterranean where some of our friends don't think in terms of 30-year mortgages because they just don't have the opportunity to do that. But we have the security, we enjoy it, we tend to take it for granted. And the military security undergirds this overall sense of comprehensive security that we have economically and politically.

Ambassador Joseph W. Prueher: "It's important for us as we go into the next century to think in terms of comprehensive security . . . embodying all the elements of national power." The future role of the military will be to act as a balance to the non-military tasks in a national strategy of preventive defense.

And this brings up my second point where I think it's important for us as we go into the next century to think in terms of comprehensive security. Security for a nation, if you go back to Civics 101, embodies all the elements of national power. Tom Friedman wrote a pretty book, I think, about *The Lexus and the Olive Tree* where he listed six parts, but let me get down to three where we just talk about the military, the economic, and the political dimensions of security.

In these days, where we don't have a transcendent threat in the world, we need to look at security in various pockets of the world as the intersection of political, economic, and military. And we have to have the right combination of those in order to provide security in a part of the world. And this is pointed out. John White made this point a little bit, talking about the economics. Klaus made the point as well as that the commercial interests in economics are tending to dominate this and diminish somewhat the role of the military. They never drive that role to zero and, when they do, we will be in peril, I think.

The next point that I think we need to look about, and this is pandering a little bit to Bill Perry and John White and Ash Carter who came up with the term of "preventive defense." In

fact, wrote a book about it which can be at Harvard and various places and your local bookstore. But I'm not trying to sell the book today. But the notion of preventive defense is one of foresight. Of trying to do things in advance that head off having to come to actual physical conflict. Now this is sort of a complex notion because, in our world today, there are a lot of tough customers and if they think preventive defense is trying to avoid conflict, it is more likely to happen.

You have to be prepared for conflict and prepared and seem to be willing to engage in conflict. But if you are foresighted, you can head off conflict and work in a sense of preventive defense. And I think this is where a lot of our effort should be devoted. As I sort of transition careers, I think about that more and more. But as you know, foresight doesn't always work and so we have to hedge our bets and we hedge our bets with the military.

So the role of the U.S. military through this period I see as one of a balancer, a fly wheel. We can show up in various places. Particularly where I've been in the last little while in Asia and the Korean Peninsula, with Japan, with the issues in Northeast Asia, with the issues in Southeast Asia which have been so challenging the last little bit. And also Australia is doing such a great job in leading that effort.

But our military has been discussed fairly in a complex way of the various qualities that we'll need. But I'd like to get, again, not trying to pander to General Joulwan here, but a football analogy, is our military needs to be linebackers. We need to be the ones that can run with the fast and yet hit with the heavy. And we need to be multi-faceted and we need to play across a large spectrum of warfare. Modern, post-modern, and pre-modern warfare as Klaus talked about. These are the issues that we have to get at. We need to think in terms of the flywheel and creating stability.

And finally, a point that is a little off this theme but one that I think gets at the intersection of the political-military decision making in our plans, is to never forget that the use of military force must be a proxy for our national will. Sometimes there is a tendency if parts of the military are easy to use and we've got to do something, that we end up using military force when it may not, in fact, be a genuine proxy for the will of our nation. And this is something with which we must take great care. And we must take care with this at our political-military interface and this is something that our senior leaders have to deal with as we look at the use of the military.

And this is even true at low levels. It's especially true at higher levels of force. And I think if we keep this notion in mind, it's something that will be of great utility to us as we move forward into the next century. Thank you.

Mackenzie: Well, ladies and gentlemen, I always seem to be the chap who gets that moment when there are about 12 minutes left. I have a presentation to give and you also want some questions. So Jacqui, when she introduced or talked to me outside, she said, well, that's why we put you last because at least you're speaking your mother tongue and you can get on with it.

I come to you as a European, a Briton, and a Scot. Not necessarily in that order. But to bring perhaps a slight damp, typically British cloud over this gathering here. Because however responsive you are,—and I like the word responsive, but I much prefer the word effective—I think it's effectiveness that we're looking at. And in terms of operations, you are almost certain to be operating with others and then the whole business of effectiveness becomes an altogether different challenge.

What I'd like to do in the few minutes I have here is just give you some of my experience as the Deputy Supreme Allied Commander with responsibility to General Joulwan here, to the chairman of the Military Committee, Klaus Naumann, to your Chief of the Army Staff down there, who was in fact a subordinate of ours at the time. How do you work an operation like this in this difficult multinational environment?

Europe has changed enormously. That's been said several times, but unless you've had the privilege of going and visiting all 27 countries of the partnership program, you just can't begin to imagine where they're coming from. You are starting from a high point. They are starting from an incredibly low point. But this doesn't make them poor allies. But if and when you have to do business with them, it will make them very uncomfortable bedfellows. And I'd like to explain really why.

General Sir Jeremy Mackenzie expresses concern that the pace of the U.S. Revolution in Military Affairs is outstripping the less-capable, but important, European countries.

I think it comes as a basic rule of thumb that the more multi-national an operation is, the less effective it is militarily, but the more acceptable it is politically and the absolute reverse is true. You will be dealing in an organization which is not as effective militarily as you would like it to be and as you train and prepare and organize yourself to be from here, 3,000, perhaps 4,000 miles away.

I look at it in two parts. First of all, structure and then pick up my key word, effectiveness, again. In terms of structure, you will be dealing with a headquarters which is not a national one. You may well be providing the nucleus of the national headquarters, but you will find bolted onto it a contribution from all the nations who have contributed the contributing forces. And you have to work out how to handle them. General Rick Shinseki knows that better than anybody serving here. Thirty-two nations present a serious challenge when all of them want officers on your headquarters.

Secondly, which posts do they have? Believe you me for the IFOR, the arguments were labyrinthine in trying to establish who would have what post. And most countries want at least one star above that which they justify. You can end up with enormous headquarters filled with starred officers. I could have manned the IFOR headquarters with two star generals easily. I couldn't find any privates.

Within that headquarters, you will tumble over the issue of intelligence sharing. Intelligence in an international environment is cartels within cartels. I can speak to him, but not to

him. In the Ace Rapid Reaction Corps, which I commanded, I could share intelligence with my American colleagues and got it from a very high level from the United States, but I couldn't with my Italian deputy or indeed with my German. Cartels within cartels and how do you handle that?

Communications, capability, data sharing, digitization of the battlefield. All these are grand ideas here, but please remember us. The key players in Europe will be keeping up with you, but there will be many, many who are not and you need to just cast an eye on them and consider them when you work out how to do business, how to operate with these countries.

Then how do you organize your force? What states of command are you going to have? States of command are basically Old World speak in NATO. OPCON, TACOM. Understood to us, but, believe you me, when you need to use them for real, droves of lawyers are involved to interpret precisely who has what over whom. In fact, the standing joke in NATO at the moment is it's not OPCON, TACOM and so on. It's UPCAN, UPCAN'T, UPWON'T, and for those of them who don't share our love of British beef, UPNON.

You'll probably need to organize a lead nation status amongst your structures which you deploy on the ground. And you, as Americans, the biggest players, will undoubtedly have to put your arms around several lesser players within your own sectors. And you need to think through how you do this. I'll come to logistics and so on in a second.

So if that's the structure which you're going to have to think through when you build this modern force to operate in an international environment, how do you make it more effective now? Well, I like to think that we shouldn't be using the word joint now, we should be using the word integrated. We should consider the implications of total integration of, a fusion of political, economic, diplomatic, humanitarian, civil, and military. An approach, any operation we do, fusing all those elements together. Because my experience is that most of the time they fight each other.

And then on the ground, you need to work out how the military commander hands over to a civil administrator. How he becomes a supremo on hand and hands over to another. And unless you differentiate clearly the levels of command between strategic, operational, and tactical, you'll get in a muddle. And I think probably some of the muddle of Mike Jackson and the language and the difficulties he had with the Russian incident were probably because he was operating at the tactical and the strategic at the same time.

Another aspect of effectiveness is getting there. It was Lord Carver in our Army, a very distinguished soldier indeed, who I recall at the staff college when I was the commandant there saying 60 percent of war is getting there. It is the challenge for us. As the force generated for NATO, we had millions of troops, we had hundreds of tanks, we had thousands of aeroplanes, but getting them there at the right moment, to bring them to bear at the right time, was extraordinarily difficult. We talk about rapid reaction, immediate reaction, we talk about 96 hours or 120 hours. Doing it, believe you me, is a problem. And as I look across all the countries of the alliance, they're too heavy, too slow, and far too procedural. We need to think through how we sharpen up that process.

Time in theater has to be, in terms of training and preparation, kept to the absolute minimum. It's no good moving like light and then spend six months getting yourself effective. You'll also be short of specialists. If that's one message I like to leave as an ex-D-SACEUR, consider the role of specialists. You run them out and you run out of them extraordinarily quickly.

Force protection runs counter to all this. In the United Kingdom, for example, we were very happy with an infantry fighting vehicle called the Warrior. Well-protected, we faced the Russian, the might of the Soviet Union at the time, with this vehicle and perfectly happy to use it to fight the Russian. To send it to Bosnia, we up-armored it immediately with a foot of armor on each side. This was force protection because of our fear of casualties. A factor I'll come back to.

But if you can generate light forces which pack a punch and can sustain themselves and can be backed up by heavier forces in that sequence, then you're almost certainly on track and there are very few countries in the alliance and around that can do that properly.

Logistics is another theme. Do you know, amazingly in Bosnia when we started, eight out of 10 of everybody there was a logistician. The tooth to tail ratio was appalling. But it had to be. These sorts of operations, we rolled over our logistic base first. We laid it out first and then rolled the tanks and everything over it as a secondary operation. The understanding of that, the working out of how to make that lighter, how to avoid within the national responsibility this tremendous desire for everybody to bring the same things.

We had, I don't know how many medical chains—10 or 12. There's absolutely no reason why a British soldier couldn't be treated in a German field hospital and an American one and a French one at all. But casualties, responsibility, and the desire to have our own medical meant that we all went with them. That's changed, but it was a cultural change which took time and it was driven by a shortage of medical personnel more than anything. But logistics, you need to think light. And it's extraordinarily difficult to do, believe you me. It is the heaviest part of the operation and I would suggest very firmly that in your consideration of how to be rapid and reactive, the consideration for logistics should loom very large in your thinking.

And then the whole question of interoperability about which we've heard today. I'm entirely of the view that interoperability is not really just about equipment. It's actually about people. It's about an attitude of mind. I well recall an intractable problem we had in the Ace Rapid Reaction Corps trying to fuse together two different communication systems; a French one and a British one. They just couldn't and hadn't been able to speak to each other for 10 years. When we put them together in the Ace Rapid Reaction Corps, a sergeant from each Army fixed the problem overnight. They fixed it. They had spent millions trying to sort it out in our own countries.

People can fix a lot of this. It is about attitudes, it's about training, it's about understanding. And recognizing that you'll never get everybody with the same equipment. It is a fact in the alliance today that there is not a single item of equipment shared from north of Norway to eastern Turkey by everybody. With the exception of diesel and that was changed by the Americans because you changed your type of diesel.

And my final point, just to reemphasize very much what has been said by others concerning casualties. It links to force protection. It is the curse of today for us military commanders. We have to live with it. But it was very much brought to my mind how very long a way we have come when I spoke to Staff Major Alexander in my own organization in London, the Chelsea Pensioners. Wonderful old soldiers from the Great War. And he reminded me of the Somme that had 20,000 killed before breakfast. Now we never want to do that again, but we may have it happen to us for some other completely different reason and we need to educate that war can be bloody and we need to make every effort to avoid it.

But it mustn't be a curse. We mustn't develop timid armies. There are many around that are muscular and filled with equipment and filled with brilliant people, but they're timid. And that to me is the curse of today.

If I could just finish then perhaps by, as everyone else has a quote, the one I particularly like about our allies is, in the dark days of the war in 1940 when the Axis had in fact taken the whole of the European mainland from northern Norway right down to the Mediterranean and Churchill was told this news he said, "So we are alone. Thank God."

Davis: Now unfortunately because Senator Rudman and Dr. White have to leave promptly at 3:15, we have time for only a few questions. Who would like to start? Yes, over here. Please identify yourself.

Audience Member: The commander of TRANSCOM during the Gulf War stated that 90 percent of the equipment and dry cargo moved by ship. Since that time, three major American shipping lines have been bought by foreign interests: APL, Sealand, and Lights [*sic*]. And also a large number of ships around the world are owned by Asian interests. I think about 80 percent of the dry cargo ships. And also 218 ships had to be chartered from foreign flags for use during the Gulf War. The Panama Canal is now controlled by a Hong Kong company. Is the United States absolutely equipped to deal with all eventualities in the effect of an extended ground war at a distant place?

Davis: Who would like to take David's question? Admiral Prueher, you seem to be the only former CINC, the U.S. CINC on the panel. Would you like to?

Panel Member: I don't think you ought to say anything, Admiral.

Prueher: I don't either. I was going to beg off in that same manner.

Panel Member: I think the simple answer to the question is I think that is a totally overly stated case about the Panama Canal being controlled by Chinese companies. True, they have bought various port facilities and apparently control them, but I could assure you it would take this government the speed of light to do whatever it had to do to maintain sea lanes and, frankly, to get cargo ships if faced with a crisis. We have plenty of tools to do that with.

Davis: Any other questions? Time for two short questions. We have a question here? Yes, please.

Audience Member: But to follow up for the rest of the panel, the two issues of burden sharing and, conversely, the military technological convergence that we're seeing, is there a balance? What is it?

Davis: General Naumann, would you like to start since we're talking about that infamous technology gap?

Naumann: First of all, there is indeed a gap. In my view, this is a gap that consists of three sub-gaps. First, we have a technological gap between the United States and the European al-

lies, primarily in the field, what you call C^4I. We can close this, but this will require some preparedness on your side as well to transfer technology. Otherwise, we will not have a problem. And in the United States, you would have a problem if you approached parliamentarians by asking to buy European. They react angrily if you told them to buy American. So we have to find a solution, but I think it's feasible.

Secondly, we have, I should say, a capability gap that is the result of lack of political will. The Europeans could easily muster forces which are capable to have position guided munitions, things like this. That's not a technological miracle and a hurdle for the Europeans, it's a lack of political will. And this has to be addressed. I think Kosovo was our wake-up call, at least for some Europeans. And I think they will take action slowly, but they will do it.

And then you have a gap in between the European allies where you have a first league and you have a second league and perhaps even a third league. I don't know. We have to arrange for a solution that will close this gap as well. I think these are the gap challenges that are ahead of us. But I think we can find solutions if there is the political will to provide the necessary funds to do it and, secondly, if there is some preparedness on your side to go for some technology transfer.

Which on the other side, we offer advantages to you as well. There are areas where the Europeans still have some possibilities to offer—things which you would like to have as well and which they have in their forces right now. Just to mention the famous example of the howitzer.

Davis: Of course General Naumann knows that it's a virtual victory to have gotten funding for the MEADS program in the United States to sustain a collaborative effort. But Dr. White, I think you wanted to . . .

White: I just wanted to build on what General Naumann said. As I mentioned in my remarks, I think we get too fixated on the American solution and too fixated on technological solutions. It's part of our culture. But in point of fact, the challenge before us as everyone has said on this panel today is how are we going to fight and win effectively. And we're going to fight and win effectively, as General Mackenzie said, and be effective only if we do it together. We don't do it together, we may in some sense win the battle, but lose the war.

So it's not enough to simply say we're going to go pell-mell forward with our technological advantages. There is a bigger challenge here. It has to do with how we organize forces, how we cooperate with our allies both in terms of military capability and the larger issues on which we have common objectives. And those have to be built into this change which we're going through and have to be an explicit part of the change.

Davis: Yes, General Naumann.

Naumann: One sentence to what John White just said. I would really argue we should not continue for too long a time with this burden sharing debate since otherwise we will end up with a bean counting exercise of unforeseen dimensions. The Europeans will tell you we are providing 80 percent of the forces in Bosnia and in Kosovo. Of course you provided 85 percent of the air campaign. The Europeans will start to tell you that we are doing most of the stabilizing efforts with the East Europeans and with the Russians and they will start with all these wonderful statistics what they have given in terms of money to the Russians to no one's avail. You don't know it, but anyway, they did.

But I would really argue let's find a solution like John White just said it. To work together to make this alliance once again an entity which thinks together, which fights together, and which succeeds together.

Davis: General Mackenzie, would you like the final remark?

Mackenzie: Just one final remark if I may. There is an aspect of burden sharing which is in procurement. Some countries in the alliance in particular say, all right, we have tanks and you have tanks, but you buy the tank transporters and we, therefore, because we're close allies, don't bother. Please don't do that. We need the United States and Europe to be large. We tremble slightly at the thought of the U.S. becoming small and sharp and clever. We need a large hammer somewhere. And so as a European, don't think too small.

Davis: It remains for us to thank our distinguished panel.

Anticipating Today the Essential Capabilities for Tomorrow

Panel 3
Dr. Ashton B. Carter
General George A. Joulwan
Lieutenant General Thomas G. McInerney
General Michael P. C. Carns

Tuesday, November 2, 1999—3:30 to 5:00 p.m.

The security challenges in the early 21st century require forces to respond more quickly, more decisively, and with greater precision. In effect we must define the military capabilities we seek in the new revolution in military affairs. Although this revolution will be driven by perceived needs and future threats, significant change in our doctrine, organizational innovation, and decision making capability must accompany technological change. Just as critical as defining the need for new capabilities is identifying a process for realizing them first and then getting them into the hands of soldiers, sailors, airmen, and marines in a timely fashion.

Summary of Proceedings

- The greater precision and lethality flowing from the RMA will be the hallmarks of our future forces. It is critical to balance the RMA with traditional military power, measured by end strength and some "low-tech" weaponry (tanks, infantry fighting vehicles, aircraft, and ships).
- Although the U.S. force structure must be tailored to emerging missions (counterterrorism, WMD proliferation, homeland defense), the complexity of the emerging security environment requires capabilities that can adapt to a variety of conflict scenarios.
- Reducing infrastructure, bringing the force structure in line with strategic requirements, and adopting more efficient logistics, personnel, and administrative practices are the keys to freeing up needed funding for modernization.

Analysis of Proceedings

A strategy of preventive defense demands a reorientation of the traditional U.S. approach to military affairs. It is a strategy focused on taking the necessary steps now to avert or minimize future potential threats to U.S. national interests. The effort to prevent WMD proliferation in the former Soviet Union under the Nunn-Lugar Cooperative Threat Reduction Program is illustrative of preventive defense. While the success of the RMA in improving traditional military capabilities is promising, our ability to initiate a "parallel RMA" to counter looming asymmetric threats leaves much to be done. The practice of assigning new missions to existing forces is no longer appropriate in a transformed security setting. New threats, especially those categorized as threats to vital interests, but also the other types of contingencies for which

military forces are deemed necessary, call for a reorganization of the Department of Defense. Such an undertaking would require a fundamental revision of the 1947 National Security Act perhaps along functional lines. There are several areas that fall outside the existing DoD organizational hierarchy: asymmetric warfare, joint information technology development, joint procurement, homeland defense, and peace enforcement, as in Bosnia and Kosovo. To execute such sweeping reforms the Department of Defense would have to reverse the steep decline in R&D spending and exploit commercial technology more effectively. Despite the lack of public clamor for defense reform, the national security community should act now to take fullest account of the fundamental transformation shaping the global security environment.

Although two nearly simultaneous wars are not the most likely contingencies confronting the United States in the near future, the possibility of such conflicts remains sufficient to justify the presence of necessary U.S. military capabilities. The Armed Forces must have the strategies, doctrines, and forces needed to execute the full range of likely missions within the concept of Strategic Responsiveness. The principle of integrated military command based on the Combined Joint Task Force (CJTF) concept, as demonstrated by NATO, will be a cornerstone of U.S. operations spanning the range of plausible conflict scenarios. Retooling our Armed Forces will demand (a) greater organizational flexibility; (b) improved agility and rapid-deployment capabilities within the warfighting commands; and (c) expanded support to the activities of law-enforcement agencies, civil authorities, and international organizations. Developing these roles and further refining those of our joint civil-military staffs would improve U.S. efficiency in responding to future contingencies.

Understanding the basic military lessons from Operation ALLIED FORCE gives the Armed Forces an important perspective for the future. First, the experience of the U.S. Air Force exposed shortfalls in sustainability and modernization that plague all of the Services. The force structure is too small and is aging rapidly because of inadequate R&D and procurement. While it is important to improve flexibility, sizing the force correctly is also a central element of adapting to the early 21st century security setting. For instance, the United States emphasizes the use of stealth aircraft in order to minimize casualties; yet there are fewer than 75 of these aircraft in the entire Air Force inventory. The escalating demands for precision weaponry have depleted the inventory. Shortfalls in cruise missiles and precision guided munitions during Operation ALLIED FORCE illustrate the degree to which the procurement cutbacks of the 1990s have eroded U.S. early 21st century military readiness.

Improved cooperation between the military and the private sector is crucial to successful technological advancement and logistical development in the Services. While the RMA will bolster the capabilities of the warfighters, a Revolution in Business Affairs is needed to streamline logistics and infrastructure. Improving the defense acquisition process is critical. The current acquisition system is an artifact of the relatively predictable threat environment of the Cold War. To accelerate the process of designing and fielding weapons, the United States must be able to: (a) anticipate the essential capabilities that will be needed tomorrow; (b) translate these capabilities into concrete operational requirements; (c) determine what technologies should be exploited to fulfill these requirements; and (d) dramatically shorten the lead time from R&D to the deployment phase.

The U.S. Services must abandon centrally planned Future Years Defense Plans and move instead to milestone-driven programs that harness private sector business dynamics. Competition among defense contractors will remain a key element in developing new systems rapidly and

at reasonable cost. Modernization funding must be boosted. Shedding unneeded infrastructure and placing greater emphasis on outsourcing activities such as accounting and finance would enhance efficiency and reduce duplication of effort with the DoD and the Services. The traditional 20-year lag between the identification of a requirement and fielding a weapon system is clearly unacceptable in a dynamic security environment in which technologies are changing so rapidly that today's innovations become tomorrow's obsolete systems. Force planners are faced with problems brought about by the increasing obsolescence of equipment. The Armed Forces should purchase modern weapons in smaller buys rather than pursuing large-scale production runs that may be unaffordable under present budget constraints and, in any event, may be rendered obsolete by rapidly changing technologies. This approach to modernization must be designed in such a fashion that it does not impede combat efficiency by creating a force made up of a mix between newer and older systems. The less desirable alternatives may be a force consisting only of older systems.

Transcript

Pfaltzgraff: We now move into the third and final panel session for this, the first day of our conference. The title of this panel is "Anticipating Today the Essential Capabilities for Tomorrow." As we prepare for the challenges of the early 21st century, it seems to me from what we've said so far today, we are generally agreed that we will need forces that can be used more quickly and decisively and with greater precision. These are among the characteristics and capabilities that we're going to need and we will need to seek these capabilities from a Revolution in Military Affairs.

This session—session three—addresses several key issues that are related to tomorrow's essential capabilities. And I wanted to outline some of these issues as we hoped they would be discussed. First, requirements for littoral and other maritime operations: maneuver, warfare, and airspace control. Secondly, forward engagement and power projection requirements. Thirdly, how do we enhance joint and combined? And we emphasize combined here as well. That is, alliance/coalition capabilities. Fourthly, how do we translate the missions that we will need to undertake in the early 21st century into force structure options?

These are of course fundamentally important questions that we're attempting to grapple with here. To help us address the important issues for this panel, we have indeed assembled a distinguished group. I would like to introduce each member of the panel in the order in which the presentation will be made. First, Dr. Ashton B. Carter. Ash Carter is Ford Foundation Professor of Science and International Affairs at the John F. Kennedy School of Government, Harvard University. And most recently, as was mentioned in the last panel, he is co-author of a book called *Preventive Defense*. He is also a former Assistant Secretary of Defense for International Security Policy, an appointment which he held between 1993 and 1996.

Second on our panel, we have General George A. Joulwan, who is a former Supreme Allied Commander in Europe and Olin Professor of National Security Studies at the United States Military Academy. I might add that among General Joulwan's other accomplishments and assignments, tours, he was Commander in Chief, U.S. Southern Command.

The third speaker on this panel is Lieutenant General Thomas A. McInerney, United States Air Force, retired. He is presently President and CEO of Business Executives for National

Security or BENS, as it is known by the acronym. General McInerney retired from the United States Air Force in 1994 after of course many important assignments, including Assistant Vice Chief of Staff and Director of the Defense Performance Review.

Finally on this panel, we will be hearing from General Michael P.C. Carns, who is also United States Air Force retired. He is President and Executive Director of the Center for International Political Economy and former Vice Chief of Staff of the United States Air Force. I might add that he was director of the Joint Staff during the Gulf War and during Operation JUST CAUSE in Panama. So with those opening remarks and brief introductions, I turn to our first presentation by Ash Carter.

Dr. Ashton Carter: "I see in our country a dangerous complacency toward national security affairs . . . we are seriously failing in our attitude towards the international problems whose solutions will largely determine our future: the 'A-list problems.'"

Carter: Thank you, Bob. Thank you all for coming today. I want to extend a particular thanks to General Shinseki for organizing this very useful conference and also to commend his able staff which includes a few superb former Harvard students whom we managed not to ruin and are still productive. I don't want to put words in Eric Shinseki's mouth, but I think the guiding philosophy of this day was that we have the best military in the world and the public knows it. The military is one of the few institutions of our government that the public, when polled, believes is doing its job properly, competently.

But all that approbation, which I share, however deserved, I think General Shinseki is telling us is not a birthright. It's not a fact of nature. It's something that's got to be earned and re-earned. And now these are my words and not General Shinseki's. I see in our country and our defense community a dangerous complacency: a complacency toward national security affairs. The public for 10 years has enjoyed essentially a honeymoon from thinking about national security at all. They're all out trading dot.com stocks and worried about a stock market bubble and they're not worried, as well they should be, about a security bubble.

I am worried about a security bubble. And nowhere is the complacency of which I speak more evident than in strategy or the identification of priorities for defense. We're a decade into the post–Cold War era and, as is frequently noted, we have no other name for it than that. Post–Cold War, which means we know whence we came but not where we are or where we're going. And so I want to begin by asking ourselves what is the essence of the post–Cold War world in

strategic terms. And I'll start with a quotation that inspired Bill Perry and I to work together on what will be the first part of this talk.

George Marshall in an address at Princeton in 1947, at America's previous last great strategic transition after World War II, Marshall said, "Now that an immediate peril is not plainly visible, there is a natural tendency to relax and to return to business as usual. . . . But I feel that we are seriously failing in our attitude toward the international problems whose solution will largely determine our future." Well, what is the strategic essence of this world? What are the problems that will largely determine our future in Marshall's words?

Well, if our dot.com trader goes to the newspaper or (since few of them read the newspaper anymore) turns on the TV and has done so over the last decade, they can be forgiven I think for having the impression that the issues of our times—the defense issues, security issues in the post–Cold War world—reside in such places as Kosovo, Bosnia, Rwanda, Haiti, Somalia, East Timor. And while these are important issues, I think you know and I know that they don't threaten our vital interests directly. And that while important, they not only not threaten our vital interests directly, but let alone do they threaten national survival or our way of life or our position in the world in the way that the struggle with the Soviet Union did for 50 years.

And so in our taxonomy in the book we wrote, we assigned these problems that are so prevalent in the headlines to the "C-list." The strategic C-list. Important problems, but belonging on the C-list.

Now if you look not at the headlines, but at the defense budget, you would conclude that the most important security problems of this era are to be able to fight and win handily, however you want to define that, two major theater wars: one in Southwest Asia, one in Northeast Asia. These, unlike the C-list issues, *do* implicate vital interests of the United States. And unlike the C-list issues, we have no option to pick and choose among them or to opt out of them. They do affect vital interests of the United States, but not our survival or our way of life or our position in the world. So we assigned them to a "B-list."

And the B-list issues are, for Americans, for our dot.com trader, familiar strategic territory. They're imminent military threats as traditionally defined. And what do you do with imminent military threats? You deter them through ready forces. Now that's a formula Americans have had trouble grasping in the past. It took two world wars to understand that it was better to have standing forces to deter aggression rather than wait for aggression to occur, mobilize, and defeat it. Well, we all got it after World War II and so this is a familiar strategic formula, it's not a stretch for most Americans.

So what does that leave? What's on the "A-list?" That is, what is on *our* A-list: security problems that might threaten the survival, the way of life, or the position in the world of the United States? That might steal the headlines abruptly, immediately, compellingly from the East Timors of the day and abruptly give some new name to this era that we fail to rename? Well, the good news is, the obvious news is that for 10 years, if you define the A-list in terms of imminent threat, the A-list is empty. That's what having the Cold War over means. So instead, today's A-list is populated by threats that *might be*, not threats that *are*. But threats that if they come to be, are big. Bigger than the B-list, way bigger than the C-list.

This is strange strategic territory I think for Americans and for most of us. And what it requires and one of the things we discussed in our book is a preventive strategy, number one. And number two, a strategy of preparation for the long haul and preparation for the A-list, not just for the B-list and C-list. And it is in that connection that I think we need to return to George Marshall's

formula. I fear we are seriously failing in our attitude towards the international problems whose solutions will largely determine our future.

Now we identified five A-list problems that we argued would largely determine our future. The first is the prospect of a "Weimar Russia"—a Russia that doesn't fulfill the promise that we all hoped for in the early '90s of becoming a partner, but instead becomes a spoiler. The second you might call "Thucydides' China." Remember, Thucydides attributed the cause of the Peloponnesian War not to a power imbalance, but to a dynamic situation when one nation's rising power caused anxiety in the other. And specifically, he had this famous line that what caused the war was the rise of Athenian power, and not just that, the fear that power, that rising power inspired in Sparta.

And if you substitute China for Athens and us and our Pacific allies for Sparta, that's the Thucydides' formula and that was the second on our list.

Dr. Carter: A strategy of preventive defense will require that we identify the A-list of security threats correctly, take it seriously, and organize behind it. When the current security bubble bursts, Americans will ask: "who lost it?"

The third we identified was the hangover, if you like, the legacy, the lethal legacy of the Cold War. The fact that the weapons that constituted the former Soviet Union's weapons of mass destruction arsenal still exist. The half-life of plutonium 239 is 24,400 years. Which is one hell of a long time in Russian politics. And if you want to get uranium 235, it's 713 million years. So it's not going away and it's going to go through many turns of the wheel. And a command and control system, however well designed, wasn't designed for a society that disintegrated.

The fourth was weapons of mass destruction in the form of proliferation that has occurred: proliferation that has now taken the form of a real threat, not just a diplomatic problem. And while that may not have occurred in nuclear weapons to the extent we feared over the years, it certainly has in the biological and chemical and ballistic missile areas.

And fifth, we identified something we call "catastrophic terrorism," or "grand terrorism," which was the prospect that war and crime might come together in some grisly mixture in which individuals or small groups would be able to wreak warlike damage on our homeland, and bring to the American homeland the prospect of warlike destruction for the first time since Stalin exploded the bomb in 1949. For us, wars have been somewhere else since then. You go out and you project power and you take care of somebody somewhere else, but it's not home. And this could bring it home. So that was our list. That was our A-list anyway.

Now if one took this construct of the C-list, B-list, A-list seriously, we would have programs in our overall defense program that reflected the imperatives of prevention and preparation. Those preventive programs we collectively named "Preventive Defense." The analogy being to preventive medicine. Preventive medicine is what you do to keep yourself from getting ill in the first place, whereas curative medicine is what you do once you're sick already. Preventive defense is what you do to try to stave off threats before they turn into imminent military threats as traditionally defined. And in our view, we were and are not doing enough as a country in the preventive area.

And the second thing you would do is prepare for the eventuality that not just the C-list, not just the B-list, but something on the A-list eventuated in coming decades. And in that connection, you might reflect on the fact that Saddam Hussein came along right at the end of the Cold War, and he configured his forces in technology, tactics, doctrine, and so forth essentially like a Soviet Union—only smaller. And said differently: just as we had perfected over five decades the "hammer," along comes Saddam Hussein configured like a "nail." It's a perfect match and the outcome was foreordained.

Now the next guy's not going to do that. The next guy is not going to be a "nail" at all. He's going to be something different. A screw or something. And yet, if you look at how we are running the RMA, the RMA is basically—and I don't have any problem with this—but it's basically polishing the hammer. Making the hammer bigger, better, faster, cheaper, etc. And yet, were we serious about the A-list, we would have running in parallel with the RMA an "asymmetrical RMA." But our RMA is essentially still symmetrical.

Also if we took the A-list seriously, we'd organize around it or, for that matter, reorganize around it. The last time the Department of Defense and indeed the U.S. government as a whole was reorganized for security was 1947, at the beginning of the Cold War. Businesses find it necessary to fundamentally reorganize themselves every few years to stay up with the pace of change, yet our government has not. And as a consequence, we've been assigning over the last decade, this post–Cold War decade, new missions to existing structures rather than undergoing fundamental renovations.

And we're doing okay at that—but as a consequence, there is a list, which I'll shortly recite, of things that you all know, we all know, is demanded of our defense establishment that are essentially missions that are "homeless." Missions that we're "kludging" together a way of getting done, but they're essentially homeless. Or said differently, there's nobody who's obviously in charge.

Let me just give you the list. The first one is asymmetrical warfare. We have a start in the Defense Threat Reduction Agency (DTRA). That's an organization that I commend, but it's just a start. Second, as far as the symmetrical RMA is concerned, we say that that's based on the revolutionary power of information technology, yet the inherently joint capability called C^{4}ISR still doesn't have a systems architect in DoD. You ask what is the engine of the RMA and have we organized that engine? Frankly, it's a dog's breakfast organizationally.

We have joint forces, thanks to Goldwater-Nichols, which was the one major organizational innovation since the 1947 act. We now have joint forces and we fight jointly, but we still have no way of procuring jointly, of configuring forces jointly, of reacquiring forces jointly. So the list grows. Joint procurement: homeless. C^{4}ISR systems engineering: homeless. Asymmetrical RMA: homeless. Homeland defense: homeless. Coalition warfare: homeless. The back

end, if you like, of peacekeeping, namely reestablishing a normal civil society after you've established a stable environment: homeless.

So again and again these are missions that we know, not really controversial, that we know are part of our future, yet we content ourselves with having a system where no one's in charge. And that reflects complacency.

Now even if we got our priorities straight and we got our own house in order, we can't maintain superiority if we don't take into account the changes in the international environment. In the late '70s, when Harold Brown and Bill Perry decided that the way we were going to win the Cold War was through what they called "the offset strategy," the U.S. figured we were just never going to match the Warsaw Pact numerically. Rather we were going to make our national strength technology. They called that the offset strategy. And that—the technological edge and the professional soldier—were to be the pillars of the American way of waging a war.

Now what's happened since 1980 in connection with the technological edge? In 1980, the world spent about $240 billion on scientific research and development. Half of that was spent in this country. Everybody else accounted, all the rest of the world accounted for the other half. And of that, $40 billion, fully one-sixth of the global total, was spent by the Department of Defense. This year, $360 billion is the estimated worldwide research and development spending. Once again, half of it spent in this country. Everybody else makes up the other half. But now DoD accounts for only one-twelfth of that total.

Juxtapose the world of then and the world of now. In the world of then, defense technology originated in a defense technology base that was embedded in defense companies that resided in the United States, for which defense was their main driver. That was then. Now, defense technology increasingly originates in a commercial technology base that's embedded in commercially driven companies that are not American, rather they are global, for which defense is a niche player. Everything is opposite from the way it used to be.

What does that mean? Whereas in the past we could pursue the offset strategy (that is, military advantage was conferred by our national possession of defense-unique, leap-ahead technology that potential opponents couldn't get)—in the world into which we're going, military advantage will be conferred by the rapid adoption and integration of mostly commercial technology and components into defense-unique "systems of systems"—*more rapidly* than opponents who have access to the same technology will be able to do. That's a totally different environment for us to maintain what has been the distinctive edge of our forces.

So for all these reasons; strategy, whether we've identified the A-list correctly, whether we're taking the A-list seriously, whether we're organizing behind it and whether we're fully aware of the environment in which we live, I'm concerned that we're in a "security bubble" like a stock market bubble. And I say this and I don't mean to be too dismal, but calling attention to these challenges may seem out of tune with the emphatically true fact that we have the most proficient military in the world—a fact that we've demonstrated again and again in recent contingencies—and that we will see no global competitor for many years.

But still, the effectiveness of our military in protecting our security isn't a birthright or a fact of nature. If we're going to keep it, it's going to require self-scrutiny and a much more active effort to combat complacency. Will this occur? Looking out there at the dot.com traders, it's far from obvious to me that these changes will be made or made in time. When the important threats that we face are those that *might be* rather than those that *are*, when success against

the lesser challenges of the moment appears to create a *prima facie* case that all is well, and where the fundamental shifts occurring in the environment are nonetheless gradual and subtle and sneak up on you, there's no forcing function compelling attention to change.

There will be no public clamor for it. The clamor will come later when, if the bubble bursts, the relative safety of the first post–Cold War era seems like a distant Golden Age and the question asked of defense leaders, the defense community, those of you in this room, will be: "who lost it?" Thank you.

General George A. Joulwan: "Over nine years we have yet to develop a peacetime engagement policy, strategy, or doctrine. It is time to do so."

Joulwan: Thank you very much. Again, let me also congratulate the Army and General Shinseki and the co-sponsors for this timely conference. And I couldn't help but notice on the last panel, as we started out with the Senator, and got down to Jeremy Mackenzie where the rubber met the road of having to put forces together, how different the presentation was. And so I am going to try to talk a little bit from my last 10 years or so in that environment and having to put forces in harm's way. And I'll leave to the more highly qualified on the panel to discuss hardware and capabilities and resources.

And though my remarks will deal with the broader theme—that is, methods to enhance the ability of our armed forces to meet the security challenges confronting the United States in the early 21st century—I would also deal with this panel's topic: anticipating today the essential capabilities for tomorrow. And at the outset, let me be clear on the points I want to make.

Indeed, "anticipating" in our panel's topic is a key word. Since the Cold War ended 10 years ago, we as a nation and as a military have been more reactive than proactive. We have focused our attention, strategy, energy, and resources primarily on the high end of the conflict spectrum. First, two major regional contingencies, then two major regional wars dominated and still dominate our strategic thought, training, procurement, and leader development. Clearly, we as a nation must be concerned about fighting and winning our nation's wars. But two MRWs are the least probable conflict we will face. Rather than focus solely on the high end of the conflict spectrum, can we not bring the focus of our best minds on the rest of the conflict spectrum? Can we not anticipate the challenges of the entire spectrum and develop the strategies, capabilities, leader development, and training philosophy to meet any mission assigned by the national command authority?

Given our experiences of this past decade, should we not focus on missions? Missions are missions, operations are operations. Terms such as Operations Other than War or OOTW misrepresent the mission and confuse our troops. I can assure you that putting troops in harm's way in Bosnia with 200,000 armed soldiers from the former warring factions, an enemy integrated air defense system, tank and artillery formations in the fields, and millions of mines was not an exercise in filling sand bags. We went into Bosnia well-trained, well-equipped, and focused on enforcing a peace agreement, but also prepared to fight if necessary.

We anticipated all contingencies. We fought for political clarity and robust rules of engagement from our political masters. So "anticipation" is a great word. Let's put words into action. Our theme for the 21st century not only should be "No more Task Force Smiths," but also no more Vietnams, Lebanons, Somalias, or Kosovos. Our U.S. troops are up to the challenge. However, the issue to me is whether our senior leadership is prepared to develop the strategy, the doctrine, the capability to be truly capable of full spectrum operations. We need a military that is not only, to use your term, strategically responsive, but also strategically relevant. And that includes the Army in the 21st century. Hopefully, this conference will assist in that effort.

Now with that as an introduction, let me tell you how I really feel. Ladies and gentlemen, as was mentioned by some of our speakers, 10 years ago just about to the day, I stood as the V Corps Commander on the inner German border in the famous Fulda Gap with my armored cavalry commander, John Abrams, and watched with enormous satisfaction as the Iron Curtain and the Berlin Wall were torn down. It was a victory for the millions of GIs who, for decades, crossed the Atlantic to demonstrate U.S. commitment and resolve to our allies and potential adversaries.

Much of the success was due to the innovation and thinking and doctrinal work from men like DePuy, Gorman, and Vuono, who focused our attention following Vietnam on rigor and discipline in our training, doctrine, and modernization. We in the field were directly involved in the doctrinal debate which not only included tactics, techniques, and procedures, but also focused our great industrial appointments on developing a high quality, technologically superior, best material and equipment in the world.

In 1989, V Corps in Germany was the most modernized, best equipped, best manned, best trained corps in the world. The Soviets knew it and we, with our allies, prevailed. A year later, Germany was reunited as a country, emerging democracies were evident in the former Warsaw Pact, the Soviet Union was breaking up, and communism as an ideology was on the decline. Within a year, we fought and won a great victory in DESERT STORM. However, times and missions were changing. But as is our history as an institution, the U.S. military and, particularly, the U.S. Army were slower to change. Instead, we were quick to downsize without regard to strategy or missions.

In November of 1990, I was assigned as the CINC in Panama. In the first 10 days of my command, there were three coups, an insurrection in Panama, and a resurgence of the war in El Salvador. I called it a "CINC stress test." Interestingly, there was not much concern in Washington as our attention, rightly, was on DESERT STORM. But for three years as CINC-South, I fought a different type of fight. Not an MRC or regional war, but several lesser regional contingencies.

For example, we, the military, were tasked by the national command authority to support law enforcement in the war on drugs. For the most part, the U.S. military viewed the commitment as a distraction from its readiness to fight and win our nation's wars, and regrettably still does today. Even though the number of Americans killed by illegal drugs has risen to 14,000 a

year, and the cost to taxpayers is over $110 billion a year in law enforcement, rehabilitation, education, and health care. There's an existing Presidential decision, Directive 14, that mandates a military commitment to assist law enforcement. But our support and interest as a military is lukewarm at best.

However, even though the military is not in the lead, support by the military is essential, in my view, for success. Without that support, not only will Americans continue to die from illegal drugs, but our entire southern flank, from Mexico to Colombia to Chile, is in danger of corruption, crime, addiction, and collapse. Can we not facilitate and assist the interagency in law enforcement efforts in this critical region so vital to American interests? And I ask: do we have to wait for the train wreck in Colombia to occur before we act? And can we do so while also maintaining our readiness to fight and win a major regional war?

I believe we can. But those are the issues before you in order to put the theory of strategic responsiveness and full spectrum operations into practice.

Another example. From 1993 to 1997, I was dual-hatted as both SACEUR and CINCEUR with responsibilities for 83 countries. And if I had to make a bumper sticker for those four years, and it should be a bumper sticker for the Army for the next millennium, "Stuff Happens." Now you could substitute another word for stuff, but I will tell you that stuff will continue to happen. But that period from '93 to '97 was a period of adaptation for the alliance as it transitioned from the Cold War to the new challenges in the post–Cold War period.

Unlike the U.S. model of two simultaneous MRWs, NATO political and military authorities and we operationalized a concept of simultaneous engagement in MRW (or Article V) and two lesser regional contingencies (or non-Article V). In other words, NATO strategically adapted to the new reality of the post–Cold War period. Better, in my opinion, than the U.S. military.

And for the commitment to Bosnia, let me be clear. NATO political and military authorities developed the plans, generated the force, deployed the force, and commanded and controlled the force. Not from capitals—Bonn, London, Paris, or Washington—but from the integrated military command structure of NATO. Numerous contingency plans were developed in NATO for every possible mission. Anticipation of events was the key. Clarity of mission, unity of command, robust rules of engagement were debated by both political and military authorities. Most importantly, troops were trained to mission.

At one point the U.S. Army in Europe conducted an exercise with over 100 helicopters simultaneously in the air at night, anticipating a forced entry operation into Bosnia if it came to that. All plans were reviewed and approved by the joint staffs of 16 nations as well as 16 foreign ministries and defense ministries. But there was no micro-management of military operations. In the bombing campaign, for example, for August and September of '95, capitals did not pre-approve every target every day. Again, anticipation and contingency planning by NATO's military integrated structure assured political control, but not micro-management.

Are such doctrinal principles essential to full spectrum operations? I absolutely contend they are. And I ask where are they being written today? Where is the gaming? If we are serious, then we need to get on with it. In addition, the Partnership for Peace Initiative was developed into an operational concept, not just a political diversion from engagement. The intent of PfP was to train non-NATO nations to common standards, techniques, and procedures. To do so would enhance the probability for success whenever their forces were committed into operations.

PfP was also envisioned to promote mutual trust and confidence between NATO and the militaries of former adversaries. Forty-four nations have joined the Partnership for Peace, to

include Russia and Ukraine. I had a Russian deputy for Bosnia for 20 months at my headquarters in Mons, Belgium. And over 30 of these nations have contributed forces to Bosnia. In Kosovo, it was said 80 percent of the force on the ground today is other than U.S. So Europeans are involved, and I think we need to recognize that as we talk about the future. Therefore, I ask you military folks and particularly the Army, is PfP a training distracter for forward deployed U.S. troops or is it a viable mission?

Can we leverage the troops and assets of our PfP allies and partners in future operations? In doing so, can we promote mutual trust and confidence among the military of PfP partners? Can we interact in a way to advance our interests for democratic institutions and respect for the dignity and worth of the individual? By doing so, can we prevent conflict as well as fight and win our nation's wars? I know we can. Our national strategy from the White House recognizes the need for not only joint, but combined multinational and inter-agency operations.

And I would urge General Shinseki a doctrine to effectively recognize the complexities and opportunities inherent in such a strategy. To do so recognizes the world as it is, not as we hope it will be. To do so anticipates future missions across the conflict spectrum, not just two major regional wars. And I will tell you the future is now. There is a need for clear, direct, and supportable training guidance. To put rigor, discipline, and feedback in training units for full spectrum operations.

In addition, our leader development programs must instill the confidence in current and future military leaders to be innovative and imaginative in training, to give clear military advice to our political leadership, and to interact with multi-national civilian organizations. It is time for some straight talk with our troops. If you agree, then structural change and organizations of procurement of the right assets will follow.

We need flexibility and agility in our organizational structures as well as more rapid deployment and agility in our war fighting systems. In my opinion, if the military leadership institutionalizes and internalizes the strategy and doctrine of full spectrum operations, our current structures will require some modification to fit resources to missions.

However, if the military leadership pays only lip service to full spectrum operational deployments and continues to concentrate solely on the "Big One" then no amount of high tech platforms, precision guided munitions, or rhetoric will suffice. Finally, we must find ways when directed to facilitate the efforts of law enforcement, civil organization, and multinational to regional organizations, particularly when the United States military is not in the lead.

We must find ways to leverage, as I said before, the assets of our allies and partners. We must be proactive and innovative. Such as structuring civil-military integrated staffs for stability operations and civil-military action plans for decision matrixes. We must help civilian organizations close the deal on operations such as Bosnia, Haiti, and Kosovo. That is what I mean by strategic relevance. To do so will require a proactive, informed, professional military leadership and highly motivated, well-trained troops.

President George Bush at the Aspen Institute on August 2, 1990, said, and I quote, "The United States would be ill-served by forces that represent nothing more than a scaled back or shrunken down version of the ones we possess at the present. What we require is a policy of peace time engagement every bit as constant and committed to the defense of our interests and our ideals in today's world as in the time of conflict in the Cold War." Ladies and gentlemen, over nine years we have yet to develop a peacetime engagement policy, strategy, or doctrine. It is time to do so. Thank you very much.

McInerney: Thanks, George, great words. Chief, thanks very much for having us here. It's great to have Tom Schwartz. I normally go down to Atlanta and get to listen to him. He's a much better speaker. Bob, thank you. Today, what I'd like to do is review our strategic responsibilities for the 21st century. Now I'm going to go back and I'm going to look at Kosovo. And not as an airman because it easily could have been a ground campaign. But the same points resonate with all of the forces.

I would say though that clearly the Kosovo operation would have been a lot shorter if we had had a ground campaign. It could have been a shaking ground campaign. It didn't have to be a heavy, heavy commitment, but we would have then had a much better synergy between the air and ground forces.

Lieutenant General Thomas G. McInerney: to replace aging equipment and adequately prepare for the future, DoD needs to spend about $100 billion per year in procurement, far in excess of the $60 billion programmed for Fiscal Year 2000.

The one thing that the allied force did show for us, we've got a flashing red light. We've got two major problems. The Air Force showed on us, but it shows to the rest of the Services. And those red lights, we're talking about sustainability and modernization. Fundamentally, the force structure is too small. I was here when we did the Bottom-Up Review in '93—that came in. I was the Assistant Vice Chief of Staff at the time. We watched it. We did the best we could, but we have gotten it wrong. And each time we have a different crisis, whether it was DESERT STORM or Kosovo or Bosnia or all the ones that George talked about, it's different.

And so we've got to have a flexible force, but we've got to have one that is sized right. And frankly, we have not sized it right and now it's a very aging force. Clearly, in the sizing, and when we needed it, the stealth aircraft, because the political leadership wanted us to have very low casualties. It was important to the political situation in the war fighting there. We have a total of less than 75 stealth aircraft in the entire U.S. Air Force inventory. That means the entire worldwide inventory on the Western side.

We've got 40-year-old B–52s. And to put it in the vernacular of the dot.com people that Ash was talking about, that would mean that was before the PC was invented. Just to give you the time frame that we're talking about. And the administration is going to take them out to 75 years. We've got 20-year-old F–15s. When Mike and I were flying, we thought it was a new airplane. And it was a new airplane. But that was 20 years ago, Mike.

And then what did we run into? I mean, fundamentally, I'm talking about a procurement holiday for the last six years, going on seven. Politically, we went from where we had 9 to 10

percent in DESERT STORM with precision guided munitions, where we went up to over 80 to 90 percent in certain phases of that campaign. Had to be precision guidance. That wasn't in our plan. That wasn't the way we had funded. And all of a sudden, we're now using JDAMs [Joint Direct Attack Munitions]. Great weapon, low cost, meets the things we want it to do, but we didn't have enough. One B–2 can carry sixteen JDAMs. The fact is, we're now talking with that technology —and the same applies to much of the Army technology and Navy. In the old days, we used to talk about how many sorties we put on a target. We're now talking about how many targets a sortie or a weapons system will hit. That is a major paradigm shift, and we have not invested enough in that as we go into the 21st century, and it's imperative that we get that right.

The second lesson of course is the equipment that we've bought, and I alluded to it, is it's wearing out. Army average age of your trucks, 40 years. You look at the equipment in the other forces, the average age of the U.S. Air Force airplanes is 20 years. The average age in Kosovo was 26 years for equipment. You can't have that for the long term. We're getting by because we have got superb soldiers, superb airmen, superb sailors and marines. But their equipment is wearing out and it's wearing out fast.

Now what's our problem? Well, if you look at it and step back, 70 percent of our dollars today are in overhead and in infrastructure. At the height of the Cold War, 1986, when George and I were in Europe together, 60 percent of our dollars went to the war fighter, 40 percent went to overhead and infrastructure. And I was part of the problem on the Air Staff, but the choice was to close Warner Robbins or take another fighter bomber or missile wing to meet your $100 million bogie that we had to get down to meet our budget.

It was an easy decision. We're all still faced with those decisions. And we left this huge infrastructure that is fundamentally an industrial age infrastructure, left over from World War II and the Cold War, and we have paid the price on the war fighter. The war fighter has not gotten the resources that he needs to fight in the future. Now it's not everybody's fault. I mean, clearly trying to make this change, it's met with some very strong congressional resistance. Change is hard there. But we must solve this problem if we're going to go into this 21st century and still be a world class power. Or as Ash says, the bubble will break.

Let's talk about some of those areas that we have in government which I call "non-core." Such as these huge data processing centers, payroll operations, warehouse facilities, and other business activities that aren't core war fighting. As a matter of fact, if you can find them in the yellow pages, we probably should not be doing them. We ought to focus on, number one, war fighting, trigger pullers. Number two, policy. Number three, oversight. Number four, certain management functions. The rest we ought to look at of becoming partners with industry. Partners with industry to then use their efficiencies that has made us the number one economy and make ourselves the number one war fighters in the world.

Now this skewed investment program that we have is what our problem is. Now Secretary Cohen this year tried a base closure. You know, we need to close about 35 or 45 more bases with the force structure. And our force structure is not going to get a lot larger if we still have all these people in the overhead side. We've got to shift those people. The Secretary tried to do that, you know. Because of political problems, he wasn't able to do it. The new administration must do it.

Now I'll talk to you how we can do base closures and do it very well. And we can do it so it benefits the people and it benefits the communities. The other area is looking at 240,000-

plus to outsource. Take those functions, but you go through the terrible process of the A–76. It ties your hands and doesn't enable you to do it the proper way. We need to change that.

Now let's talk about specifically what we see and what we're trying to do and bend so we get the private sector to help. We're talking about fundamentally a Revolution in Business Affairs at the same time you've got a Revolution in Military Affairs. And I talk about the RMA as the war fighting side. I talk about the RBA as the overhead/logistics side. We formed a commission. Warren Rudman who was just up here is our Chairman. We have Josh Weston of ADP who's the co-chair. We are focusing on trying to take $20 to $30 billion a year out of this overhead, which is a little more than 10 percent of a $280 billion budget, and move those dollars over to the war fighter through efficiencies using the model that U.S. industry has used.

Now on that commission, we have 23 of America's top corporate executives. Bernie Markus of Home Depot. You want to talk about inventory control, go to Home Depot and talk to Bernie Markus. Fred Smith of FedEx. Ward Zuckerman, *U.S. News and World Report*. Admiral Bill Owens, Jim Kimsey, the founder of AOL, John Morgred, Cisco. Jack Vessey, Gordon Sullivan, Tony McPeak. Tom Orman, Al Grey, and Admiral Stan Arthur, to name a few of our military advisers. We've got Bill Perry and Frank Carlucci.

So you see, we've taken former political leaders, former military leaders, and current business leaders to help focus this effort for defense reform. Now this is an extraordinary collection of people and clearly they want to take the model, as I mentioned earlier, of what's going on in U.S. industry. It's not a risky model. It's one that every company in the country that is surviving is using. We want to take that model and put it in defense. And that was the model when I was running the defense performance review, that I went out and visited over 100 leading edge companies to see just what they had done to move into the information age.

And if we can free up $30 billion a year in that budget to Congress and in the present budget in the out years, it's going to give us $20 billion. And if we can't get another $10 billion, because I'm driving toward 60 billion additional, the new administration's going to have to get it. And why do I come up with that number? I mean, we're at 54 this year, 44 last year. Fifty-four, if we don't have a contingency. Let me tell you how I come up with this number. It's a rough number.

But we are depreciating the tanks, airplanes, and ships in the military today at $118 billion a year. That's a good way to look at it. Look at what you're depreciating, what it will cost to replace it. We put in 44 last year. Fifty-four is going to go in this year. Well, if you look at $118 and $44 billion, we've got a gap. The Chiefs and Bill Owens and General Shali came up with a number, that we needed to get to 60. I'm here to tell you 60 isn't the number that's going to take us to get into the 21st century. We're going to need over $100 billion to solve this problem.

And the new administration, no matter what party, is going to have to do it or the system's going to break. And that's the bubble that I think, Ash, that you're pointing out. I mentioned the criteria that we ought to use. Let's focus on what our core business is. Our core business is trigger pullers, it's oversight, it's policy, and it's management. Key areas.

Let's talk about payrolls. You already outsource the Defense Finance and Accounting Service (DFAS). Mike Carns and I were there when we consolidated. We didn't have a good answer, we all went and did it. What we missed in those defense consolidations was competition. If you don't have competition, and you all know here the problems we have with DFAS. We've

got 40,000 people in the Department of Defense today, 20,000 in DFAS and 20,000 in the Services, that are in finance and accounting. Forty thousand people. Chief, that's a lot of people. And not one of them pull a trigger.

Now through efforts that the JCS is doing and we're doing and others, they have agreed to outsource civilian pay and retired pay. Let me tell you, I think after 35 years, Mike and I and George, we deserve our retired pay. The only question is, if you try to call DFAS and get any service, you're not going to get it. Now in addition, they charge $2.50 for the paycheck. They charge you that. It's really $5 in the fully burdened cost. If you're on active duty, they charge $8.50. The fully burdened cost is $12.50. We are spending $1.67 billion this year in DFAS. In the private sector, what I pay for my tiny little company—I pay ADP a buck fifty.

Now they pay 26 million people a month. And I went in and talked to the previous director of DFAS and he told me there's no company that can handle us, we're too big. And I said, "Well, when's the last time the U.S. had 26 million people in uniform?" They pay right now five and a have million people. And by the way, I haven't missed a paycheck since I went out the door. Can you hear me? I get a much better product. And that's my point. You get it for less money, but you get a much better product.

I was on *Carl Vincent* in March. They're wired there now. They can bounce a signal off a satellite. It doesn't matter where the server is. Chief petty officer gets promoted, that check goes to the bank electronically. So paying people isn't our core business. Seeing that they're paid is. But let's get out of doing these kind of tasks that we can't change fast enough.

Now they put out this RFP, by the way. That RFP was 3,500 pages long. The stack was this high. And I'm not going to tell you, but I talked to a very senior person in DoD, very, very senior person. He said, "Well, look, industry isn't having a problem with it." And I said, "I think they are. Nobody bid on it." So we sent a letter in, Warren Rudman signed it, to the Secretary of Defense. We had a 13 page RFP, which would be the standard RFP that the industry uses. We went around to three different companies, major companies in the payroll business and they gave us this notion of RFP. We're meeting next Monday, the eighth of November, to discuss how we can do this better. That's an example.

Let me give you another example that I think is very important to us. Army log mod. Chief, we've got to have it. The Army is doing it, you're pushing hard on it, and you've done a very good job in the soft landing. At the end of this month or, I guess, it's December, you're going to let the contract. Two people compete, they're taking a commercial, off the shelf, product that will go in, and it will spread across the other Services. It is very important. You all probably heard the example of Caterpillar. But Caterpillar, if you have a Cat product, there's a 99.7 percent chance that you'll get that product delivered within 24 hours in the United States. It's 30 hours, I guess, if you're outside the United States. Thirty-six.

The fact is, we have an inventory in DoD of about $65 billion. We need about $32 billion. And that's probably twice as much as what we need. I went and visited my old wing in Alaska, long story short, with Joe Ralston. It had its 80th anniversary. That's old for flyers, not for you chaps. But the wing commander was telling me when he has a part out for 30 days, he personally gets on it. He's a superb wing commander. I said, "Scott, that's great. But if you're in the private sector, if it was out for more than 24 hours, you'd be in trouble." That's the kind of standards that you need to get. That's the kind of standards that we ought to make our logisticians in the system give us.

Finally, let's talk about housing. Van is here today. I think he's still here, Van, aren't you? You're doing a great job in the projects that you've got going out at Fort Carson and what you're doing at Fort Hood. All the Services have got to go this way. Not only is it going to save us bucks, it's going to give us a better product. Now the important thing is you can outsource or privatize and you can do it wrong or you can do it right. Go visit and benchmark the people that do it right.

Well, Chief, we've got the best military in the world, the best soldiers, sailors, airmen, and marines. They need the best equipment. We need to move it in their direction and so we have got to change. Let's use the model of the best economy in the world and let's be partners with them. Thanks very much.

General Michael Carns proposes a bold and overdue restructuring of acquisition processes: "let market forces operate—price-based acquisition, continuous competition, and value assessment . . . what the U.S. consumer does every day of the year."

Carns: Good afternoon. Chief, thank you very much for the invitation to participate in this important undertaking. I must say it's a refreshing privilege to be the last speaker of the day. The rapt attention of the people out there is daunting, but I'll try to deserve it.

The arcane task assigned to this group was to discuss the challenge of anticipation, competently estimating what military capabilities America will need tomorrow to meet its national security needs. That's a problem that every generation, every administration, every Service chief faces. Today, the task is more difficult as we shift from threat-based strategies to capability-based ones, while also shifting from a posture of deployed forces to expeditionary forces.

This sea change has rendered our current response capability largely a late-to-need strategy. The new strategic demand is to be able to act so quickly that the adversary reacts to us, not our reacting to him. So, for the sake of this discussion, let's accept that these two general descriptors strike a responsive chord in this room.

Today, the way we convert these two descriptors in military plans and operations is to task military service staffs and joint long range planners to draw up illustrative scenarios, describe needed force characteristics, determine requirements, transfer these needs to the developers who design, produce, test, and provide new equipment capabilities to the fielded forces.

That process certainly worked in World War I, but we had a three-year bye to get ready before arriving on the scene in 1917. That process worked again in World War II, but this time it

took five years to arrive on the scene in major formations. In Vietnam, we reported to the battle in a timely fashion because we were already equipped and ready for the Soviet scenario. Our readiness for the Soviet scenario proved to be a bad operational mismatch when applied to the Southeast Asian battlefield. Finally, in the Gulf, we showed up six months after the crisis started, beholden to the patient indulgence of a truly incompetent military adversary.

In short, this readiness and force structure style worked in the past, but it's no longer okay today. We're imprudent planners and irresponsible guardians of the nation's security if we think we're going to enjoy the luxury of time to get ready for the next crisis.

So, hearkening back to the panel tasking: how do we anticipate today the essential capabilities for tomorrow? Let me suggest a modified approach to that question, taking a military perspective of the business perspectives suggested earlier by General McInerney. The model to consider is the U.S. business sector and its experience over the past decade or so. During this period, we have seen business keelhaul its vision, revise its business concepts, alter its methods of execution, and achieve fairly stunning results. In military terms, business saw a growing threat, acted decisively, and succeeded . . . but it didn't love the experience despite the salutary outcome.

Make no mistake, business hated doing it. It required massive changes to the status quo, it had substantial human resources impact, and it required massive downsizing, restructuring, reinvestment, and process alteration. But there was no choice: it was either adopt dramatic change or collectively forfeit American economic pre-eminence to more innovative, more aggressive overseas companies, both in innovation and modernization.

Unfortunately, that former characterization is a good working description of what has not yet happened in military acquisition. For over a decade now, the citizens of this country have annually granted us a quarter trillion dollars of tax money to provide for national security. In return, we have very little to show for it. We have the same main battle tank that was developed in the '70s. Naval fighting ships have been cut in half in the last couple of decades with little modernization on the way. And, the Air Force, like the Army, is flying the equipment designed in the '70s with the lone exception of 20 B–2 bombers.

The resistance to change in acquisition is palpable. Convincing people to alter an acquisition model that won a 50-year Cold War is not easy. The military and it acquisition system was able to focus on a known enemy and develop a surveyed battlefield, land, sea, and air, and hold out until collapse. Moreover, the U.S. was supported by a military-industrial complex that responded to requirements in an orderly and procedural fashion. Over time, this system spawned such debilitating acquisition strategies as ensuring that parts of every major weapons system were manufactured in every state of the Union.

The result today is a process that takes on the order of two decades or more to field new weapons systems for the future battlefield. We got what we tolerated and, therefore, we got what we deserved. In a telling phrase, the acquisition process is now producing capability slower while technology is moving faster . . . a trend with disastrous implications for a military force.

Tomorrow, America's essential capabilities are going to be perilously dependent upon how quickly we can convert our operational expressions of new technology into concepts, doctrine, and new technology equipment for the troops to carry out the mission. Unfortunately the processes of the past are still in charge. Recent process changes have hardly altered outcomes. The F–22 is a perfect example . . . a three- decade development program . . . almost a generation . . . shameful.

Is this happening because we can't afford it? Yes and no. Yes, we can afford modernization and, yes, we can afford the equipment. But, no, we should no longer tolerate the way we go about doing it. Regrettably, we do not now enjoy the operational perspective or the political will to forge real change . . . not in the Services, not in the Department, and certainly not on the Hill. For now, we are restricted to tinkering at the margins.

To fix the problem is not as daunting as it appears. About only three things need to happen . . . admittedly big things, but not a long list and all are well within the doable. All that is lacking is the resolve to make it happen. First, as leaders and users, we need to better understand what it is we want to be able to do. Anticipating today the essential capabilities for tomorrow is not rocket science. The tough challenge is for the military operator, not the acquisition officer, to understand technology well enough to express new service component and joint capability needs in clear, operational terms. This is not a matter to be left to the acquisition corps or the vendors, but that's who's doing it today. The customer needs to take charge . . . and stay in charge!

Once the operator understands technology well enough to articulate operational needs in clear-cut output terms, our industrial providers are quite capable of delivering the weapons we want, innovatively conceived and delivered promptly to the user. In just a few areas, we already do this but not in the mainstream. For example, when certain senior operators realized and understood that stealth technology was in hand, it was relentlessly pursued, not by the acquisition corps, but by the operator . . . with results widely appreciated today.

Several years ago, a well-known combat field commander in the Air Force said at a very dark hour, "there is a way." In the case of stealth, the military grasped the impact of this technology and instituted special processes to procure it. The result was built and fielded F–117s in just a few short years. In another case, the Gulf War problem of penetrating deeply buried bunkers was solved . . . in three short weeks! . . . by building, testing, deploying, and employing 5,000-pound GBU–28 bombs, from start to finish. Tank barrels from Watervliet Arsenal were shipped by ANG C–130s to Eglin AFB where they were cut and filled with explosives by test engineers, one quick operational drop was tested at Nellis AFB for proof of concept, and then the bombs were airlifted over to the Gulf, hung on F–111s and operationally delivered. It was done, absolutely start to finish, in three weeks . . . "There is a way."

So what's the problem? We know we can do it when we put our minds to it, but unfortunately procurement concepts of this type are reserved for exceptions, not the rule. The obvious fix is, to the extent we can do so, convert the exception to the rule. We're the military user; we're the market; we're the customer with a $250 billion budget . . . not exactly chump change.

The challenge is for the operator to know technology—the art of the possible—express the operational need in output terms . . . and U.S. industry will produce. They have never failed us when we, as smart buyers, tell them what we need and must have. But we must never forget operators decide; buyers/acquisition offices implement . . . *not* the other way around. We don't put kids in charge of candy stores or foxes into hen houses. Operational requirements—weaponry—is our operational business. We are not in charge; but, we'd better take charge. That's step one.

This, however, requires a major sea change within our Services. After taking charge and understanding *what* it is that we want to do, we've got to be willing to do it. On the acquisition side, while the Undersecretary of Defense for Acquisition and Technology has sought to implement change, effects are at the margin. Acquisition policy needs to be keelhauled . . . practices, procedures, and processes. We must transition from centralized, communist, future year "fairy

dust" plans *to milestone driven output programs* that utilize the dynamic of capitalism: the customer demands; industry responds; technology drives market development and transition; competition solves the value equation; and, operators take timely delivery of relevant high technology equipment suited to the mission.

The common thread through all this is: honor the principle of competition. Instead of selection production winners, select winning designs and prototypes—the best operational capability—and then contract two or more developers/producers. The winning design should then be produced by a minimum of two contractors, with annual competitive "buys" shared out to contractors (variable percentage of the total) based on contractor-proposed new innovations, output value, and best pricing.

This is not a new idea. For example, in the late '80s, the Air Force was experiencing enormous developmental difficulties with AMRAAM missile (Advanced Medium Range Air-to-Air Missile). Moreover, cost was rising rapidly. The USAF decided to move to two producers to incentivize the "market" to seek cost savings and capability enhancements. The USAF purchased the proprietary drawings from Hughes and provided them to Raytheon, also facilitating production. The net effect was that the AMRAAM price not only stabilized but each of the contractors offered performance and price improvements as incentives for a larger share of the annual production percentage distribution. Competition works; we have consistently gotten a better performing missile at a better price ever since value was the contract determinant in AMRAAM production buys. Competition was the major force in solving the value equation.

Now some brief thoughts on the challenge of strategizing the issue of being willing to change. The military has historically been reluctant to be a major participant in the important role of informing the public on the national security challenges and what may be required to protect the nation. We need to take a more prominent role in this national debate. When contingencies and crises arise, the public needs to be able to grasp quickly what America's interests are and when to support action. A delay of months or even weeks to debate the role and character of American involvement is every bit as debilitating to the final outcome as a military force promptly dispatched, but saddled by months to reach the area of engagement.

After solving the issues of intent and will, the third challenge is to be prepared to do it—to effectively alter our acquisition processes to meet our pressing operational needs. Operationally expressing what we want is only a start. The more difficult challenge is the resource issue. A useful beginning would be to strip out all the process aimed at telling industry how to do it and how they're going at it. We do not need the over 200,000 uniformed and civilian members of the Defense Department's acquisition corps to manage the weapons procurement process. Over 200,000 people . . . some 15 Army division equivalents invested in acquisition personnel (*vis a vis* our 10 total active divisions).

The proposal to fix the problem is mainstream America: let market forces operate to produce military capability in an atmosphere of price-based acquisition, continuous competition, and value assessment . . . what the U.S. consumer does every day of the year.

A second critical task is to shed what we don't need to finance what we do need to . . . what General McInerney was talking about. We should pursue whatever action's necessary to increase funding for modernization, to include trading off manpower, shedding excessive infrastructure, and competitively outsourcing non-core activities.

Think about it. What's core about routine long-haul communications . . . read DISA. What's core about accounting and finance . . . read DFAS. What's core about procurement of com-

modities. . . read DLA. And soon, what's core about mapping and processing overhead photography . . . read NIMA and NRO.

We don't need to operate the communications infrastructure; we don't need to operate our own accounting offices; we don't have to own the camera. We need the output . . . connectivity . . . payment of invoices . . . and the picture of the target. We don't need to own the process; we need reliable access to output. It's time—it's time now—to get rid of commodity overhead, farm it out on a value basis to the competitive marketplace, and invest the very substantial resource savings in our core national defense mission. We'll all be better off, the military as well as the marketplace.

To sum up this discussion on our operational future, some may think that acquisition is a misplaced topic in a capabilities discussion. Not so. The path to future operations capability passes squarely through technological acquisition. Our current process is a failure, delivering in 15 or 20 years, a military requirement perfectly articulated today. During that intervening 15–20 years, two, three, maybe four or five technology cycles having spun inside that development cycle. We must understand: how we acquire our future capability has decisive impact on our capability because of the increasing pace of technology development.

To close out these brief thoughts, three vectors will take us 90 percent of the way:

—Senior operators who understand technology, take control of the process, and operationally drive what they need to operationally do. Get "need focused."

—Second, get "value focused" and use mainstream tools to motivate the market. Incentivize industry to produce technologically superior weaponry; use price-based acquisition as the basis of value determination; employ constant competition to stay on the technology leading edge.

—Third, shed military non-core. Reinvest the savings in what we do and what we need; get output focused.

So there it is: *get need focused, value focused,* and *output focused*. That wraps up the comments.

The good news: that's our job. The hard part: having the focus and the diligence to stay the course, to make it happen, recognizing the path to anticipating today what the essential capabilities of tomorrow must be is through tech smart operators, overhauled acquisition processes, sound business practices, and competency in our core mission and tasks . . . while shedding everything else. Thank you very much.

Pfaltzgraff: Although we are rapidly running out of time, we should not miss this opportunity for a few very brief questions and brief responses. Now let us adopt the technique that we did late this morning and have questions asked and then let the panel make some concluding comments based upon those questions. Please keep your questions very brief and wait for the microphone and camera. We'll begin over on this side of the room.

Audience Member: [BEGINNING OF QUESTION INAUDIBLE] . . . conceived in the 1880s, designed in the 1890s, and acquired in the early 1900s when we had to go to war against imperial Japan and Hitler. It seems to me that we are, even understanding the obsolescence problem that several of the gentlemen have discussed, it seems to me we're getting ourselves into that bind potentially for the coming century.

Pfaltzgraff: Okay, next question. From this side of the room perhaps. Is there another question? Please, yes.

Carlson: I'm Fitz Carlson, a member of the Association U.S. Army. I am struck by the fact that we've had five presentations from panelists up there and I'm recalling that last Thursday Mr. Paul Mitchell wrote a column in the *New York Times* which said we ought to do away with all of our nuclear weapons. We have no use for them. And I'm surprised that nobody addressed, considering the title of your panel, what is the utility and what is the requirement for our nuclear weapons systems and the nuclear stockpiles that we have today.

Pfaltzgraff: Okay, is there another question for the group? Yes, over here. Please. Wait for the microphone.

Audience Member: Thank you very much. Ash Carter laid out a hierarchy of strategic problems and observed that we are not giving priority to the A-list of threats. I wonder if the three career military professionals share the sense that that A-list should be the A-list that is being neglected. And I wonder if they could say why we are not addressing it as we should. Is it a failure primarily of military leadership to bring those crises to the attention of the policy makers on the civilian side or are there political influences detracting from the military priorities reflected in that list?

Pfaltzgraff: Is there one more question now? Then we'll turn to the panel. Okay, we'd like to begin with General Carns and work our way over to Ash Carter. Please be very brief because we are really running over time soon.

Carns: Okay . . . I believe that we have to change the whole production scheme. There was not time to talk about it. We should not go for production runs, we should go for small buys of lots of things for a long time so that we have one wing of fifteen F–15As, another wing of Bs and Cs and Ds and Abrams' ones, twos, and threes, and fours. And it's an Abram–1 this year, an Abram–2 next year and so on so that we have dynamic technology. I understand all the arguments behind the training and the difficulties there, but we cannot field homogeneous forces in tens of thousands in a technologically updated manner using our current processes.

Secondly, regarding Fitz Carlson's question, I think this is dead wrong. There is great utility in nuclear weapons today because of balance problems, it focuses the issue of consequence on the plate when people consider to use them, and, third, we need to use the Tarzan principle. Until we've got something better to deter, we'd better not turn loose of nuclear weapons.

And finally, this issue of the A-list. I think we are paying attention to the A-list, but I wouldn't pay a lot of attention to the A-list despite the distinguished writers of the book. And my concern would be that as soon as we start zeroing in, we get threat specific, we start tailoring forces, and we become less flexible. Let's wait until we see where it's really headed and we'll convert capabilities to threat focused forces.

McInerney: I would just say on the point on mass equipage, the fact is just having a very capable deterrent force, no one's going to take us on today. That force must be modernized. You can get into how fast we modernize it, but clearly we didn't even have a military of any substance

before World War I and that's why it started. So I'm a believer in deterrence and a very capable force. On the nuclear—clearly nuclear's role has always been a deterrent role and enough said on that. And I agree with what Mike said on the A-list.

Joulwan: I don't want to add much to what's already been said, but on the historical example, I would caution about trying to look so far into the future that you forget the Army and the Navy and the Air Force and the Marines of today. As a former deployed CINC, I can tell you it's much different at the point of spear where you have to put forces on the ground today. And I think we have to caution against there's something better out there and let's delay what we're doing today. I would caution against that. And I might add, we passed the Neutrality Act in 1939 and '38 which I think also contributed a great deal to what occurred in World War II.

To General Carlson's question, absolutely, there are 20,000-plus nuclear warheads in the Soviet Union today. We're unsure about where it's going. We need to get back. And NATO has, by the way, a nuclear planning group. They are concerned with dual capable aircraft. NATO is concerned about that as an alliance and we ought to take great comfort in that. And as far as the A-list, I agree with what's already been said.

Pfaltzgraff: Ash?

Carter: On nuclear weapons, I agree with everything that the panel has just said. I'd just add one more thing which is our nuclear weapons are not ours only. They are also a protective resource for a number of other countries as well. And I don't think it's a good idea to pose them with the question what would they do if the United States has no nuclear weapons.

Now as far as what Mike and George have said about the A-list, two things. I agree with George, George being of somewhat different perspective. You know, on the rear bumper, stuff happens. But, you know, up on the front bumper, that has to be a sticker that says, "What stuff might happen?" And somewhere over the rearview mirror has to be a little reminder that we need to pick and choose when stuff happens what stuff we, as a nation, are going to take responsibility for. Because there's an endless list of tasks that the world will assign the world's greatest superpower and are we prepared to step up to all of them? And so there has to be a filter in there.

Now should that filter come from our military leadership, Dalton, or from our political leadership? I think in the first instance it has to come from political leadership. But military leadership needs to demand it as a guide to what they're doing. Now you can disagree with our A-list. Bill Perry's and my A-list. That's fine. But the idea that there is not an A-list, B-list, C-list, but instead there's stuff and that stuff happens to us rather than us thinking about it in advance, I think is abdicating the strategic duty that we in this community, military and civilian, have. And that's not returning to threat-based planning, Mike.

To say that there are people out there with biological and chemical weapons is not a specific threat based statement. It requires a capability-based response. So I don't think that the A-list or enunciating the A-list, B-list, C-list is returning to a threat-based hierarchy. And to my way of thinking, we have no choice but to have priorities. So to be against priorities is a strange case.

Joulwan: I have no problem with putting priorities out there, but let me just give whatever advice I can to the military here. That when I got a call on a Thursday from General Shalikashvili,

he said the President's going to direct you tomorrow to go to Rwanda. And I said, "Where?" He said, "Rwanda." And if I look on a list here and, well, where is it on our list? And I said, "Well, okay, I'll put a joint task force together, give me about 30 days." And I said, "How much time do I have to deploy?" He said, "He wants you to deploy tomorrow." That's the reality and I would say to my military friends, that is the real world. And if you think you're going to somehow pick and choose, you are going to get a "blue 92" out of the air. And can we call "audibles?" And can we have a flexible force to do that?

Now we can say, and I think we've said it for too much as a military, we don't do that. That's not in our interest. And we fight the problem to a degree where we don't do the planning, we don't do the anticipation, we don't do the training. Then all of a sudden we get told "execute." And Kosovo's a good example. We're better than that. And that is what our military needs to do. The political authorities will come up with all kinds of things. The academic world will come up with all kinds of ways to prioritize and talk about what's in our interests. We serve the nation. We can give clear military advice on the rest, but we better get ready to execute and missions are missions and operations are operations and that is what we're going to face in the 21st century.

Pfaltzgraff: General Carns, did you want to say something?

Carns: One last comment. There's some misunderstanding here, but I think we do plan for big contingencies and we all know that and we do plan for small contingencies and we all know that, but we plan in a very general fashion. What we want to avoid is having an A-list which focuses our procurement. We don't want that A-list to focus our procurement until there is, no kidding, an A-list. We have a threat based focus such as we had in Europe. If we get too focused, we are going to be victims of asymmetry. And if a superpower ever uses the word asymmetry, they've flunked the course. If we can't handle asymmetry, nobody can handle it.

Pfaltzgraff: Well, on these notes, we must conclude. It's good to have some preventive defense of the A-list, I'm sure, and we've had a good deal of discussion of many things here. So I would like, on our collective behalf, to express thanks to the members of our distinguished panel this afternoon for what has been an important and enlightening contribution. And also for the controversy that we saw among the members of the panel. That's what makes these conferences most interesting. Thank you very much.

Beyond Joint Vision 2010

Keynote Address
General Henry H. Shelton

Tuesday, November 2, 1999—8:00 to 9:00 p.m.

Summary of Proceedings

- Policy makers must establish priorities among competing claims on U.S. military resources.
- Future crises will require the sustained application of all elements of national power; military force will be only one aspect of any solution.
- Inaugurated by the new Unified Command Plan (UCP), the Joint Forces Command (JFCOM) will promote joint experimentation and help the Services to prepare for asymmetric challenges.

Analysis of Proceedings

The security challenges of the 21st century will be at least as great as those faced by the United States in the 1990s. A clear, long-term perspective on the security environment and potential uses of military force is a pivotal element in U.S. military doctrine for the 21st century. Iraq and North Korea represent the most serious short-term threats to regional stability. In the long-term, U.S. foreign policy success will hinge on our relations with China, Japan, Russia, and Iran, the states whose future evolution will have the greatest impacts, respectively, on the security of East Asia, Europe, and Southwest Asia.

Emerging powers are only part—albeit the most important part—of the post–Cold War security setting. Because of their humanitarian component, many such crises appeal to what Abraham Lincoln called "the better angels of our nature." Force is a tempting option in these cases because the U.S. Armed Forces are readily deployable. Yet the use of force to promote peace and stability often carries unintended consequences. U.S. policy makers must carefully weigh the decision to place U.S. prestige, leadership, and lives at risk in an attempt to resolve such conflicts. The decision to use force is sometimes appropriate, as in Kosovo. Operation Allied Force, however, was in many ways a unique case that should not be viewed as a universal model for humanitarian intervention. A relatively blunt instrument by itself, military force should always be used in concert with the other elements of national power to attain U.S. political objectives. Policy makers must craft political objectives supportive of the national interest and determine whether these goals are attainable by force or more appropriately by other means. These objectives should also be important enough to offer a reasonable prospect of sustained public support. The United States should refrain from threatening the use of force unless we are prepared to carry out such a threat. A failure to back public statements of intentions with actions would jeopardize U.S. credibility and encourage aggression by potential adversaries.

The unsettled security landscape of the early 21st century demands a transformation of

the current military structure into a truly joint force. Harnessing the capabilities for two nearly simultaneous regional wars remains the focus of U.S. military strategy. While the existing force structure is sufficient to prevail under these circumstances, there must be an adequate surplus of forces to hedge against unexpected contingencies. In the future, victory will go to the force that best adapts itself to changing conditions. To uphold the present strategy, while the United States transforms its military forces, it will be necessary to deepen jointness, integrate new technologies, and maintain the current high quality of military personnel.

The newly revised Unified Command Plan (UCP) represents an important step toward this future joint force. The UCP designated the newly activated Joint Forces Command (JFCOM) as executive agent for "joint experimentation." Under the aegis of joint experimentation, JFCOM will supplement the efforts of the Services to develop operational concepts, doctrines, and technologies more appropriate to the new security environment. The new command thus will help to minimize redundancy and inter-Service rivalry while bolstering the cohesion of future joint operations. JFCOM's efforts will also improve the ability of the Armed Forces to counter the asymmetric strategies currently being developed by U.S. adversaries. Intended to stimulate innovation, this new approach to force development will enhance the ability of the U.S. Armed Forces to dominate the spectrum of conflict and realize the vision outlined in *Joint Vision 2015*.

Transcript

Galvin: There will be all kinds of recommendations and all of them coming from all kinds of places, inside and outside the Beltway. Some of them, let's face it, will be very, very good, and those are things that we can absorb. But Hugh is the military leader, the leader in uniform, that is ultimately responsible for everything that we'll discuss and everything that might get done or that will get done. He's responsible for advising how to do it and he's responsible for doing it. He is the top person in uniform responsible for that.

So when we're talking about strategic responsiveness, we're talking about the strategy itself and the response that we will make. I would add, by the way, as an aside that it's great to see the combination of Hugh Shelton and Bill Cohen. That's the kind of thing that we really need and that is working. But Hugh is the point man. He's the one who will set the pace and he is the one that we need to listen to tonight, not me. And so I would say, welcome, Hugh. We're just lucky to have you here and let me give you the lectern. Please, take over. And thank you for being here.

Shelton: Thank you very much, General Galvin, for your very kind words, your kind introduction, and also let me thank you for all that you have done and for all that you continue to do for our great country and for our joint military forces. I see a lot of other old friends here tonight and certainly mentors from the past and people that I'm indebted to seated across the room. Certainly happy to see our Undersecretary Rotsker here tonight, General Gordon Sullivan. Of course we've got General Crossen here as well. And a whole host of great allies, in the form of General Klaus Naumann, that we work very closely with in terms of coalition and allies and that basically did yeoman's work for Operation Allied Force.

And of course Tom Schwartz and Jack Keane and another general down here, General Sir Jeremy Mackenzie from the U.K. If he and I look about the same age, it's because we are. In fact,

we go back to Ranger school together. We were Ranger buddies back in 1964. He pulled me through. So I'm indebted to him. But a great officer. I'm delighted to be here with him tonight. And a whole host of others.

I'd also like to thank of course my cohort, my partner over here, General Eric Shinseki for his great leadership. As General Galvin said, a man with a great vision, great energy, who I think we're all very fortunate to have leading our Army into the new millennium. And also I might add, who's done a great job of getting this conference organized and set up. So I'd ask you to join me in giving him and the Army Staff that helped pull all this together a big round of applause.

And of course Dr. Bob Pfaltzgraff and his team have done a magnificent job of, as usual, working behind the scenes and making it all happen. So thanks to you also, Bob.

I feel very honored to be here this evening and have a chance to speak to you at what I know is a very important conference and one which I think will be also a very memorable conference based on the feedback that I've gotten from some of my guys that have been present here today. I would tell you right up front I think that today, tonight, America sits at a very special place in history. We are at a time when we're at the pinnacle of our power and yet, as we look around, we see the world changing right before our eyes.

And I believe that the future, although certainly I'd have to say up front is uncertain, is also bright with wonderful possibilities for our nation in the future. But only if we are wise enough and if we are strong enough to look at what's unfolding in front of us and prepare for them. And part of that preparation, as General Galvin mentioned, is my job as Chairman of the Joint Chiefs. I report to the Secretary of Defense and to the President, and I advise them on matters of national security and the use of military force. I don't do it in isolation. I have some great partners in that regard and that's of course my fellow members of the Joint Chiefs.

And I think that all of us must never forget that the military force is a relatively blunt instrument. Certainly our military assets cannot substitute for other forms of national power in resolving some of the complex crises that are inherently political in nature. And as we've seen over the past decade, the urge to take action in a crisis can be somewhat overpowering. I mean, look at what happens to us. We have the crisis that's piped right into our living room. You can watch it unfold on television. And it can also make a very compelling case to use the military as an instrument to try to solve this crisis simply because we provide an attractive and a readily available option in some cases.

And sometimes the military of course is the right option as we saw in Haiti, Liberia, Bosnia, Kosovo, and East Timor. Where the United States chose to get involved rather than just to stand on the sidelines and not commit military forces in response to what was obviously a crisis that was unfolding. But I think we would be very foolish to think that the future will only consist of operations like the one that we've just conducted in Kosovo. On the contrary, I would submit that our response to this particular operation was very unique. No one can guarantee that the circumstances under which Operation Allied Force succeeded will be repeated.

And I think any look that we take at the future requires a very clear perspective of where we are and the vector that we're headed on. And I know that perspective can be very important.

I'm reminded of the story they tell about the Army captain and the first sergeant that were out training in the field. And they'd had a very hard day of training and finally nightfall came and they decide it was time to get some rest. And so they just kicked back and lay back on their rucksacks. And just as they laid back in the darkness, the first sergeant said, "Captain, look up

there. What do you see?" So the captain looked up and he said, "I see a million stars, First Sergeant." And the first sergeant said, "And Captain, what does that tell me?" Well, the captain decided he would seize on this opportunity to impress the first sergeant with just how sharp he was, intelligent and intellectual, etc. So he said, "Well, First Sergeant, astronomically it tells me there are millions of galaxies and perhaps billions of planets. Theologically, it tells me that God decreed that the universe is magnificent and that we, as human beings here on earth, are small and insignificant. And meteorologically, it tells me that tomorrow is going to be a beautiful day." Well, there was a long pause. And then the captain said, "First Sergeant, what does it tell you?" And the first sergeant said, "Captain, it tells me someone stole our tent."

Chairman of the Joint Chiefs of Staff General Henry H. Shelton: "our response to Kosovo was very unique. No one can guarantee that the circumstances under which Operation ALLIED FORCE succeeded will be repeated." In Kosovo, there was "a disconnect, albeit a small one, between political objectives, state objectives, and what force could achieve."

So as you can see, perspective is important. And tonight what I'd like to do is give you my perspective about the future. A future I think that goes beyond our latest doctrinal vision as found in *Joint Vision 2010*, which I know that you've spent a lot of time talking about today, and how the United States can respond to meet the challenges that I see in the future. And of course I'd be the first one to admit that no one knows for sure what the future security environment will be like. But I think it's safe to say that it will be at least as challenging as what we have experienced in the past few years.

And I firmly believe that one of the greatest challenges that we face, that is confronting us today, is to have the foresight and the fortitude to literally take the long view, the long approach as to where we're headed in the future. Over the past few years, we've seen a lot of issues that have dominated the front page of the *Washington Post* and other major newspapers throughout the world and our television screens from Iraq to North Korea to Bosnia, Kosovo, and of course now East Timor.

But in today's troubled world, I think that there are many causes that we find and will continue to find that will cry out for our attention. Yet in today's troubled world, many worthy calls that cry out we have to seriously consider whether or not they require or are worthy of U.S. military intervention. We are and I think always will be by our very nature the better angels of our nature, to use Abraham Lincoln's phrase, which will often prompt us as a nation to get involved. And of course sometimes getting involved is exactly what we should do. But I

think it's also very prudent to consider the unintended consequences that may accompany the well-intentioned impulses to use our military to further peace and stability.

We have gained considerable experience in this area in the past few years. And I think that we have found that sometimes sorting out the good guys from the bad is not easy. That getting in is a lot easier than getting out. And that deeply rooted ancient hatreds cannot be resolved with a short-term application of military force. I think we've got to ask ourselves some very hard questions when confronted with the momentous decision to use our military and our military strength before we lay our prestige, our word, our leadership, and, most importantly, the lives of our young men and women in uniform on the line. And I think each of these situations is serious and it merits our attention and of course certainly merits our best efforts.

For the United States, North Korea and Iraq are clearly today the most serious of these situations. Threats that could turn their regions into turmoil. But even these near-term threats will not determine the shape of the world in the first decades of the next century. It's clear to me that the future of Asia, for example, will be decided in the rise and fall of the markets of Hong Kong, in the computer chip factories of Shanghai, and on the floor of the stock exchange of Tokyo, but not in P'yongyang.

China, the world's most populous country and by most estimates already with the third or fourth largest economy in the world, with the largest conventional military, and the third largest nuclear force in the world and a country that is starting to modernize its military forces. Yet at the same time as we look at China, we find that they are trying to maintain control of an emerging and expanding capitalist economy under a Communist hierarchy that embraces centralized planning and control. I think we all can see that this situation is an internal contradiction that could end up with dire consequences.

But it is Japan, not China, as we all know, that is the economic engine of Asia. The Japanese are our most important ally in the region and the second largest economy in the world behind our own. It's clear to me that the destinies of China and Japan will have a tremendous impact on the future of peace and stability in the world.

And in Southwest Asia, though Iraq is still bothersome and of course we have to deal with Iraq in new ways, they are no longer our most serious threat in the region. In fact, Iraq is now a damaged regime. Internally insecure and with an armed forces that is literally a shadow of their former strength and with their nuclear acquisition programs at this point held in check. Rather than Iraq, it is Iran, armed with religious fervor and an increasingly more capable and modern armed forces that is the most powerful and long-term regional force in Southwest Asia. But the true gravity of Iran's influence is less than its missiles, its tanks, and its planes, as it is Iran's ability to influence religious conflicts in a region that is already a tinderbox of both economic and political issues.

What could prove more ominous is Iran's very clear drive to expand its influence through the pulpit into the Caucasus—a drive that is very threatening—threatening to Russia, threatening to the Balkan states, and to our NATO ally, Turkey. The current situation in Dagestan and the war in Chechnya reflect this threat. The possibilities of the war in Chechnya causing further destabilization in the Caucusus is a very real and a major concern.

And in the same vein in Europe. As much as the Balkans are a very serious concern, the situation there pales when considered against what is happening on the streets in Moscow. The future of Europe will not swing on the independence of Kosovo or on the establishment of a new Serbia. It will swing on the path that Russian nationalism takes and on whether Russia can

change peacefully into a nation with a stable economy and one that is governed by the rule of law. As we all know, they still have thousands of nuclear warheads in the Russian arsenal. And I think the most profound threat to our future security is if these weapons were to be wielded by an enemy rather than by a friend.

And of course what happens in Russia will shape the rest of Europe. Ultimately determining whether Europe will go together or fragment apart because of so much warfare that we've witnessed there in the past centuries.

I think in order to shape the strategy that has to be dealt with effectively, we have to deal effectively with the Bosnias and the Koreas, the Kosovos and the East Timors. But we must not allow them to distract us from what are the truly vital issues that loom before us. Or put another way, we cannot let the urgent overcome the important on a day-to-day basis. I think what we all must understand is that the developments that take place in Russia, China, Japan, and Iran are where we must place our greatest investment in time, in energy, and in diplomacy. These in essence I think are the main events.

General Shelton: In Kosovo, there was "a disconnect, albeit a small one, between political objectives, state objectives, and what force could achieve."

And our second greatest challenge is transforming our current military structure into a future joint force. A force that is powerful enough to protect us, protect our interests, and to maintain our leadership in international affairs. And as all of you know, our strategy to protect our global interests requires that we maintain as a minimum the capability to fight and win two major wars nearly simultaneously. And my real concern about our future force is broader than just our ability to fight two major wars or conflicts like in North Korea or in Iran or Iraq. The fact is that in this warfighting scenario, even if it involved the two aforementioned countries, it would involve great risk, but it also is something that we would win.

Rather, my concern is to maintain a force that is powerful enough for the unexpected. And the unexpected is something that we in uniform know that we have to deal with almost on a daily basis. And as we look back at our history, our historical experiences show us that it is impossible to predict what type of a strategic environment might emerge 10 or 20 years from now. And when we read history, we find that victory does not always go to the strongest military force, but to the one that can adapt to changing situations more rapidly.

And I believe that the two MTW strategy is appropriate for the unexpected, but it must have the same kind of remarkable people in its ranks that we have today, it must have an in-

creased emphasis on jointness and an improved technological capability over what we have today. And yet at the same time, I think we must maintain the intense understanding of how to prevail in battle that has served this nation so well for over 200 years.

Right now I think our most urgent task is to fight for the strong support of these objectives to keep our forces ready, to protect the quality of life so that we can continue to attract and retain the same kind of outstanding men and women in uniform that we have today. In these areas and others of course, as you know, we're working very hard to prepare for the future and we recognize that the linchpin of our future force is information. And a course that we have entered into already, an era of knowledgeable warfare. And information decisions, information superiority has got to be the cornerstone of our future application of force.

We also recognize today that as we make plans that we have to create future forces that will be able to respond rapidly in 2010 as well as in 2015 and respond to the threats, be relevant to the threats that are emerging.

Just this month, as you know, we had the Unified Command Plan published, or the UCP as we refer to it as, and I think this was a major step for us in establishing the preliminary foundations for command structure that will address two of the most compelling requirements for the future security of our nation. And that is to provide a mechanism, which is the new Joint Forces Command, for the exploration of new technologies through joint experimentation and to address the new and asymmetrical threats, some that might be directed at our homeland, that we believe our adversaries will employ in the future.

Other aspects of our future force, however, are especially fragile. Especially the area of modernization which we must keep pursuing with renewed energy. In short, we need a future force, a future joint force that can move rapidly, fight decisively, and win quickly on the land, at sea, and in the air. And at the same time, I think we are going to have to ensure that we have a force structure that has forces with greater joint symmetry. Forces that can tap into the power of information and to dominate the total war fighting spectrum. These then are some of the challenges that I see as we look out toward 2010 and toward 2020.

And I think to meet these challenges, we've got to have the vision, the foresight, to take the long view. In our preoccupation with the daily battles that we fight, whether it's Bosnia, Kosovo, Iraq, Iran, or East Timor, we can't be distracted from the big issues, and those big issues are the ones that will shape the world in the decades ahead. The developments in China and Russia, the stability of Northeast Asia, and of course of Europe.

And at the same time, we've got to create forces here within this country that are strong enough, talented enough, and technologically advanced enough to protect our interests and our international leadership against the challenges that it will face within the next century. And finally, I think that we must remember that the military force is a great hammer, but not every international crisis is a nail. The full power of the United States, diplomatic, economic, and moral, should be employed whenever possible to shape the international environment. But warfare should always be our last resort.

Personally, I think it's a very exciting time for those in our Armed Forces and an exciting time in the history of our military and our nation. I believe that we're on the right path towards transforming the armed forces for the 21st century—a military that will be capable of executing joint doctrine and meeting our national security objectives.

But of course there's a lot of work to be done and we certainly will need your help. We need you, each of you here tonight, and certainly you're interested in it or you wouldn't be

here, to think hard about the issues. We certainly need your ideas and, befitting the heritage of our proud democracy, we also need your strenuous debate. And like all of you, I pray for a peaceful world, but my job and those of the Joint Chiefs is to prepare for the alternative just in case.

Thank you for listening to me tonight. And on behalf of all of our soldiers, our sailors, airmen, marines, and members of the Coast Guard, thanks to each of you for your sincere interest in our national defense. Thank you very much.

Pfaltzgraff: We now have an opportunity for some questions to General Shelton. Who would like to open the question and answer period? Yes, back here. Again, please wait for the microphone and the camera should be there as well.

Charles: Yes, Kathleen Charles. And I just want to ask a couple of questions. One is how do we want to posture our future relations with NATO in terms of peacekeeping in the Eastern Europe and the Balkan countries in concert with the United Nations? And number two, how do we, as a military, both the Air Force and the Army and the Navy, want to coordinate policies whereby we could be a little bit more fast effective in the case of a nuclear problem or a war or something like this? Thank you.

Shelton: The second question was to coordinate faster and more effectively? Did I understand you correctly? Okay, thank you. Let me say first of all regarding NATO. NATO is a great organization. Of course it is a consensus organization. We are one of 19 members in that organization. And I think that has served us very well. Consensus from a standpoint of, when you ask about the rest of the region, we have been pushing very hard and, as a matter of fact, had a discussion today with the Secretary General about a Balkan strategy rather than just a Kosovo strategy or a Montenegro strategy or a whatever strategy to try to look at the area of the region.

But in dealing with any particular issue there, this is something that is done either in the military committee initially, as was led so ably by General Klaus Naumann until replaced just recently, or by the NAC, by the North Atlantic Council. And then the United States has input into that, as you know. And out of that comes a consensus among the nations as to the way forward. And we get a voice in that. And of course each nation gets to vote as to whether or not they want to continue to move in that direction. So I feel very comfortable with that particular operation.

Now as we get into the new strategic concept and get away from Article V, the collective defense issue, and start looking at out-of-area operations or those related to peacekeeping, I think that this same mechanism will serve us well. Again, it is consensus. We'll have a voice in that. And of course there's a lot of interest right now with the United States Congress about how the strategic concept is unfolding and what this portends for the future. And I think Senator Warner addressed you today. He's, I think, going to be conducting hearings on this particular issue and it's something that we need to discuss. But I feel comfortable with the mechanism and our involvement and the decision making process that allows us, along with the other 18, to opt out. Or to vote to go ahead.

In the other case, I think in terms of jointness among the forces. I think that in about the last 10 years we have come so far in jointness that to me, having been a brigadier in the Joint Staff 10 years ago and then having had commands in the meanwhile that put me in a joint

environment, that we have come so far in the area of jointness that I think we are on a roll right now. And I think a roll that will continue because I think the more you work in the joint environment and the more you understand the capabilities that the others bring to the fray, the more you understand the power, the complementary capabilities, when they are all put together on the battlefield, and how much that multiplies the overall effect of our forces.

That as we get more and more people, youngsters in particular, growing up in that environment, this is something that I believe we won't have to spend a lot of time being concerned about. You know, the Joint Chiefs right now, for example, you wear two hats. One is you're a service chief, but the other one when you walk into the "tank" is you're a member of the Joint Chiefs. And you fight like the devil to pull your programs and for your Service, but when you come into the "tank," you fight for what's best for the nation.

Now with Joint Forces Command leveraging off of the great experiments that are being done by the Services and each of them looking forward with the *Joint Vision 2010* as a guideline, moving forward, but then having Joint Forces Command leveraging those experiments and pulling these capabilities together out on the battlefield, so to speak, or on the test field and putting them through the wickets. And then having a mechanism to come back in through the defense resources board or through the Joint Requirements Oversight Council (JROC) and having a voice in whether or not it fights together and gives you the complementary capabilities or whether it's a stand alone system. I think that will help us immensely in terms of moving forward and making sure that when we get onto the battlefield, everything works as it was designed to work.

Pfaltzgraff: Our next question? Is there someone on this side of the room perhaps? Yes, please. And again, wait for the microphone.

Melcher: Sir, Colonel Melcher. Sir, one of the issues that has come up repeatedly today is the proliferation of weapons of mass destruction and you mentioned it again this evening as well. I tried to recount today many of the things that have been done to try and address that: Rapid Assessment and Initial Detection (RAID) teams out in many of the states, training at city level across the country, Joint Task Force—Civil Support, and other things that have been done. But most of those are in the realm of "prepare" and "respond" as opposed to "shape." And it seems to me that shaping in this arena is one of the things that you want to do so that you don't have to respond. Could you offer some thoughts on things that we might do to shape that environment to reduce the risk?

Shelton: Thanks, I certainly will and I certainly share your concern there that that is a major issue we have to deal with and I think that we have to be very aggressive in the way that we deal with that. And I'm happy to say in a lot of cases that we are, most cases we are, I think. But of course in some of those ways that it's outside of the prerogatives of the Department of Defense, but gets over into other agencies of government. But certainly trying to stop the proliferation before it ever starts is first and foremost to avoid it.

That's one of the reasons that we pressed for the Comprehensive Test Ban Treaty in that same realm. If we could ensure that our nuclear stockpiles would be safe, this was another way of making it much harder for countries to develop new capabilities. Now they could keep what they had, but developing new capabilities that would really be of any significance almost requires testing. At least according to all of our scientists in our national labs.

And so pressing ahead in any of these areas, in each area where we can to try to hold down on anything that will keep other countries from trying to pursue weapons of mass destruction. Whether, you know, as we're working with India and Pakistan, trying to reduce tensions there, trying to get them to sign the Non-Proliferation Treaty and things of that type, very aggressive. Most of it done by the State Department.

When it comes to the proliferation of them and our reaction to them, that's where we enter into it. And having capabilities that can serve our nation and our citizens well, to be able to respond if in fact that happens as we are in support of other agencies of government, needless to say, be it FEMA or be it Justice or whoever, is the piece of it that we're working. And I might add, working it pretty hard right now. But any area, and I just mentioned a couple, anything that we can do, I think, to try to make it tougher and tougher to proliferate is in our best interests. And I'm happy to say a lot of behind the scenes stuff that goes on is designed to do exactly that.

Pfaltzgraff: Next question. Yes.

Frye: General Elton Frye. With the Senate's refusal to tender advice and consent on the Comprehensive Test Ban Treaty, with the pressure to move forward with the national missile defense and break out of the Anti-Ballistic Missile Treaty, with the protracted delay in further strategic arms reductions, there's a lot of concern that the fabric of negotiated restraint may be unraveling. You made reference to your concern about dealing with Russia. And my question is a very straightforward one. What do you think can be done to restore the lost momentum for a cooperative approach to these problems between the United States and Russia?

Shelton: Okay, thank you. Great question. And let me say that, first and foremost, I think that there are a lot of perspectives that go back to the captain and the first sergeant in terms of our own national security and what argues best for our national security, as you know. Certainly the ABM Treaty has served us well for a number of years. There are those that argue now that it's antiquated and that to maintain this ABM Treaty right now is, if it precludes us from fielding a national missile defense, is not the right answer either. So I get both sides of it everywhere I go.

But I think that, number one, establishing and engaging Russia is extremely important from our standpoint and I can assure you that within DoD we, in fact, are reaching out. We just came to a military agreement just a couple of days ago for 24 exchanges next year at the military level. General Kabashny and I will have to meet to sign that, but that's a positive step forward to regain this relationship that we've had.

I think that when it comes to national missile defense, for example, we need and have sat down already with the Russians to explain that this is not designed to stop their nuclear arsenal. I mean, at a max, we're talking about a few rogue missiles that would be fired at us and our ability to stop that. Certainly nothing of the magnitude that would ever stop what they could throw at us or potentially the Chinese in a few years or even right today.

And so I think that we need to engage, as we are trying to do with them, to work to amend the ABM Treaty, but not, if we can, keep from doing away with it. I think it still serves a useful purpose in terms of, again, back to the point of non-proliferation and being concerned about the proliferation of nuclear weapons. But it's a very complicated issue as you know. It's a policy issue and you

make the decision based on what you think is best for the nation. My recommendation would be based on what I think is best for our national defense.

Pfaltzgraff: We have time for two or three more questions. All the way over here in the back.

Audience Member: General, a recent story in the *Early Bird* talked about offensive nuclear or, I'm sorry, offensive information warfare. And one of the criticisms in the story was that the doctrine isn't fully formed. What is being done on a doctrine for information warfare, offensive information warfare?

Shelton: Well, as you know, we've had offensive information warfare for a good number of years. And I think, first of all, let me go to information operations and talk about what it consists of. Because, as you know, it includes deception, operational security, psychological operations, even public affairs. All of this is woven together. Computer network defense, computer network attack. And too often, as one of the articles that appeared in the *New York Times* appeared, to make it look like we had gone after computer network attack. And we did, but another element of it is electronic warfare.

And the electron that we used out of VA6's, they're computers that they use to control their missiles. And so in that respect, we did. But in terms of how it was pictured in the *New York Times*, it was like we had gone after their financial systems or whatever and of course we did not. We've got a joint pub out on information ops. Those that have read it have been very complimentary about it. I think it pulls it all together. The Services have been complimentary about it. And we have seen for the first time now interagency national level programs that are starting to move pretty well in several areas with information ops. But it's pulling together all of these.

And the final piece of it, I mean, we're trying to protect our networks now. As you know, we have a Joint Task Force for Computer Network Defense (JTF–CND). But in the long term, before we had ever used a computer network attack or even really pressed hard in that capability, that is a policy issue that will have to be resolved at the top levels of our government and it involves a tremendous number of agencies that have an interest in that, departments and agencies that deal in that arena.

But I think we're seeing now programs develop that move all the pieces of information ops along just like an execution matrix that we're all familiar with in terms of an operation. And so we're making great headway. I'd like to tell you that it's up and running full speed and we can do it and it's automatically an annex to every op order, so to speak. It's not, but it's getting there pretty quickly because people are beginning to see the advantage of doing it that way. And as a matter of fact, Allied Force, that kicked in late, but kicked in very strong and was working very well toward the end of that operation. And so we learned a lot from that and that's carrying over now into some planning and other areas.

Pfaltzgraff: Okay, our next question? Yes, please. And then you will be next.

Rosen: Sir, Mark Rosen, Booz, Allen, and Hamilton. Doing *Vision 2010*, sir, was a great step forward for the military because it was truly the first joint vision and the next version of Joint Vision. Someone said a criticism of the previous vision is it has a focus on the in-theater

piece absent the more strategic piece. And I'm thinking particularly the power projection piece. Do you see in the next JV version, whatever it might be, a shift from the focus of in-theater platforms and concepts to the strategic piece, in particular, power projection? Because, after all, there's no capability that's more joint than the projection capability. Thanks, sir.

Shelton: Well said. And to give you a short answer, I think what we need in the next one, in *Joint Force 2020* or *Joint Vision 2010* modified or whatever revised, we probably do need to have a little better balance. The toughest thing to do is to project power in such a manner that you are ready to fight when you arrive and then it just flows in seamlessly. And we've got a lot of initiatives that are ongoing in that regard. We now have an agreed upon position by all the Services that the Time Phased Force Deployment Data (TPFDD), the standard for developing a TPFDD, is now 72 hours or will be very shortly.

Of course in order to do that, all of your systems that you use to do it have to have a common base or have to be able to be interoperable. That's not the case today, but it's moving in that direction and with the agreement of all the Services. And I think in the next one we've got to strike a balance between the emphasis placed on in-theater, which of course is where you're going to fight and win. But in order to fight and win, you've got to get there first. And as the last general said, he who gets there firstest with the mostest is the one that wins. So getting there quickly ready to fight and win is important and we do need to have a better balance in that. And I would predict that it will be.

Pfaltzgraff: There's another question right back here.

Dekowsky: General, Dennis Dekowsky, Captain, United States Navy. I used to hear, as I was growing up in the military, "two MTWs," more recently, "two nearly simultaneous MTWs." I don't want to be accused of learning only the lesson of the last war, but having watched ALLIED FORCE, what I am concerned about is something I don't hear addressed. And that's "two not quite simultaneous MTWs."

If I look at the number of low-density, high-demand forces that were tied down in Kosovo, I look at the number of precision strike weapons used in ALLIED FORCE, I'm concerned that if we go to one MTW, we commit so many forces that when it comes time for the second MTW, not to mention the other lesser included bad guys of the world, like the Muammar al-Qadhafis, acting up, we could be in big trouble. And what will make up for the low-density, high-demand forces and the precision strike weapons will be U.S. lives. How will we prevent that from happening?

Shelton: Okay, great. Thank you. Well, let me say first and foremost, when we talk about two MTWs, although some look at Kosovo and say "could we still have fought two MTWs?" Kosovo was an MTW and we have never claimed that we had two and a half or three MTWs, worth. And in essence, for Kosovo, we committed an MTW's worth of air. Now what did we do differently that we would not do if, let's say, we had not been deployed there?

First and foremost I think is the fact that we didn't go to full mobilization. We didn't do that right up front. As you know, we did pick up Presidential Selective Reserve Call-up and did pick up a lot of our Reservists and brought them on active duty. But we also kept carrying out a lot of our other peacetime activities—SOUTHERN WATCH and NORTHERN WATCH. We had some

of the biggest days in history during that, that were flying in those two operations. We kept going over in Korea although we did take a carrier out and put some prepared-to-deploy forces on the West Coast. We kept operations going except for ISR in some cases for Charlie Wilhelm.

But we've always said, and part of the Quadrennial Defense Review was, peacetime ops have to stop and we turn and fight in two directions and we go the full mobilization. We didn't do that. On precision strike weapons, we used less than 10 percent of the inventory on precision strike. As I said several times to the press, the arsenals of democracy are deep. And they are.

Now I could also tell you in certain selective categories I was quite concerned and I woke up with a cold sweat a couple of nights at two in the morning. Things like CALCAMs that were running in short supply and is a tremendous weapon. But we also had some good news. The JDAM, the Joint Direct Attack Munition, came on. It had only been in production six months, $20,000 a copy compared to $750,000 with a TLAM [Tomahawk Land-Attack Missile] or a CALCAM. And it turned out to be, as you know, a very, very precise weapon that paid great dividends. And of course we turned the burners up full speed and a couple of those areas are wide open and opened up other lines, etc. And we actually came out with more than we started with when it was all over.

But having said all that, low-density, high-demand is still a concern and we in fact after this are plussing up in a couple of those areas already. And as we look to the future, I think particularly as we go into the next QDR, that is an area that's got to have some really serious look at it and we already are giving it that. We started even before Kosovo. But this is an area where the normal peacetime requirements exceed the numbers that you actually need to fight two MTWs.

That having been said, we fought differently in Kosovo than we ever planned to fight or that we did fight in DESERT STORM or had planned to fight in a warfight scenario in Korea. We were doing what I call man to man coverage of our fighters, for example, with DA–6s in Kosovo. Whereas, it had been designed for zone defense. So we've got some lessons learned out of this and some resource issues that have got to be addressed.

Pfaltzgraff: We have time for one more question before we finish. Yes, please, back here.

Trotso: Colonel Trotso from the War College. Sir, you mentioned that the military is a great hammer but not every international crisis is a nail. The President, in his speech before the U.N., seemed to present a view that most, if not all, international crises are in fact nails. It seems to me that this is a very important issue as we look to the future in terms of the appropriate force structure, first tempo concerns, as well as even modernization programs. So I wondered if you could comment on what you think are the appropriate criteria for the use of that military hammer?

Shelton: Okay, thanks. Well, I think, first of and foremost, you have to stop and figure out what your objectives are that you're attempting to accomplish. Because it is in fact the objectives that will tell you whether or not the military can, as you analyze the issue, whether or not you can achieve those objectives through the use of military force. There are many other criteria that you could apply to it, but I think if you go back and look at Kosovo, you will find that there was a disconnect, albeit a small one, between political objectives, state objectives, and what force could achieve.

And I'll go back to what General Klaus Naumann said many times. You know, if you're going to take step one, you better be prepared for step six. You know, if you're going to threaten force, you better be prepared to go all the way to whatever capital you want to go to to achieve it if in fact your political objectives may require you to do that. But in this case, we were able to use force, achieve our military objectives, which in fact achieved our political objectives. And to be frank, we always thought it might, but we always knew that it would not necessarily.

So I think that's the first thing that you want to look at is: what are your objectives and can the military achieve that objective? If it is, then you get into the use of force in general, you know. Is it in our national interest? Our vital national interest? Is it going to pass, as I say, the Dover test? You know, let's don't go through Somalia again where we commit our great men and women in uniform and then the first time we suffer casualties decide it's not worth it. Let's decide up front that our national interest is at stake, and we're willing to pay the cost to win. And then when we do that, then use the force overwhelmingly. Go for the jugular vein. Let's don't dally around, which is an incremental approach. And the list goes on and on. But certainly our national interests, whether or not you can achieve your objectives and then how you apply the force are the key things that I start looking at right up front when you first present the problem or when I see the first flash on the television screen.

Pfaltzgraff: Thank you. And I'd like now to turn the meeting to General Shinseki for his concluding comments and thanks to the Chairman for being here. General Shinseki.

Shelton: Thanks very much.

Shinseki: Well, I'd just like to thank the Chairman again for making the time to be with us. This is a bit of a surprise. I thought that we were going to conclude today here with comments from others, but let me just say that for the first day of this year's Fletcher Conference, my congratulations to Bob Pfaltzgraff. I know several times today there have been references to Rick Shinseki of the United States Army being a part of this and I just want to set the record here straight before we end the day.

This is for all of us. All of us in this business of national security where we think that we have this opportunity, all the Services, members of Congress and Defense, members of industry, to being what we think is a very important discussion on national security in this last year of this century as we prepare for the future of the 21st.

And with that, Mr. Chairman, let me just thank you for making time to be with us tonight. We know the demands on your schedule and we thank you for standing here and taking some tough questions. Thank you very much.

Pfaltzgraff: This then ends our evening session.

Serving the Nation in the 21st Century

Panel 4
General Eric K. Shinseki
General James L. Jones
Admiral Donald L. Pilling
General Lester L. Lyles

Tuesday, November 3, 1999—9:00 to 10:30 a.m.

Close cooperation between the Services is key to successful future application of military power. Although threats to American security have changed significantly in the last decade, our military forces look much the same. Each Service has its own vision for the future. Determining how these visions relate to a larger joint strategy designed to adjust to the demands of future threats is essential. Success will be defined in large part by the degree of cooperation and interdependence the Services adopt and the development of a joint implementation strategy. To achieve joint effectiveness means more than cooperation. The Services will need to shed unnecessary redundancies and integrate core competencies more effectively and efficiently.

Summary of Proceedings

- Our Armed Forces should not sacrifice the depth of joint capabilities by excessive zeal for eliminating redundancy, for some degree of overlap is critical to assure success in joint operations.
- Reducing the Army's logistical support requirements and providing greater strategic lift are the key to strategic responsiveness
- The Marine Corps is reviving the Expeditionary Brigade concept to bolster its versatility and enhance the ability of Marine units to function in joint and combined operations.
- The Navy will adapt its capabilities for control, attack, and sustainment to a battlespace defined by dispersed, networked forces featuring vastly improved sensor and weapon ranges.
- The Air Force must attain full aerospace integration and build upon its expeditionary tradition.

Analysis of Proceedings

Joint forces must draw on the unique contributions of each Service and be able to function in tandem with allied/coalition forces. Especially in operations other than war, U.S. military forces must be able to work with civilian government agencies and non-governmental organizations. By setting forth the basic interoperability objectives, the *Joint Strategic Vision* will provide a baseline for reshaping Service capabilities for the next joint operating environment. Synchronization, integration, and efficiency will be defining characteristics of future U.S. operations. The importance of forging a *Joint Strategic Vision* is undeniable, but that vision

must balance the capabilities of the Armed Services in order to meet defense requirements with minimum redundancy and waste. Balancing modernization with near-term readiness is another part of the equation. Because the demand for forward-deployed forces and power projection will increase to unprecedented levels, our Services must have greater capacity for rapid growth and adaptation.

The Army

The Army's most important mission remains to close with and destroy an enemy force. It is a task that no other Service can replicate. There is no substitute for a rapid, deployable land power—a force that adversaries cannot ignore—and only the presence of the Army in sufficient numbers can assure that circumstances on the ground can be changed to meet U.S. national security goals. This includes not only the separation of hostile forces but also restoring and preserving the peace in the post-conflict setting. Yet the Army presently lacks sufficient mobility and agility to arrive at the scene of a conflict with overwhelming combat power quickly enough. The Army's overly centralized structure impedes rapid deployment and current efforts are too limited in scope.

The hallmarks of a more strategically responsive Army must include maximum deployability, versatility, agility, lethality, survivability, and sustainability. The Army will develop the C^3I capabilities necessary to allow its forces to shift missions quickly along the conflict spectrum while reducing their combat-support and combat-service-support requirements. Reducing the support and logistics "tail"—which comprises 90 percent of the Army's lift requirements and inhibits mobility—will create a more efficient force. This will require future Army equipment to be designed for transport by C–17 aircraft to the theater of operations. The Army equipment must also be compact enough to permit C–130 aircraft to shift assets and materiel quickly within a given theater. Finally, the Army must continue its efforts to dramatically reduce each unit's repair parts stockpile by standardizing equipment components as fully as possible.

The Army must become not only more mobile, but also more lethal. The distinction between light and heavy units must be erased in the transformation process. If it is to harness the potential of advanced technology, the Army must immediately focus on fielding smaller, lighter, more lethal, more survivable, and more fuel-efficient combat vehicles. Technologies must be pursued that enhance survivability by providing low-observable protection against enemy fire, as well as capabilities for long-range target acquisition, deep targeting, early attack, and first-round kills. Future artillery systems should be able to achieve first-round kill using smaller-caliber guns to reduce the heavy burden of resupply. An all-wheeled vehicle fleet will provide a solution to the Army's mobility dilemma by reducing lift tonnage by 50 to 70 percent compared to heavy tracked vehicles.

The Army currently anticipates that the outcome of this retooling process will be the ability to deploy a combat-capable brigade anywhere in the world within 96 hours; a division within 120 hours; and five divisions within 30 days. The question remains whether the capability to put a Medium Brigade on the ground in four days is *fast enough*. Technological advancements and innovation in the coming years could make an even more rapid deployment possible for the initial entry force. Nevertheless, speeding the deployment pace further will give the national command authority a genuine deterrent by assuring that U.S. ground forces can reach

the scene of a crisis before an adversary can properly react. Such a responsive force will confer on the United States a pronounced advantage wherever it must intervene. When the Army attains this level of strategic responsiveness our political leaders will have a range of ground options more akin to a variable rheostat than an on-off switch.

The Marine Corps

The Marine Corps has historically been our nation's most expeditionary service. As the Marine Corps plots its course for the future, its vision must remain consistent with the operational concepts of expeditionary warfare. The Marine Expeditionary Brigade (MEB) concept will be revived in an effort to enhance the ability of the Marine Corps to take part in joint expeditionary operations. The new MEB would be able to deploy rapidly and marry up with the pre-positioned equipment carried by maritime squadrons based overseas. However, the Marine Corps currently lacks the force structure to equip the new MEB with a fully independent headquarters.

The future Joint Force must be more sustainable and versatile. The Marine Corps fits into this future force in three important ways. First, the pre-positioning concept provides the Marines with a generous measure of sustainability. The lift cost of sustaining a Marine Air-Ground Task Force (MAGTF) of 16,000 Marines for 30 days would come to 250 C–141 equivalents. Yet a single Maritime Pre-positioning Force (MPF) ship can provide the same support. Second, the occasional demands for long-term U.S. military commitment call for endurance of the type provided by the Army and the Air Force. Sustainability takes on even greater importance during such extended missions. And third, the future force will clearly be an expeditionary force that is capable of both combined-arms warfare and lesser missions. This expeditionary approach begins with the Marine Corps. Forces must be versatile enough to transition from relief operations to combat operations without missing a beat. They must be sustainable enough to reach the battle with everything needed to get the job done.

The Navy

Sea control is a familiar concept to Navy strategists, since this has been the Service's traditional contribution to joint warfighting. Sea control assures the flow of power-projection forces to a theater of operations and guarantees access to the oceans over which the vast majority of the world's commerce still flows. But the new battlespace includes not only sea control, but also airspace, cyberspace, and land control. Battlespace control encompasses defeating the attempts of an adversary to deny U.S. forces access to forward operating areas. Missiles, mines, minesweeping and submarines are inexpensive and potent means available to prospective opponents and will remain so. The time and effort the Navy has devoted to mine warfare and littoral antisubmarine warfare techniques represent an excellent start but fall short of what is necessary given the future international security landscape. Future missions and interventions will require the Navy to act in direct support of ground forces as a routine matter. This support will manifest itself through close air support and upgraded, precision naval gunfire. The Navy must expand its battlespace beyond littorals and beach operations farther inland, but also—and most importantly—the Navy must remain dominant in littoral and beach operations. In the realm of battlespace attack, as naval forces capitalize on the growing precision of joint weap-

Panel four, from left to right: *Army Chief of Staff General Eric Shinseki; Vice Chief of Naval Operations Admiral Donald Pilling; President, Institute for Foreign Policy Analysis Dr. Robert Pfaltzgraff; Air Force Vice Chief of Staff General Lester Lyles; and Commandant of the Marine Corps General James Jones.*

ons and sensors, they must stand ready to project power deep inland. Connecting and improving sensor and targeting systems would allow these forces to pinpoint mobile targets in real time, thereby accelerating the tempo of combat operations dramatically. Sea-based logistics, in concert with strategic airlift, will be the key to sustaining joint and coalition forces throughout the battlespace.

The Navy's role in joint strategy is to contribute to forward-deployed forces as a basis for other instruments of U.S. national power—diplomatic, political, and economic—to foster stability and shape the security environment in regions of major U.S. national interest. Sea control will remain the critical prerequisite for forward presence. In the future, however, the Navy will strive to dominate a second operating domain: cyberspace. Future maritime dominance will require a shared, real-time understanding of the battlespace. Rapid improvements in information technology promise to equip dispersed, mobile naval forces with preemptive information superiority.

The Air Force

The past year has witnessed two major applications of U.S. military force—Operations Desert Fox and Allied Force—both of which had relied heavily on air power. These operations have helped to shape the Air Force's vision of its future role in the Joint Force. The Air Force leadership must build on existing core competencies such as aerospace superiority, global attack, global mobility, information superiority, precision engagement, and agile combat support. Determining how these competencies fit into 21st century national security objec-

tives is their primary intellectual task. Preparedness, readiness, modernization, equipment, and the future strategic concept will be particular areas of focus.

The Air Force is now challenged to assess whether its current training plans will develop the necessary leadership qualities to lead a transformed service. Identifying shortfalls between the present force and future requirements is the Air Force's greatest challenge. In the future the reliability of our allies is not assured and, as such, planning for the unimpeded use of forward bases is a flawed assumption. The Joint Forces and Air Force especially must prepare to operate with greater self-sufficiency. The tenets underlying U.S. Marine expeditionary forces—lean, mobile, and lethal—will serve as a model for the Air Force. Above all, the USAF leadership will seek to innovate and experiment with new concepts and force structures. The challenge will be to craft a truly expeditionary aerospace force suited to a new security environment that can function over long periods, if necessary, without depending upon forward basing as an operational necessity.

The Joint Force

We must combine the efforts of each Service to build a more effective Joint Force. At the same time, expanded R&D and procurement budgets on the part of NATO European and other allied governments are essential to interoperability within a combined force for allied/coalition operations. Greater sharing of technology such as precision weaponry may be part of the solution. As we endeavor to heighten the level of joint cooperation and interoperability we should remain skeptical of excessive zeal in the quest to eliminate all redundant capabilities. Some degree of overlap is critical to maintain the depth of the joint operating capability. Striking a balance will be a crucial function of the newly activated Joint Forces Command, which was assigned the task of joint experimentation.

Transcript

Pfaltzgraff: May I extend a cordial welcome to everybody to the second day of our conference. The title of panel number four is "Strategic Visions: Serving the Nation Into the 21st Century." As we all know, one of the over-arching themes of this conference is jointness. We have talked about the need for closer cooperation, about the need for integration, and about the need for interdependence to recall some of the terms that were used yesterday.

We believe that future success will be determined in large measure by our ability to achieve not only a joint strategic vision, but also to develop the means for its implementation. And in doing so, to shed unnecessary redundancies. This leads to several important issues and questions that we hope to address in the panel that we have before us. First, how do we create and implement a joint vision? Secondly, how do we build forces that are agile as well as capable and lethal and readily deployable? How do we tailor budget priorities to a joint strategic vision? Fourthly, how do we achieve necessary levels of synchronization and synergy? That is, among land forces, maritime capabilities, and in aerospace. Fifth, what are the problems that we must surmount if we are to achieve optimum efficiency in joint operations?

I would say of course that is the optimum panel, to use the word optimum again, to help us address these issues and questions.

Let me give brief introductions to each of our panel members. First, of course, we have General Shinseki who became the 34th Chief of Staff of the United States Army on June 22, 1999. His previous assignments included Deputy Chief of Staff for Operations and Plans; Commanding General of United States Army, Europe; Commander, NATO Stabilization Force in Bosnia; and, most recently before becoming Chief of Staff, he was Vice Chief of Staff for several months.

Secondly, we will hear from General James Jones. General Jones became the 32nd Commandant of the United States Marine Corps in July of this year. His immediate prior assignment was as Military Assistant to the Secretary of Defense. Among his many previous assignments, General Jones was Deputy Chief of Staff for Plans and Policies and Operations at Headquarters, United States Marine Corps.

Our third speaker will be Admiral Donald Pilling, who is Vice Chief of Naval Operations, an assignment that he began in November 1997. Among Admiral Pilling's previous assignments, he was Deputy Chief of Naval Operations, Resources, Warfare Requirements, and Assessments. That is N8. And before that, he was Director for Programming (N80) on the staff of the Chief of Naval Operations. I can only point out here in great admiration that Admiral Pilling holds a Ph.D. in mathematics from the University of Cambridge.

Finally, we have General Lester L. Lyles who several months ago became Vice Chief of Staff, United States Air Force. Prior to this assignment, General Lyles was the Director of the Ballistic Missile Defense Organization. Among his many previous assignments, General Lyles was Commander, Space and Missiles Systems Center, Los Angeles Air Force Base.

So with those brief introductions, we turn to our distinguished panel beginning with General Shinseki.

Shinseki: Well, good morning everyone. Bob, I think I'll be a little better prepared for my panel remarks this morning than I was for my concluding remarks for the Chairman's presentation last night. That's a warning to all of you. When you sit in a panel session or conference room with Bob Pfaltzgraff, you're liable to be called on. So everybody stay awake here.

Let me begin by acknowledging the presence of some old mentors and friends. First of all, our Army Vice Chief of Staff is here, Jack Keane, and Tom Schwartz, recently confirmed for Korea. Tom, good to see you. General Gordon Sullivan, Association of the United States Army. General Foss, good to see you, sir. Fellow panel members, all of whom I know, distinguished guests. Especially General Jeremy Mackenzie who was kind enough to participate yesterday.

Ladies and gentlemen, thank you for joining us this morning for this important discussion about national security and our options for protecting the interests of our country and looking after those of our friends and allies. Because we are called upon to do that from time to time. In the coming months, this debate will take different forms. The run up to our national elections next fall, the continuing crucial work of the Commission on National Security in the 21st century, the National Security Studies Group, posture hearings before Congress next year, the Quadrennial Defense Review 2001.

These will all impact the Armed Forces and the roles we are likely to be asked to perform in the next century. And hopefully this conference and others like it will inform the work and will lead to military capabilities that meet the requirements for strategic responsiveness and dominance. Strategic responsiveness and dominance. In the first quarter of the next century.

Two events in the past 10 years I think will continue to influence the future security envi-

ronment in major ways. At least in the near term. First, the collapse of the Soviet Union ended four decades of a world divided around two superpowers which spent that time in a standoff where brinkmanship and statesmanship were sometimes indistinguishable. Nations that lived in the shadow of this Cold War tension, today exercise greater freedom of action. But that doesn't mean things are necessarily better.

The second major event was and is the ongoing explosion, global explosion, if you will, of communications and information technology. This revolution has created new industries, new communities, new markets, and new awareness. Perceived relative deprivation, that old term, has taken on new meaning. And the collision of these two events has left the world as dangerous as it ever was, and global and regional security issues today involve greater instability and increased complexity.

Let me briefly make three assertions. First, the United States I think will retain its world leadership role for the foreseeable future. Second, regional conflicts will continue to involve violent action between the "haves" and the "have nots." And finally in this world, in this world where so many political boundaries no longer seem to make sense, where there's economic disenfranchisement creating floods of refugees who take their politics and their religions, to include fundamental extremism, with them wherever they go. Where drugs offer the opportunity for quick dollars, and weapons of mass destruction are available and affordable to the high bidders. In this world, and despite its superpower status, U.S. leadership will continue to be challenged—perhaps more frequently.

It is therefore incumbent upon us jointly to provide our national command authorities with strategic forces that are readily available, agile, and dominant once a decision is made to employ them. To this end last month, the Secretary of the Army, Louis Caldera, and I articulated a vision for modeling the Army or attempting to meet this transformation requirement I just described. An Army that's more strategically responsive and dominant throughout the spectrum of operations we routinely refer to.

We settled on the use of force characteristics that describe the Army in terms of deployability, versatility, agility, lethality, survivability, and sustainability. Now I know that all of this sounds like an exercise in alliteration, but these are meaningful terms and they do mean different things. To improve our strategic responsiveness, we committed to enabling our corps, Army corps, and our Army service component commands for missions as joint force headquarters. Enabling them to be able to perform that role.

Furthermore, we committed, as I indicated in my talk at the Association of the United States Army, to manning our combat divisions and armored calvary regiments at 100 percent of authorization by the end of Fiscal Year 2000. And setting a goal of meeting 100 percent of Military Occupational Specialty and grade-level authorization in those units (in other words, ensure our combat units have the right number of soldiers with the right job descriptions and rank) by the second quarter of Fiscal Year 2001. We intend to man the corps and do a 100 percent of authorization at Military Occupational Specialty and grade level of detail by Fiscal Year 2003. And I know this sounds like a lot of statistics, but in a large organization those are challenging goals.

We will enable our divisions to dominate across the full spectrum of operations by providing them the versatility and the agility to transition rapidly from one point on that spectrum to another with least loss of momentum. To do so, we must develop a vibrant capability for reach back communications and intelligence so that we can begin to aggressively reduce the size of our deployed support footprints—both combat support and combat service support. As I have

said before, if we don't deploy it, some maneuver commander won't have to feed it, fuel it, move it, house it, or protect it.

It is our intent that units deploy essentially with their fighters and their critical combat support, combat service support needs. Ninety percent of our lift requirement is composed of our support and logistics tail. We're going to attack that condition both through discipline and through a systems approach in our design of future equipment. We will look for future systems which can be strategically deployed by C–17, but also be able to fit in a C–130 Light Profile for tactical intra-theater lift. We will look for log support reductions by seeking common platforms, common chassis, standard caliber designs by which to reduce our stockpile of repair parts. This is part of that 90 percent lift requirement I talk about.

We will prioritize solutions which optimize smaller, lighter, more lethal, yet more reliable, fuel efficient, and more survivable options. We will seek technological solutions to our current dilemmas. We want the best combination of technologies that will provide survivability through low observable ballistic protection, long-range acquisition, deep targeting, early attack, first-round kill at smaller caliber. Can we in time go to an all-wheeled-vehicle fleet where even the follow-on to today's combat systems can come in at 50 to 70 percent less tonnage? That's the question I get asked most often as a result of the presentation at the Association of the United States Army.

Marine Corps Commandant General James L. Jones warns against excessive zeal in eliminating Service redundancies—the result: a joint force lacking in depth. He sees a future Marine Corps as a vital component of the Joint Force's expeditionary capability.

I'll tell you, we don't know the answer to that question today, but I think so. And we're going to ask the question and then we'll go where the answers are. With the right technological solutions, we intend to transform the Army—active duty, Reserve, and National Guard—into a standard design. With "Internetted" C^{4}ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) packages that allow us to put a combat-capable brigade anyplace in the world in 96 hours once we have been ordered to lift off. A division on the ground in 120 hours. Five divisions in 30 days.

Being able to do so gives the national command authorities a genuine deterrent capability. When ordered, we intend to get to trouble spots faster than our adversaries can complicate crises. And once there, we intend to leverage for de-escalation and a return to stability through formidable presence. But if deterrence fails, we will be postured to prosecute war with an intensity that wins at least cost to us and our allies and sends clear messages for all future crises. And when technology

permits, we will erase the distinctions which exist today in the Army between our heavy and our light forces and review our requirements for specialty units.

Now this commitment to change will require a comprehensive transformation of the Army. To this end, we will begin immediately as I announced at the Association of the United States Army to turn the entire Army into a full-spectrum force—that's our orientation—which is strategically responsive and intends to be dominant at every point on the spectrum of operations. We will jump-start this process by investing in today's off-the-shelf equipment to stimulate the development of doctrine, organizational design, and leader training. These are long-lead issues. Not the equipment—doctrine, organizational design, leader training.

Even as we begin a search for the new technologies that will deliver the material needed in the longer term for the objective force that I'm describing, as quickly as we can acquire vehicle prototypes, we will stand up the first units at Fort Lewis, Washington, where the infrastructure, the maneuver space, and the gunnery ranges will accommodate such a transformation. Other units will follow. These are not the only two. It is our intent to have an initial set of prototype vehicles beginning to arrive at Fort Lewis this fiscal year. We're getting close, right, Jack? Going to make it happen.

In conclusion, we intend to provide more viable choices to deal with international conflict by strategic responsiveness. We mean providing ground options that, in conjunction with our other Services, gives the national command authorities a rheostat rather than a toggle switch for employing military force. The Army is pursuing change to correct shortfalls in its own unique land force capabilities, and we believe that accompanying change and the nature and the capabilities of our Joint Force partners will provide the nation an unprecedented ability to accomplish its objectives in peace and in war, persuasively and invincibly. Thank you all very much.

Jones: I'm always interested and intrigued by the word "vision." I remember the QDR process. One of the favorite lines that came out of the experience of the QDR was that "a vision without resources is a hallucination." I think we should keep that in mind as we proceed with our respective visions because there is a ring of truth to that. But it certainly is a good thing to think about. Strategic vision is important and we have a solid foundation for a joint strategic vision. The challenge, of course, is to make that a reality. It's a question, in my judgment, a fundamental question of balance and how we go about achieving that.

Certainly as a member of the Joint Chiefs, I'm concerned about balancing the capabilities of all of our Services to meet the defense need, but to do that in a way that avoids unnecessary redundancy and inefficiencies and waste, if you will, of the resources. But as a service chief, I'm also concerned about balancing near-term readiness and modernization so that we can continue the work towards achieving this joint strategic vision. I'm encouraged, as are my colleagues, with the progress we've made with this year's defense budget, which for the Marine Corps, at any rate, got us about halfway towards where we wanted to be. It is a positive step for the first time in a few years. But I must tell you without any equivocation that we are continuing to balance our readiness in the near term out of the budget provided for modernization and infrastructure modernization.

I completely agree with Rick Shinseki's comments on post–Cold War challenges to stability. We must be able to influence those events in regions where our interests lie. The requirements for forward-deployed forces and rapid force projection probably have never been greater.

The word "expeditionary," which had a restricted application not too long ago, is now a much more common term.

I don't think that my service is new to this particular game or to the understanding and interpretation of the word "expeditionary," which has literally been our middle name for quite a while. To witness: Marine Expeditionary Forces, Marine Expeditionary Units, and one that we're dusting off called a Marine Expeditionary Brigade. If I could pause on that for just a moment to tell you that we will bring the brigade concept back on-line. We never intended for it to disappear, but for reasons that have more to do with efficiencies of manpower and resources, five, six, seven years ago, we stood down our brigade headquarters. We subsumed that capability in the larger Marine Expeditionary Force and proceeded to essentially fall off the joint warfighting map sheet. The capability, however, was always resident. Our units still trained to the Maritime Pre-positioning Force standards. As you know, we have three Maritime Pre-positioning Squadrons.

I've talked to the Chief of Naval Operations, and I've talked to the Chief of Staff of the Army about the capabilities of the Marine Expeditionary Brigade. Brigade commanders don't have the force structure to make them independent headquarters anymore, but they will be functional, they will be viable, and they will be part of the war fighting kit made available to our CINCs.

We place the highest values on the term "expeditionary." To the list provided by Dr. Pfaltzgraff—agility, lethality, and deployability—allow me to add three others that I consider to be very important. The first of these would be sustainability. For example, for a Maritime Pre-positioning Force, Marine Air-Ground Task Force, of about 16,000 marines and sailors with 30 days' sustainment, the lift cost is about 250 C–141 equivalents. You get that in a Maritime Pre-positioning Force ship right now.

Endurance is also important. Some missions require (as certainly the Army and the Air Force both know) long-term commitments.

The third quality I would add is versatility: the ability to execute more than one mission within the potential spectrum. I would cite the recent experience of our 26th Marine Expeditionary Unit (SOC), which made a brief appearance in Kosovo. In the early days, we conducted a relief operation, backloaded on the ships, and then sailed around to meet humanitarian disaster relief requirements in Turkey. These Marines were inserted into a potential combat environment with a given set of rules of engagement. Those same Marines and sailors terminated that mission, got back on the ships, and then responded to a humanitarian crisis of significant proportions. That flexibility to do many different things is versatility.

These forces can deploy rapidly, and are also able to hit hard and to stay in the fight, if in fact there is one. We're talking about an expeditionary force that is also capable of delivering combined arms competence and, if you will, lethality.

Single dimensional responses will probably be inadequate in the future. So we must intelligently blend the unique contributions of each Service. I would add that coalition partners and even some governmental agencies will also be involved in this effort. Our capabilities must embrace all regimes; aerospace, land, maritime, information operations, and many others. It's very important, as we make our move in this direction, that we adopt the term "complementary, vice competitive" when we're talking about Services. There are, frankly, not enough of us left to be competitive, so we have to be complementary. There is no crowded battlefield and there are plenty of missions to go around. We need to study how best to achieve that. I'll touch on that in just a moment.

The joint strategic vision, like *Joint Vision 2010*, can provide the baseline for shaping Service capabilities to the joint operating environment. It defines interoperability objectives in a broad sense. It's up to us to refine it. Synchronization, integration, and efficiency are the bywords of joint operations. Services have achieved much progress, but can, should, and will do much better in the future.

But there's a warning to be issued here and that warning is to beware of the pitfalls that can be the enemy of effectiveness if you get carried away with it. Excess zeal in so-called "elimination of unnecessary redundancies" can lead to a joint operating capability that's lacking in depth. Defining the word "unnecessary" is key. It's wise to retain some overlap.

Joint experimentation will be a critical factor in our success. To this end, I support the joint experimentation of the Joint Forces Command. But how we achieve this and what it consists of is really what's important, so we certainly offer Marine Corps participation in that effort. Our Marine Air Ground Task Forces are good test beds for that type of experimentation. By virtue of our combined arms theology and historical expertise, we can, on a small scale, test concepts that could apply to the larger joint arena.

What is the impact of a specific concept on air, land, and sea components? I would offer our forces to the extent that would be useful to participate in such an experiment.

I also echo Rick's statement with regard to the National Security Studies Group and the Quadrennial Defense Review forums, which will be very important and will be vital towards shaping the forces of the future. Services have come a long way in implementing joint war fighting, but we can and should do more. To this end, we will hopefully participate in a series of conferences. As a service chief, I am interested in holding war fighting conferences with the Army, the Navy, and the Air Force in the near future to discuss ways in which our Title X responsibilities can merge towards providing a more cohesive, more balanced force.

I would underscore the fact that it's extraordinarily important that the nation's two land forces achieve that commonality and achieve that mutual understanding. It is vital to the goals of the nation, and I think it can only lead to good things, not only tactically and operationally in the field, but also to the investments that we make in the purchases of our respective equipment, our long-term programs, and the effectiveness that we achieve when we use the taxpayers' precious resources.

Ladies and gentlemen, I thank you for allowing me to address you very briefly this morning and I look forward to answering your questions at a later time. Thank you.

Pilling: Thank you for the opportunity to speak about our visions in the context of a larger joint strategy, and our contribution to the security and economic prosperity of this nation in concert with our sister Services.

When we think about the future, three questions frame the Navy's thinking of its role in joint strategy. First, *what is it* that joint forces will be *expected* to do? Second, *how* will they carry out these expectations? And, third, what is the Navy's *role* in all of this?

What will we be expected to do (the "ends")?

There is probably no more fundamental question than the first one: what do we want our military forces to do? The *National Military Strategy* correctly describes two general objectives that we must continue to meet in the future: promoting peace and stability, and defeating adversaries. These objectives are best discussed when broken down further into four interrelated *ends* within these broader objectives:

The first end is regional stability. That our world is becoming a smaller place is indisputable. Instantaneous communications and computer links . . . coupled with an immense daily flow of capital goods and services which know no geographic bounds . . . serve to join the major regions of economic activity around the globe in a complex web of interdependence. These globalization trends are neither all good nor all bad—they are a fact of life, and our military must be able to respond to stresses and tears in this web that are caused by regional instability. Turmoil and duress in any major economic region of our world will necessarily cause disruption in others.

Forward-deployed forces—by "being there" with a sustainable and credible combat presence—help "shape" these regional security environments every day. Through routine operations with friends and allies, we forge relationships of trust and confidence, powerful reminders to potential aggressors of our will to maintain peace and stability.

Vice Chief of Naval Operations Admiral Donald Pilling: the Navy will continue to assure "access forward" in support of U.S. military strategy using two means: command of the seas and speed of command.

Forward-deployed combat power leads me to the second end of joint forces: deterrence of aggression. By maintaining a force-in-ready, with the means to target the political and military infrastructure of regional aggressors, we will give them reason to rethink their actions. With 80 percent of the world's population living within 500 miles of the sea—including 84 percent of all cities of greater than a half-a-million people—I am convinced that the Navy's joint contribution landward, with our sister Services, is the correct one.

The third end our nation will ask of military forces in the next century is to provide timely crisis response . . . where and when our nation's interests are at stake. Joint Forces deployed for peacetime presence are often those suddenly called upon to respond first to an emerging crisis . . . often as the enabler of—or in conjunction with—other power projection forces from out of theater. Possible escalation demands that these forces be configured and trained for any mission they may encounter, and that they provide our national command authorities a variety of flexible response options for unexpected international crises, standing ready to bring their effects quickly to bear.

The fourth *end* of our future force posture will be the readiness to fight and win our nation's wars. We believe that the most *important* role of naval forces is to *prevent* war; Army and Air Force win them by focusing overwhelming combat power when and where required. And the *critical* role of the Naval Service is as an enabling force during the transition from

crisis to conflict. Moreover, naval forces make their most important contribution—preventing war—precisely because both our allies and adversaries know they have the capability to perform their most *critical* contribution: to provide a timely response to any developing crisis that would threaten U.S. interests—or those of our allies and friends.

How will we do it (the "ways")?

Having addressed what joint forces will be expected to do in the 21st century, the second question for consideration is: *how* will they do it? We see three *ways* of achieving the *ends* I just described: *control, attack,* and *sustainment* within a new and expanded battlespace, whose limits are defined by our widely dispersed and networked forces and their sensor and weapons reach.

The concept of "control" is a familiar one to military strategists, and "sea control" has always been a unique naval contribution to joint warfighting. Control of the seas guarantees the flow of joint power projection forces to the theater of operations and assures the access of all nations to this international medium over which the vast majority of the world's goods will still move.

But it is no longer sufficient to think solely in terms of sea control . . . or area control. As I mentioned, naval and joint forces must have the ability to defeat or negate an adversary's capabilities by contributing to *total* battlespace control: sea, air, space, cyberspace and *land* control . . . the entire battlespace . . . as we project joint power and its influence . . . beyond the sea.

Battlespace control also means that we must be prepared to counter an adversary's strategy of denying our access to forward operating areas. Missiles, mines, and submarines represent the least expensive and most likely means potential opponents will use in this pursuit. Our investments—such as in innovative undersea and organic mine warfare capabilities—will strike at the heart of such an area denial strategy, and will allow joint and coalition forces the freedom to operate where their weapons and sensors can best be used.

Control of the battlespace leads directly to the second *way* of answering the question of how we will carry out our responsibilities—battlespace attack. The unprecedented reach and precision of our joint weapons and sensors—such as the extended range of amphibious operations through Operational Maneuver From The Sea—will allow joint forces to project offensive power deep inland. Shortening our decision timelines by improving and connecting sensor, information, and targeting systems—to include focusing on the real-time location of an adversary's mobile targets—will accelerate the operational tempo at which these attacks can be delivered. By understanding . . . and operating within . . . an adversary's decision timeline, naval forces can achieve *effects-based* planning. This will permit distributed, netted forces to apply massed effects to disrupt that adversary's decision-making process.

Finally, as we *control* and *attack* within a much larger battlespace . . . with new dimensions . . . we must *sustain* the activities of engaged joint forces. Therefore, the third *way* we will operate in the future is battlespace sustainment. Mobile, dispersed forces require an equally agile and tailored logistics system to support their distributed, dynamic operations. Logistics focused to arrive where and when needed—without a large or vulnerable footprint—further enable maneuver in an expanded battlespace. Sea-based logistics employing pre-positioning and strategic sea and airlift are key to sustaining future joint and coalition forces throughout the battlespace.

What is the Navy's Role in the Joint Arena (the "means")?

Having covered the first two questions—what joint forces will be *expected* to do and *how* will they do it—the third question is . . . what is the Navy's role?

I propose two answers to this question . . . which go to the very heart of the *means* by which our future Navy will contribute to the ends of our nation's security and prosperity. I've mentioned the first one during my remarks, and it should come as no surprise to any of you. The second part may be less apparent, but will become self-evident upon further discussion.

Why the Navy? The first answer is its contribution through the *means* of *forward presence.* By controlling the seas, naval forces will remain forward-deployed where our most vital interests are concentrated, helping to provide the framework of security that enables other instruments of U.S. national power to promote stability and to shape regions of interest. This is the enduring role of our Naval Service. In cooperation with friends and allies, forward-deployed forces protect our shared interests; and through combat credible forward presence, naval forces deter aggression throughout the spectrum of conflict.

Clearly, sea control will remain the cardinal prerequisite to *assured access* forward. But as we look towards the future—and take stock of the lessons we learned in the recent conflict in Kosovo—we have come to realize that being present forward will not suffice alone. The Naval Service has developed a *Maritime Concept for the Information Age* which defines how future forces will continue to *assure their access* forward . . . despite these new challenges . . . by exploiting two key operating domains. The first will remain the seas, that international medium where U.S. naval forces continuously and legally sail . . . anytime, anywhere. But in the future, our naval forces must parallel their *command of the seas* with their dominance of a second international medium . . . and that is cyberspace. To ensure our continued maritime dominance, future naval forces need—and will have—a shared, real-time understanding of the battlespace as improvements in information technology provide dispersed and highly mobile naval forces with preemptive information superiority. The capability to provide a common shared awareness of the threat and to control the timing of our actions, will allow naval forces to remain forward despite an adversary's attempts to preclude our presence by their own attempts to use—or misuse—this new operating realm. Which is why *command of the seas* must now be paralleled by *speed of command* in cyberspace, providing us the *superior knowledge* to act rapidly inside of an adversary's decision timeline.

In sum, the Navy will continue to assure access forward in support of U.S. military strategy by directly and decisively projecting U.S. influence and power ashore using two *means: command of the seas* . . . through its *presence forward*, and *speed of command* . . . by *knowledge superiority*. Together, these are the two means by which maritime power will continue to advance and protect our shared interests. Through this joint strategy, the Navy and its sister Services will continue to support our nation by helping to provide the framework for stability needed for its economic prosperity and national security. Thank you.

Lyles: Good morning. It's great to be here this morning at this year's IFBA Symposium. Bob, I thank you for inviting me to participate. Let me start by congratulating the Army and the Fletcher School for assembling such a very impressive list of panels and participants this week. This is my second opportunity to speak before this type of symposium. Last year, I spoke up at Cambridge, Massachusetts, to the IFPA Symposium. At the time, as Bob noted, I was a Director of the Ballistic Missile Defense Organization and of course I talked about missile defense and specifically national missile defense.

Some of you may have been there at that particular time. I started that presentation by giving sort of a true, but humorous, vignette as to how I got selected for the BMDO job. Well,

things have changed. Obviously, I'm no longer in that capacity. But let me tell you a little bit about getting started in the Vice Chief's job.

I got selected, confirmed, and promoted and put into this position in the end of May of this year. I knew it was going to be a very, very daunting enterprise for me. I was replacing a guy with some very, very large footprints in terms of capabilities. Super personality, very dynamic individual, very charismatic, great golfer, a fighter pilot. Almost all the attributes you might want to have for a leader. And I'll be honest with you. I had some trepidation about my ability to fill that position.

So what did I do? I decided to consult a fortune teller to ask for a little bit of advice and find out what was going to happen in my tenure as a Vice Chief. I went to this fortune teller and she looked in her scope, looked at her crystal ball, thought for a minute, and then promptly spoke up and said, "Well, you're going to confront a major theater war that's going to tax the United States Air Force's ability to support all the activities. Congress is going to make an assault on your number one acquisition program, the F–22. You're going to continue to have budget shortfalls and the money is just going to be short to get everything accomplished you want to get accomplished. And to make matters worse, the *Redskins* are going to continue to lose to the *Dallas Cowboys*."

I stopped her right there and I said, "All of that is going to happen in my tenure?" And she said, "Wait a minute, I've only gone through the first 100 days." And sure enough, if you look back 100 days from last May, that's exactly what occurred.

Well, a lot has changed over the last year since last year's IFPA Symposium. Lots of changes that impact the United States Air Force. We've had two major confrontations with regional antagonists. Of course I'm talking about Operation Desert Fox and the preparations we made last year for another confrontation in Iraq, and, obviously, Operation Allied Force. Two significant applications of military force, both using aerospace power as one of the major instruments of force.

During this past year, NATO has conducted its first offensive military operation and we learned a lot about the alliance's capability and capacity to plan and execute a military action as a unified force. And as you've heard from the previous speakers, the service chiefs, this year all the Services are conducting some form of vision update. And that's certainly true of the United States Air Force. This is a very, very important and worthwhile point of self-explanation and we're all embarked upon that.

And within the Air Force, we're planning and implementing a series of changes designed to make us more responsive to the needs of our regional CINCs—long-term organizational changes that will ensure that all of our CINCs have the aerospace power necessary to conduct their peacetime engagements and to meet their wartime requirements.

And literally as I speak today, the reason I'm here and not General Mike Ryan, our Chief of Staff, is that he is with the other senior leaders of the United States Air Force, all of our four stars, most of our three stars, our Secretary of the Air Force. They're all at our Corona conference, Corona Fall as we call it, out at the Air Force Academy devoting the major portion of their time talking about the strategic vision for the United States Air Force and where we want to be in the 21st century.

So in some respects, what I'm going to talk to you about just briefly in these few minutes is sort of a teaser for next year. Bob, I'm going to tell you in outline what it is we're focusing on and maybe next year somebody can come back and talk to you about where we're actually going to go based on the results of this Corona conference.

Well, when we think about visions and think about the vision future, I like to remember a statement made a couple of years ago by Richard Haws in his book *Reluctant Sheriff*. He wrote that a sure sign that experts are encountering difficulty with figuring something out is their use of the word "post" as a prefix. Such a label reveals that people know only where they have been, not where they are now, and much less where they are headed. And in this new world context, we, in the United States Air Force, are focusing on our vision for the future to make sure that we don't become a post–Cold War Air Force. I'm certain of where we are and, more importantly, I'm certain of where we are headed. We are focusing on where we're trying to go.

Two years ago, we were a forward-deployed force focused almost exclusively on deterring and, where necessary, winning a major confrontation with the Eastern block. In contrast, today's Air Force is engaged throughout the world, conducting a variety of small-scale contingencies and peacetime engagement missions that simply were not on our plate a few years ago. Let me just give you an example of Fiscal Year 1999, as an example.

Well, we flew over 69,000 mobility missions to over 140 countries in the past year. On every continent. We delivered over 50 tons of aid to victims of Hurricane Mitch in South and Central America and we're continuing efforts, humanitarian efforts, throughout the world wherever we're called upon. We conducted 65 deployments to Central and South America to support counter narcotics operations. We deployed, just so far, literally today, 80 units and have flown over 19,000 sorties in Operations NORTHERN and SOUTHERN WATCH over Iraq. All of which in addition to Operation DESERT FOX and Operation ALLIED FORCE.

Let me just mention specifically ALLIED FORCE to give you a feel for exactly what the Air Force was doing. We refer to this situation as a major theater war equivalent for the United States Air Force. If you look at what we accomplished and what we did, 38,000 NATO sorties—most of which are flown by the United States Air Force—10,000 strike missions, 820 NATO aircraft—520 of which were United States Air Force aircraft—were involved in that. We, the Air Force, had 18,000 airmen deployed—3,200 Air National Guard and 1,100 Reservists. We flew 11,000 airlift sorties and 7,000 air refueling sorties. We unloaded 300 million pounds of fuel as part of that.

We dropped 23,000 bombs throughout that conflict. And if you look at the real statistics as counted by General Wes Clarke and the forces' leaders over in EUCOM, we had less than one-tenth of 1 percent collateral damage. Certainly not what's usually stated in the press. So this was really a significant effort.

For the United States Air Force—if you look at percentage of active duty aircraft involved in ALLIED FORCE—we had, in every category, more of a percentage of our aircraft involved in that conflict than we did during DESERT STORM, and certainly even than Vietnam. This was a major theater war for us.

In all, the United States Air Force throughout the world supported over 160 operations and exercises with nearly 900 deployments around the globe in Fiscal Year '99 alone, and the year is not over. And nor is this an aberration. This is really the future as far as we're concerned. I'm reminded of a statement made by Billy Mitchell. "In the development of air power, one has to look ahead and not backward and figure out what is going to happen and focus not too much on what has happened." And that's exactly what we're trying to do as we're figuring out our strategic vision for the United States Air Force.

We're taking into context all of the things that we've done over the past year and making sure that we've shaped the right sort of vignette, the right sort of analogy, and the right sort of

strategy for the Air Force of the 21st century. As we do that, what's being focused on at Corona Fall in Colorado Springs today, and the rest of this week, is to build upon our Air Force core competencies. Those core competencies are aerospace superiority, global attack, rapid global mobility, information superiority, precision engagement, and agile combat support.

And we're looking at each one of those areas to make sure that we understand how they fit into the context of the 21st century needs for our national security objective. Not just for the Air Force alone, but looking at it in the context of *Joint Vision 2010* or even the evolving *Joint Vision 2015*. We're looking at each one of those core competencies in the area of preparedness, in the areas of readiness, in the areas of modernization, equipment, and future concept. And we will build upon each one of them.

The questions we're asking ourselves, do we have the right kind of balance in each one of those core competencies? Do we have the right kind of organizational structure to meet the needs of the national security objectives? Do we have the right force structure? Do we have the right resources to support the force structure? Do we have the right sort of personnel and skills and are we training properly to do this job and do it very, very well? So we're looking at each one of those and we will build upon them.

We're also going to look at them in the context of the full spectrum of crises. How do we employ each one of those core competencies against all the spectrum that we may have to encounter? Whether it's humanitarian efforts, small-scale contingencies, or, God forbid, a major theater war.

Now we're not just looking at our existing core competencies. We think that is a very solid foundation. But we have to look, as I stated in the quote from Billy Mitchell, where are we going, what kind of things do we need to build upon, what areas still need to have additional work? Well, the areas we're going to focus on as we do that is, first and foremost, command and leadership. Are we developing the aerospace leadership for the future? Do we have the right skills, the right preparation, are we putting our people in the right places so they can execute and lead the aerospace forces we need for the future?

Do we have the proper integration of air and space? Do we have real aerospace integration? We've talked in the past about being an air and space force evolving to a space and air force. We've got away from that rubric for the United States Air Force, and we really know that we need to focus on air and space integration. It is a total journey and we need to make sure that every airman and every civilian that's part of the United States Air Force is involved in that journey so that we will have aerospace leaders and aerospace forces in the future to prosecute any sort of contingency we may be involved in.

How do we make sure we have an expeditionary aerospace force? This is an area that we know is really the tenet, major tenet, for the United States Air Force of the future. We're getting back to our expeditionary roots. And as I stated in a speech recently to the Marine Corps Aviation Association, we're taking major lessons learned from the United States Marine Corps. We are in fact an expeditionary force. And you can take the basic tenets and descriptions of a Marine Expeditionary Force, substitute aerospace in front of that, and you will find the exact same tenets that we have for our United States Air Force. We will be rapid, we'll be lighter, we'll be leaner, we'll be more lethal, and we'll still be able to support the CINCs' needs throughout the world.

Do we have a future total force? We say we have a total force today and we certainly indicated that and demonstrated that during the air campaign of ALLIED FORCE. But are there

some things we could do better to integrate totally the Guard and Reserve and all the things we're trying to do in the United States Air Force?

And then finally, a very, very important tenet, how do we make sure that we are innovative and adaptive and we're making that a major, major part of everything we do for our vision and for our final resources and force structure for the future? This is an area where we can take a lesson learned from our other Services. As an example, I applaud General Shinseki and the United States Army for their innovative way they're using innovation and experimentation and the kind of things they're doing to make sure that that's the major part of everything they do in the United States Army. We're going to take some lessons learned from that and try to improve upon it for the United States Air Force.

So we're learning. We have a lot to learn still in what we're trying to do. We tried to make sure that the 21st century of the United States Air Force is one that has the right sort of focus, the right sort of sight picture. The 21st century Air Force will be an expeditionary aerospace force. It will be a total force, even better than it is today. It will be a fully integrated aerospace force. It will be a leader in technology and innovation and it will always focus on command and leadership in everything we try to accomplish. Thank you very much and I look forward very much to your questions. Thank you.

Pfaltzgraff: Well, thanks to the panel for this stimulating series of presentations. We now have the opportunity for questions and discussion. Let's begin on this side of the room. Would someone like to pose a question?

Taylor: Thank you very much. My name is Terrence Taylor from the International Institute for Strategic Studies in London. None of our speakers mentioned the question of nuclear forces. And I was wondering whether they've been de-emphasized so much that they were a matter for simply, perhaps, treaty negotiation. So if I wonder if any of our speakers would like to respond? Whether the new thinking about the structure and use given the new environment as we look forwards for that part of the U.S. Armed Forces force structure?

Lyles: Well, let me start, if you don't mind, Bob. For the United States Air Force, if anything we're trying to make sure that we don't lose sight of the importance of that part of our national strategy and objectives. We are trying to make sure that we are putting the right sort of emphasis on sustainment and, to some extent, modernization of our nuclear capabilities. I did not talk about that, but if you look at all the things we're trying to do in terms of force structure, in terms of our future vision, we want to make sure that the nuclear component, the very important nuclear component, is not one that we overlook. So we will continue to put the right sort of emphasis and resources in that area.

Pfaltzgraff: Admiral Pilling, would you like to comment on that question?

Pilling: Certainly, one of the things that struck me is the strategic force capability we have in this country is almost an absolutely fundamental thing. That's probably why none of us even mentioned it. You will remember in the Bush administration on the tactical side there was a policy decision that naval forces would not routinely deploy with tactical nuclear

weapons. And so there has been de-emphasis in that part of the equation. But on the strategic side, there's never been a change from the Navy's perspective.

Pfaltzgraff: Okay. Any other comments from the panel? Okay. Let's move on to our next question.

Baumgarten: Yes, sir, Neil Baumgarten, *Defense Daily*. Mostly a question for General Shinseki, but the other panelists can comment in as well, please. General Kern has spoken in the past about the need for increasing precision strike capability to Army forces. However, you didn't really touch upon this very much in your vision statement. I was wondering if you could elaborate on how increasing precision strike capability, possibly down to even the platoon level, fits into your vision for the Army for the future? Thank you.

Shinseki: Well, I alluded to it when I talked about early acquisition, okay, of target arrays, target acquisition, deciding what you're going to go after. Shoot first, kill early. In that sense, precision munitions do play significantly in what we're trying to describe as the new environment that says we don't necessarily begin with the description of an armored vehicle as, if hit, will not be penetrated. So if you're going to change that environment, you have to engage early and begin to take out those potential threats to our ground armored forces.

Jones: I'd like to just add my two cents on that. And that would be along the lines that I think the lethality of our small units is going to be a thing of the future. That officers much lower in the chain of command will have reached that capability for a far greater range of assets than perhaps we had as battalion commanders and regimental commanders in the past. And the survivability of those units will be in direct relation to the things that they have to support them. And so precision strike will be one of those utensils, one of those tools, I should say.

But I think the battlefield of the future will see more junior officers, more small unit leadership depending on that, in fact, for their survival. Because we'll be putting them probably at distances that in the past we would only consider putting battalions and bigger sized units.

Pilling: To do what General Jones has just described goes back to that description that says you've got to be able to see the array early. You've got to be able to target deep and decide, because you have a finite number of these assets, decide which of the targets that need to be attacked, shoot first, and kill early.

Pfaltzgraff: Next question. Please.

Gregory: My name's Colonel Tim Gregory. I'm from the British Embassy. All the panelists mentioned at some stage the importance of working with coalition partners and allies. Yet as you move forward technologically and place greater importance on networking and situational awareness, it's going to be very difficult for you to integrate allies into your plot and yet give them the same degree of situational awareness that they require to carry out a high technology battle. I was just wondering if the panelists would care to comment on that?

Pfaltzgraff: Who would like to begin this very important area for discussion?

Panel Member: Tim, I would start by saying we have made fairly strong efforts to ensure that what you describe, I won't say doesn't exist, but to the degree it does, that we minimize that through our liaison efforts and our collaborative efforts. There are two sides to this. I think investment on the part of our allies needs to help close that gap. But even as much as we reach back to try to ensure that, to the degree we can share that technology, that we do. I think this is a question that has two sides to our discussion here. I think there's more that can be done.

Pfaltzgraff: I'm sure there's some other comments on this question and perhaps even including what types of investments from your vantage points would be most appropriate from an allied perspective.

Pilling: I'd like to just address what we have in mind in the Navy. We are essentially building an at-sea internet, which we call Information Technology XXI, "IT XXI," which will allow naval forces, regardless of the national ensign flying from the fantail, to join into that internet by setting up standards so that all the participants can share in the information—so we're not building an exclusive network at sea because it's very important to be able to interoperate with our coalition allies.

Pfaltzgraff: Any of the other panel members like to comment on this?

Lyles: Well, certainly this is an area that was another major lesson learned from an allied force in the air campaign over Kosovo. And we're engaged literally today in discussions with allied nations and our friends about how we can work together even better in the future sort of contingencies. The kind of things we're concerned about are our dependence and rapidly increasing dependence on situation awareness, sensor-to-shooter capability. All of those kinds of things that played so very well in Kosovo and will be growing even more in the future. We want to make sure that this is not just a single thing that we do for the United States forces and we exclude our allied partners.

To go along with that is the issue of precision weapons. We want to make sure specifically that there's an opportunity for everybody to share in a fight, if you will, and that we're not just depending on one nation to have to do all the precision sort of engagements. So we've identified some problems. We're not quite sure exactly what the final solutions are. Dialogue and communication and try to share resources and technology ultimately is the way to try to address it, but we have a little ways to go before we get there.

Panel Member: And, Tim, I'd just add one more point to this and that is, and I may be out a bit on a limb here, but in our business, it is technology overmatch that carries the day. And so as we share, we want to be sure that our investments are in fact controlled so we don't end up facing our own technology someplace down the road. And I think we need to be better at it.

Pfaltzgraff: General Jones?

Jones: I associate myself with the comments of the panelists. I would also kind of like to say that technology sharing is not necessarily a one-way street. We certainly recognize that we don't have the primacy and the monopoly in technology. And so I think working within the alliances, it can certainly be much more of a two-way street as well.

Pfaltzgraff: Okay, another question from here.

Swan: Colonel Guy Swan from J5 on the Joint Staff. I'd like to ask the panel members to put on their Joint Chief hat for a minute and take off their Service Chief hat to answer this question. First of all, as we build a force that appears to be focused on speed, lethality, precision strike, and, more importantly, able to limit civilian collateral casualties and friendly casualties, do we not run the risk of building a force that becomes the tool of first resort for our political leaders rather than a tool of last resort? In other words, it just seems to be one of the ironies of the RMA. What I'd like you to do is how would you advise civilian leaders to put that into perspective of balancing the use of military power with the other elements of national power? Thank you.

Pfaltzgraff: Who would like to begin with that interesting question? General Jones.

Jones: I think that one of the pitfalls that we have to watch out for is that we don't put too much of one capability or the other in one limited basket. The rush towards being expeditionary is good, but it's also good if it's tempered, as Admiral Pilling said, by the reality of who amongst us in our Services does in fact fight and win the nation's wars if in fact it gets to the last resort. And in talking about General Shinseki's articulation for the direction of the Army, he and I have had private discussions on exactly that fact.

The Marine Corps is a one-MRC force. It is not the force of land decision. We play an increasingly important part as a percentage of those forces. For example, we have 20 percent of the infantry battalions available, in the active side, available to the United States right now. That's historically probably a pretty high percentage when you think about the Marine Corps. But we, I think, are in complete agreement that the force of decision in land warfare is the United States Army. And so in moving in these directions of being expeditionary, we should be careful that we don't sacrifice the instrument of last resort and I think we're all very well aware of that. But I think it's an excellent question.

Pfaltzgraff: Would other members of the panel like to make a comment on this question?

Shinseki: I'd just like to pick up on what General Jones said. As you can tell, we've spent a bit of time talking. I think we can both say neither one of us has been on a battlefield overly crowded. There was always room for more. But I will take the last comment he made and that's a phrase that the Commandant has used before and which I think is an apt one. That is Marines win battles and the Army wins wars. And if that's a proper corollary and I accept that, this business is about deterrence and then winning when deterrence fails. So if you go back to the statement Marines win battles and the Army wins wars, then if we're talking about deterring wars, then it takes an Army to deter wars.

Ultimately, if you're going to be called to put it on the line, you have to have the capability

to deploy significant force that's going to turn off that option. And if it fails to turn it off, then you can prosecute war decisively. And so the issue here is not about expeditionary encroachment by the Army. I think that the Marines are the force of choice for expeditionary missions. But when we talk about deterring war and follow the Commandant's line here, Marines win battles, but armies win wars, then the Army has got to have the capability to get there fast and be able to deter that conflict.

So I think the question that Guy posed is a good one, but I think we need to keep our focus on what it is standing military forces are paid to do. And that is to be prepared. Non-negotiable. They call—we deliver, fight our nation's wars, and win them decisively.

General Shinseki elaborates on General Jones' comments that "the force of decision in land warfare is the United States Army."

Pfaltzgraff: Would other members of the panel like to comment on this very interesting question as well?

Pilling: Only just an observation. I think the question is driven by what might be a lesson mislearned from Kosovo in that we didn't have any casualties. And I think it would be the moral and professional responsibility of the Joint Chiefs to advise our civilian leaders that combat is a dangerous environment and they would have to accept that that was our best military judgment. We won't make any bones about that.

Lyles: I'll echo the comment of the other panel members. In some respects, there's sort of a fine balance there. Obviously, if you look at the ultimate situation, we all consider strategic nuclear forces as the ultimate last resort. But I think we can't lose sight of our tactical capabilities and making sure they have the right speed, lethality, and precision strike so that any adversary could look at that also as, if you will, an instrument of last resort. Knowing that it will be so powerful it becomes a deterrent factor just like strategic nuclear forces are. So there's a fine balance there and we can't back off on it, I'm afraid. Otherwise it could easily become something that we have to employ.

Shinseki: That's an interesting comment Les Lyles makes, and it's an appropriate reminder. But I would say the admonition to all of us who have stood up here representing our Services is to be competent and capable and ready at the conventional business so that we never leave our national command authority's only option as the final option. And that's

what this is about. It's to ensure that conventionally we have provided every opportunity to resolve this without going to the ultimateoption.

Pfaltzgraff: Okay. Let's now move over to this side of the room and the person right in the middle there. Yes, please.

Audience Member: I'm from Booz Allen. General Shinseki, as you've challenged the Army to move to a capability of five divisions in 30 days, which really brings it down from a 75-day capability we currently have now, you've challenged the support footprint and the equipment mix and the equipment size, but what do you need from lift on the strategic side to do that? Have you started working with the Navy and the Air Force on looking at the current mix of strategic lift to accomplish that?

Shinseki: Good question. Other than just exposing the vision to Navy and Air Force, we have not gotten down to the kinds of details that we need to be able to answer that question. But it will require that. If we go to a capability where we are able to do this with smaller platforms, there will be still some impact, but not as significant as it may sound when we say five divisions in 30 days. But the 75-day scenarios—and I recognize that Dr. Ted Warner is here and I failed to recognize him earlier—but the 75-day scenario is driven by priority.

There are allocations for lift in that sequencing that allow divisions, Army divisions, to arrive at about that time. Reprioritization could change that. And my offer here is that a lighter, equally lethal and survivable, but a lighter form of that capability can get there earlier and, therefore, make the reallocation of lift attractive.

Pfaltzgraff: Now we have another question over here.

Atkinson: Edward Atkinson, the Institute of Land Warfare. I wanted to ask about close air support. We have very little experience in this decade in that. Least of all in Kosovo, I guess. Now we're talking about the Air Force being effectively stressed out in the Kosovo operation so it probably would not have had a great many sorties left over for that sort of thing. And at the same time, the Army has developed an inherent strike capability, deep strike capability, and certainly it has its own close air support platform. So how serious are we about inter-service close air support or is that sort of a dying concept?

Pfaltzgraff: Who would like to begin with this?

Lyles: Okay, I knew there was going to be one of those questions. Okay, first, it's certainly not dying. And perhaps I put too much emphasis on this being a major theater war equivalent for the United States Air Force. We were not stressed out to the point of not being able to accomplish the mission or an expansion of the mission if that were necessary over the airs of Kosovo or even someplace else within the world. Close air support is another major mission set, if you will. When we talk about global engagement being one of our competencies, we don't overlook close air support as being one of those engagement possibilities and missions that we have to accomplish.

Now what are we doing in terms of platforms to try to do that? We obviously have to make sure we have the right mix, the right capabilities, the right technologies, but we are putting resources to upgrade the A–10s, as an example, to continue using F–16s, as an example, to do close air support missions. We work very closely with the Army to make sure their capabilities for close air support and ours are complementary and that we're working together. There are a lot of things that are going on from a joint perspective in this area. Probably too many to even begin to enumerate tonight or today, but this is not a dying mission at all. It's one that will continue to have emphasis.

Jones: I think it's no surprise to anybody in this room that the Marine Corps considers close air support one of our core competencies. As a matter of fact, our concept of combined arms expertise has close air support as one of our foundational tenets. We practice it, we live it. It is something that is absolutely well-formed in the minds of our junior officers from the time they get commissioned on up till the time they deploy operationally. And we will continue to make those investments in the close air support that are required.

As a service chief, I'm satisfied that the concept and the operational competence is alive and well. And we're happy to demonstrate our commitment to that anytime anybody wants to see it. What I am concerned about in terms of fire support (and these are things that I'm working with Rick here to correct) is the amount to which we've allowed our land-based fire support systems to atrophy in the United States Marine Corps. To where we have essentially one tube of the M198 howitzer. We have one program on the books coming along in the lightweight 155-mm howitzer. But when you compare what Marine Corps land artillery systems and fire support systems were 15 years ago to what we have left today, I'm really concerned that we have marginalized ourselves without really doing what we need to do to shore up those capabilities. And so frankly in terms of our dependence, we might be a little bit over-dependent on close air support. And some of the interesting lessons of Kosovo and the impact the weather has on aircraft delivery systems are still very much open for discussion, I think, and cause me to look in other areas and to work with the United States Army to see where the Marine Corps should go with regard to its fire support systems.

The fact that we didn't get into rockets of any kind except by inter-service agreement is something that we're taking a hard look at at this time. So I thank you for that question and I just wanted to expand on it a little bit to show you some concerns that are very real and I think will recall some additional investments on our part.

Shinseki: I would just add from the Army's perspective that, doctrinally, close air support is still very much a vibrant part of the way we see the execution of ground combat. Especially the close fight. And the fact that we have attack helicopters with capabilities that give us additional fire is not a commentary on the Air Force's support for us. They still provide massive capabilities for large target reduction. When those targets are presented. And it takes a ground force to stop a large military movement and present the kind of targets that close air support has a field day with. I think without the presentation of those targets, close air support will be less effective. So it is a hand-in-glove operation.

Pilling: One additional comment. We deploy with the United States Marine Corps, so close air support is still a meaningful mission for us. And our aircraft, our pilots still train to it. But even

more important, we have initiated some robust programs in the Navy to enable surface fire support. To be able to make up for some of the shortfalls you might have on land based tubes. And in particular, we're actually initiating a new class of ships called the land attack destroy, DD21, whose primary mission is going to be land attack and support of the forces coming in to shore.

Pfaltzgraff: Now we are rapidly running out of time. What I'd like to do is to ask those who have questions to pose them very quickly and then I'm going to give the panel members an opportunity to respond to the questions as concluding comments. So we'll begin here. But please be concise with your question. But again, wait for the microphone. And then we'll have a wrap-up from the panel after this is all over. The questions.

Liney: Tom Liney, Association, United States Army. For many years, the Army would not consider fighting except as a combined arms team. We've made enormous strides in fighting jointly among the Services. But the strategic environment that's been described here and that we have confronted in Kosovo and Somalia and other places in the post–Cold War world have indicated a need for integrated operations as part of an interagency team. So I would ask the panelists what do you envision to be your contribution to the future of interagency operations and what are you doing to press the process to improve interagency operations so that the KFOR doesn't become "forever four?"

Pfaltzgraff: Okay, next question. Back here.

Mann: Paul Mann, *Aviation Week*. One of yesterday's panelists suggested that perhaps as much as 50 percent of the weapons that you will want or need in 2025 do not yet exist. Admiral Pilling suggested this morning or reminded us this morning that about 80 percent of the world's 6 billion population lives next to or close to a coastline. In the context of both of those observations, what weapons do you think you're going to need in 2025 to prosecute urban warfare that you do not have today?

Pfaltzgraff: Yes, another question here. Please.

Cappacio: Tony Cappacio out of *Bloomberg News*. For the panelist, can you each talk a little bit about the level of support the Joint Strike Fighter now receives in your respective Services? Are there fissures of support right now? Opposition growing? And for General Shinseki, as a consumer of what the Joint Strike Fighter will bring, are you concerned at all that there's an erosion of support within your sister Services?

Pfaltzgraff: Okay, one more. One more question.

Audience Member: I'd like to ask if you believe that to facilitate the translation of the joint vision and the joint plans and programs requires any changes or reforms in the Planning, Programming, and Budgeting System (PPBS)?

Pfaltzgraff: Well, let's now give the panel members an opportunity for quick answers to these questions. I know they are questions that require more than quick answers. But let's begin

with General Lyles for a couple of minutes and then we'll work our way across and conclude the panel session this way. General Lyles.

Lyles: Okay. Let me very quickly try to run through the four questions that were posed. Integrated operations and our contribution. In many respects, this may sound like a pat answer, but the core competencies that I mentioned earlier in my brief remark are exactly the kind of contributions that we would put to any sort of operation, whether it's integrated or it's something where we're acting unilaterally. All the things that we're trying to do in terms of sensor-to-shooter capability, rapid mobility, information superiority, precision engagement, we think need to be applied across the whole spectrum of operations and we need to make sure we're working very closely with the sister Services to understand their needs in this regard. So that as we put investments and resources to these various needs that we're not overlooking the needs of what the Army, the Navy, and the Marine Corps need to prosecute their missions.

2025, urban warfare. You could almost use the same answer. As we look at our contribution to supporting the other Services, we need to make sure we understand how they will be fighting and how we can help them to best effectively accomplish their specific missions.

Joint Strike Fighter. Tony, there's no fissure amongst the Services. We all support the Joint Strike Fighter. Obviously, there are resource issues everybody's dealing with, but there is unified support for the program. And as far as the PPBS system, it always needs improvement.

Pilling: On the question on integrated operations, I'd only make the observation that the interagency process is a political process and service chiefs are really in the position of providing military advice. We are a military organization that is under civilian control.

On the sort of weapons we might need in 2025, I think if you look at the Navy's programs versus every one of our strike programs for the future, it emphasizes increases and improvements in range, precision, lethality. We'll have a tactical Tomahawk in a few years that will have a 1,600-nautical-mile range, which is quite a capability. And we're trying to extend the range of our, what you would call a sea based artillery, our naval service fire support and beyond the small number of miles that we have today into the hundreds of miles in the future.

On support of the Joint Strike Fighter, I'm right where Les is. There's real money on the table there and we haven't touched it. And on revising the PPBS, I think, it may a misimpression, that PPBS is such a rigid system, it doesn't change. I've been doing this for about 26 years and PPBS in every cycle is different. So it does reflect the realities of what's changing in the military.

Jones: With regard to the integrated operations and where we're going, you can see from General Lyles' comments and his borrowing from the Marine Corps to develop the Expeditionary Air Force, we are working together. I noticed though that they didn't borrow our haircut standards, but in order to be truly expeditionary, you have to go the whole way, Les. You can't get in halfway.

I think the work the National Security Studies Group is doing is going to be extremely important in re-scoping what the elements of national security are and how they play. Certainly the agency process is going to be more of a player. It isn't going to be restricted anymore to just the Defense Department, the State Department, the National Security Council. There will be other agencies that will have to learn how to play in a more integrated process. And I think the

work of the National Security Studies Group will embrace some of that. But there is no question in my mind that, at least on the inter-service level, that we'll have a high degree of cooperation and we're heading in the right direction.

2025, what weapons do we need to prosecute urban warfare? I think we're starting that work as presently the non-lethals. The Marine Corps is the executive agent for non-lethal weapons. We had done some work in a chemical-biological environment, and we probably need more organizations to deal with that if that's in fact the size threat that it has the potential to be. I'm a very big supporter of the work the Army is doing in getting the Guard and the Reserve and the regular establishment to become much more cohesive and to start the national discussion really about how to organize for combat to do the missions that pertain to urban warfare. And within that, some of that might come under the title of homeland defense.

Joint Strike Fighter support. JSF is extraordinarily important to the Marine Corps and now that the V–22 is in production, it is in fact the number one aviation acquisition priority. I had spent a lot of time in my previous incarnation as the military assistant to the Secretary of Defense learning a lot about aviation programs, this one in particular, working with industry, working with people who are managing the program. And I'm pleased with the solidarity and the progress of the program and I think it's absolutely an important capability that we bring online on time and on cost.

Pfaltzgraff: Thank you. And now finally, General Shinseki.

Shinseki: I'll start with trying to answer, I think Tom Liney's question. I agree with Don Pilling at our level, our roles are to provide military advice. However, out in the field, as you know, the interagency process, and I think that's maybe where you're coming from, that interagency process does extend down.

And what you do have are young commanders in the field that have to deal with it and learn how to adjust. Fairly well structured in their education and development process and pure military approach, war fighting approach, to solving problems based on a decision making cycle and suddenly they're cast into an environment in which they provide great capability but may not be able to have the final say on what describes the outcome. And so they have to learn how to work inside that process.

I've got to tell you that the kids that we have out there are very good, very competent. They adjust, they learn how to maximize what they bring to the equation and get buy-in. But it's something that we ought to think about in our education as we raise youngsters for more and more of these missions which are fairly recent. I think there's a virtue in running exercises. As you may know, before we deploy a force to Bosnia, for example, we will do a mission rehearsal exercise in which we do in fact bring interagency actual players in sometimes, even representatives from former warring factions to play their roles. To give, you know, a bit more authenticity to the training.

In terms of the question on littorals and urban warfare, a good question, I would say that the basic line or the bottom line to your question is it occurs on land. And, yes, the Army is interested and we are working with the Marines to talk about dealing with the issue of urban warfare. It gives situation awareness a different flavor. The intelligence systems that we devised in our development process are very well focused on large units, large platform forma-

tions. But you get inside built-up areas and it's a different requirement for situational awareness. Our intelligence systems aren't as finely tuned to do that for you, and the issue is how do commanders remain decisive in that environment when those equations change. And I think there's a lot of work to be done there, maybe less on munitions and more work in these other areas I've suggested. I don't know, Tony, whether that question on Joint Strike Fighter was intended for me or General Jones. For me? I mean, everybody here has signed up for it, so I guess I'm comfortable. On PPBS, there's nothing wrong with PPBS. Nothing at least that more dollars won't solve.

Pfaltzgraff: Well, I think we all are in the debt of this panel for an outstanding contribution to this conference. This is an excellent exercise in jointness. Note that all of the questions required joint answers. So we have an outstanding contribution to the work that we're doing here. May I on our behalf, collective behalf, express thanks to you for being with us and giving us these insights.

Redefining Defense: Preparing U.S. Forces for the Future

Panel 5
Ambassador Richard L. Armitage
Congressman Mac Thornberry
Dr. Michael O'Hanlon
Dr. Edward L. Warner

Wednesday, November 3, 1999—10:45 a.m. to 12:00 p.m.

At the heart of re-defining defense is creating a more strategically responsive force. Our Armed Forces must undertake change in three primary areas: modernization, human resources, and readiness. Of course, each element of change means something different to each of our Services. Fundamentally important will be hard choices between present capabilities and what will be needed in the transformed security environment of the early 21st century. How to reconcile existing requirements with necessary investment in forces for the years ahead will be a challenge that must be met.

Summary of Proceedings

- The Services must continue to foster a culture of innovation by constantly reassessing current thinking, structures, and doctrines.
- The Services must develop an environment that attracts and retains the highest quality personnel—people are the most important element in military transformation.
- Private sector business practices offer great potential for promoting revolutionary innovation within the Services.
- The willingness of the Armed Forces to engage in experimentation both on technological and organizational levels will be critical for the military's transformation.

Analysis of Proceedings

The ability of the United States to anticipate the nature of the next war has been poor. New elements in warfare such as information systems, space operations and weapons of mass destruction are likely to increase the problems inherent in planning and preparing for future conflicts. Nevertheless, the Services must foster a culture that encourages innovation and adaptation in order to sustain America's military primacy across a broad spectrum of conflict in support of national security.

In order to promote innovation, the military must embrace the revolution in business affairs. Much like a large commercial entity with multi-national dimensions, the Department of Defense must embrace practices of the most successful business corporations wherever reasonable and possible. In particular, the DoD must benefit from approaches that can enhance its success as a military organization. The rapid developments in e-commerce, outsourcing, commercialization, and global-

ization will fundamentally transform and improve the military's conduct of business. The resulting increases in efficiency will help free up greater resources for modernization. As the DoD adopts modern business practices, it must become an agile and responsive organization that can more easily adjust to rapid and sudden changes in an uncertain security environment. An automobile company can bring a concept to production within two years while a computer company can change its manufacturing requirements in an even shorter period. In contrast, it takes the military many years to begin the production of new systems. Each of the Services must take steps to become more capable of rapid innovation and adaptation to the new challenges of the 21st century.

Successful innovation and transformation stem largely from a willingness to experiment with new technologies and organizational structures. The Services must develop a culture that promotes experimentation. One major inhibitor to successful experimentation is the continued disconnect between the vision of Service requirements and developments in science and technology. The establishment of battle laboratories and studies on next generation requirements has already yielded substantial results. However, to further enhance experimentation, the Services must engage in a joint approach. The Joint Forces Command is now spearheading a forward-looking effort on joint concepts and experimentation. The combatant command has examined key tasks, critical enablers such as C^{4}ISR, and leadership reform from a joint perspective. In the past, systems were developed based on the requirements of a specific Service and then modified for joint compatibility. One of the main objectives of the Joint Forces Command is to examine ways to develop a process that would field joint rather than Service-specific capabilities. Each of the Services must test new approaches to joint acquisition. Above all, the Armed Forces must abandon the zero-defect concept and accept the possibility of failure as a necessary part of the process of innovation.

Transcript

Chilcoat: Good morning, ladies and gentlemen. My name is Dick Chilcoat. I am your humble and loyal President of the National Defense University. Welcome to panel five, "Redefining Defense: Preparing U.S. Forces for the Future." I like to tell our War College students that they have picked a wonderful time to come to our university. As one of our speakers said yesterday, we are in the midst of a great strategic transformation, the last one was perhaps 50 years ago or so, and our students will have a chance to think, research, and write about this transformation during their year of study. And to build some intellectual strategic capital and prepare for their time on watch.

And I am quick to tell them, too, that their time will come sooner than they think and they must be ready. And having seen some 12 or 13 war college classes over the last five or six years, I am very confident that they'll follow well in our footsteps.

Our panel's charter says that strategic responsiveness is at the heart of redefining defense and that transformation requires change in three primary ways: modernization, human resources, and readiness. And hard choices between present capabilities and future needs will be required. The dialogue of this conference clearly indicates that. Yesterday we heard voices that called for the initiation of change. Some called for an acceleration of the transformation process currently underway. And still others called for proper balance and prudent risk management.

This morning we heard the senior representatives from our Services discuss their visions for the future and the development of shared joint vision. Our panel will continue the strategic

dialogue. And we are fortunate to have four discussants who possess great experience in national security affairs and they are strategic thinkers. Their perspectives are diverse and include those of the Congress, the public, and private sectors, those of the analyst, the scholar, and the strategic practitioner. And I'm delighted to introduce them at this time. Their detailed bios are in your program, but let me provide highlights on each.

Ambassador Rich Armitage is a graduate of the United States Naval Academy. He completed three combat tours in Vietnam and came to Washington in 1975 and has served in a wide array of public and private capacity since that time. He was Assistant Secretary of Defense for International Security Affairs and he's filled many key diplomatic and negotiating posts along the way. He's served on the past National Defense Panel and I'm delighted to say that he's the chairman of the National Defense University Board of Visitors.

Mr. Mac Thornberry represents the 13th District of Texas in the U.S. House of Representatives. He has an undergraduate degree from Texas Tech and is a graduate from the University of Texas Law School. He has extensive private sector experience as well as Washington legislative experience. Mr. Thornberry was reelected to a third term in November 1998, and serves on the Armed Services Committee, the House Budget Committee, and the Committee on Resources.

Dr. Michael O'Hanlon is a Senior Fellow at the Brookings Institution, specializing in U.S. defense strategy and budgets, military technology, Northeast Asian security, and humanitarian intervention. He received his undergraduate degree in physics and his Ph.D. in public policy, both from Princeton. Prior to assuming his current position at Brookings, Dr. O'Hanlon worked with the Congressional Budget Office for five years. He is an author of numerous books, articles, and op-ed pieces concerning national security issues.

And Dr. Ted Warner is the Assistant Secretary of Defense for Strategy and Threat Reduction. He is a graduate of the Naval Academy and also holds an MA and Ph.D. from Princeton. Dr. Warner retired from the Air Force after 20 years of service and was a senior defense analyst with the RAND Corporation. He returned to government service and assumed his present position in June of 1993. He's the principal adviser to the Under Secretary of Defense for Policy and to the Secretary of Defense on national security and defense strategy.

Gentlemen, we are delighted to have you here this morning. Each will take eight to 10 minutes for opening remarks. We'll go from our left to our right. Excuse me. We'll go from our right to our left. And then we'll look forward to your questions. Mr. Ambassador, if you will please, please open the session for us.

Armitage: Good morning, ladies and gentlemen. I may say that for me it's a special honor to be with Congressman Thornberry who, along with a few in the U.S. Senate, has really been at the heart of what you all are discussing and what we are discussing as a nation. The Congressman, along with Senator Lieberman who was with you yesterday, Senator Santorum, Senator Roberts, and former Senator Coats have been the ones who have been the prime movers in this transformation of which we're on the cusp. So I'm delighted to be with you, sir.

Why are we here today? Why are all these people here, Dick? Well, they're probably here because we all agree, unfortunately, with Plato that only the dead have seen the end of war. That's why we're here. And I'm going to tell you why I'm here, personally. I'm here because I'm looking to be part of the solution that comes up with a war fighting organization which has joint C^4ISR (command, control, communications, computers, intelligence, surveillance, and

reconnaissance). Which allows junior officers and NCOs to act reliably independently within the commander's intent. And I think, to boil it all down, that's what we're really talking about today.

You have set the task of discussing modernization, human resources, readiness, and I'll touch on each very briefly, General. I want to start by saying that Charles Darwin holds some thoughts that might be useful to remind ourselves. He said that it is not the strongest of the species who survives nor is it the most intelligent, but rather the one most adaptable to change. And if we're going to survive, we've got to be most adaptable to change.

I'd like to borrow from U.S infantry lore for a moment if I can. For those of you who remember what the mission of the infantry is: to close with and destroy the enemy. And the important words there are not to destroy the enemy. The important words are to "close with the enemy." Anybody can destroy the enemy. The Air Force can destroy the enemy. Navy ships with gunfire can destroy the enemy. It's the Army, it's land forces that have to close with the enemy. There's absolutely in my view no substitute for rapid, deployable land power which represents a tangible commitment which no enemy can ignore. It is armies and land power which changes governments and it is land forces which will be separating the good from the bad in the future.

The Honorable Richard L. Armitage asserts that there is "no substitute for rapid, deployable land power which represents a tangible commitment no enemy can ignore." Transforming the Army will require more than technology: new structures, new doctrine, and creative and dedicated junior leaders empowered with responsibility and latitude.

So on to modernization, General Chilcoat. Two years ago, the National Defense Panel, of which I was honored to be a member, urged the Army, this is a quote, "to restructure the division into small operational units with greater lethality and to become more expeditionary with fast, shock exploiting troops." Well, two years ago, we were yelling into the wind. It sounds to me like maybe a little less so these days. There's a general recognition, I think, that our U.S. Army right now is too heavy and will arrive to the fight too late to effect a difference.

A great football coach from Texas A&M and later from the University of Alabama, Bear Bryant, used to say he wanted his athletes to be mobile, hostile, and agile. And as far as I'm concerned, if you add lethal to that, that's what we ought to want for our service, for our land force. Mobile, hostile, agile, and lethal.

I want to mention, if I may, an unpleasant subject. I want to mention Task Force Hawk for a moment because it is my view that for those of us who really care about the future of land power, this was a very, very signal moment.

The failure to rapidly deploy and to become operational, operationally effective shortly after arrival shows in my view almost every shortcoming of our present day Army structure. And you can go through the list. No joint C⁴ISR, tiered readiness. Centralized, division-led organizational structure, etc., etc. But there are some questions that surprisingly haven't been wrestled with, at least publicly yet, in Washington surrounding this failure.

And I think it was a big failure. Questions of the readiness of the unit abound. I would be very interested to know if the Secretary of Defense or Deputy Secretary had asked to see the unit readiness report for Task Force Hawk for the six months or so leading up to that deployment. And whatever happened to leadership that looked around corners? Kosovo was not a secret. It was developing for months and months. It seemed to me that our most forward deployed forces in Europe ought to have been ready, more ready for the fight. And why wasn't it more ready? These are the questions, I think basic questions, that have to be answered before we can move on to the next level of transformation.

I saw the Chief's vision statement and I'm very encouraged because I think what he's trying to do is very difficult and I think he recognizes that and he's started the discussion. I give him enormous credit for that. However, I don't think the discussion went far enough, as he laid it out in front of the Association of the United States Army the other day, or that it is fully developed. I don't believe it's broad enough. I don't believe it affects enough of the U.S. Army. It looks to me like it affects about 10 or maybe 12 percent of the U.S. Army. But I really think he's on the right track and I think we've all got to get behind him and encourage him to even greater efforts.

But you know, it seems to me that we're talking a lot about new technology. It's incumbent upon us not to apply new technology to old structures and to old doctrines. That's been done before. The French and the British tried it between the two great wars to dismal effect. So I think on the endeavor that the Chief has embarked upon, he's going to have to really change structure and he's going to have to change doctrine as well. Now in this, there's something that's very important and I think for those in this room, you will instantly recognize it. But when we publicly talk about Revolutions in Military Affairs (RMA) and technologies, we've got to return to one central fact.

RMA is important, but people are the most important element of this. And it seems to me that if we are in an era where noncommissioned officers (NCOs) sometimes and certainly junior officers, perhaps guarding a bridge in Bosnia could be a strategic asset, then these folks ought to be practicing decision making. We ought to be delegating down as much authority as possible. Instead, the Army seems to be going, and the Services in general, seem to be going the other way.

I received an unclassified memo about a year and a half ago from the XVIII Airborne Corps commander, where he was taking away from battalion and company commanders decisions on discipline which normally resided in a battalion and a company. It seemed to me this was symptomatic of going in the absolute wrong direction.

And I'd like to ask the general officers here seated the following question. If you gentlemen had applied to you the standards we're applying to young NCOs and officers today, how many of you would be sitting here? I'll let you answer that yourself, I don't want to embarrass

anyone. But I think it's quite obvious that very few of us would. Denny Reimer used to speak about this quite well from his own personal experience. And if we're going to have the type of people we want manning this transforming Army, we're going to have to not only let them practice decision making, we're going to have to have them be allowed to fail on occasion. We're going to have to get away from zero-defect mentality.

Readiness. It seems to me that when we think about readiness that whatever discussion we have has to reflect today's requirements and today's warning times. And I can't come up with a better solution for readiness than rotational readiness, whatever the term of art is nowadays in the Army—where you have a cycle that's predictable. A training cycle or where you're available for deployment followed by a reconstitutional cycle. I think this is important. It's important now for soldiers to have predictability in their lives. When I was a young officer, it wasn't very important. We thought nothing, my wife and I and children, of packing up and going from one coast to the other. People are a lot different now.

Our soldiers are different, our family structures are different, the economics are different. We've got to evolve a personnel strategy that represents this and a readiness strategy that represents the changed environment. I want to speak finally about a couple of lessons of leadership, General Chilcoat, that I think all of us need to keep in mind. I keep these comments as they float across my desk, sayings on leadership. I think that there are several that are very applicable for the senior leadership of our U.S. Army these days as we embark upon this great crusade.

The first is I think it's very important, and as a quality of a good leader that we immerse ourselves, in the goal of creating an environment where the best, the brightest, and the most creative are attracted, they're retained, and they're unleashed in our national service. The second I think is very important to remember. That being responsible means occasionally pissing people off. You can't avoid it. Live with it. Third, that good leaders need to delegate and empower others liberally, but then pay very much close attention to details. And finally, that the commander in the field as far as I'm concerned is always right and the rear echelon wrong until proven otherwise.

And lastly, one thing that's often overlooked. It's the relationship between the chief of a Service and the Service secretary. Very often the political leadership, Republican or Democrat, has not always put in as Service secretary the type of people who can partner and sometimes bully and sometimes cajole the Service chief into doing things. But I think it's been overlooked for a long time, the relationship between Service chief and Service secretary.

This relationship is extraordinarily important if you want to get things done. Sometimes the Service secretary is going to have to be the bad guy. Sometimes he's going to have to be a bigfoot. Other times, he can be the front that approaches congressional leaders and congressional committees, to try to empower the Army to go in one direction or another. I think when we talk about Title X responsibilities, we talk about Service chiefs, we need to realize that the Service secretary has a huge role that's not a role that, in my view, has been filled equally throughout our Services and throughout our history with extraordinarily competent people, but it can be an extraordinarily important position. Thank you very much, General Chilcoat.

Chilcoat: Thanks very much, Mr. Ambassador. Representative Thornberry, please.

Thornberry: Thank you, General. As we think about how we prepare U.S. forces for the future, it seems to me that everybody in the room ought to at least be able to agree on one

thing. And that is we will never know for sure with certainty exactly what the future is going to look like. Now there are trends that we ought to pay attention to. In fact, we'd be foolish to ignore things like the increasing importance of space, the increasing importance of information operations, the likelihood that weapons of mass destruction are something we're going to have to deal with. But even if you see these trends, you don't know exactly how things will shape out.

And so I was interested in a little comment from a book that I'm sure a lot of you have read called *America's First Battles*, that goes through the first battles in each of the wars that the United States has faced. The editors at the beginning of that book have written "that the record of Americans' abilities to predict the nature of war, of the next war, not to mention its causes, location, time, adversary, and allies, has been uniformly dismal. Of course such flawed records are typical worldwide, but the myopia of the past in no way lessens the need to prepare. Quite the contrary. Preparations of the most certain sort possible are required for a most uncertain future."

Representative William "Mac" Thornberry (R–Texas) urges that CINCs and joint missions, especially joint experimentation, be given a much stronger voice in making resource decisions.

I think that's right. And if we are to prepare as best we can for uncertainty, it seems to me that Ambassador Armitage hit on the key and that is a flexible, responsive organization. I would also add to that a military culture that not only tolerates change, but fosters change. And I'm afraid we're a long way from there right now.

In September this year, a Defense Science Board study came out that argued, interestingly to me, that a Revolution in Business Affairs is essential not for the reasons that you always hear about, to free up enough money to pay for modernization, but it's essential to create that kind of agile responsive organization that can survive in a future that changes so quickly and with so much uncertainty. And yet that same study found that there was not the sense of urgency that was needed and that DoD is underestimating the focus and effort needed for fundamental transformation.

If you look at all the paper coming out of the Pentagon, you see the words *transformation* and *Revolution in Military Affairs* stamped on just about everything. But I'm afraid that a lot of what gets labeled transformation is really a justification or even advocacy for things that are already in the pipeline. So what do we do to try to get this agile, responsive organization to meet an uncertain future?

One possibility that will probably be included is Congress can mandate change. We have done that before with Goldwater-Nichols. And, as you know, there's a study going on now that's supposed to have some recommendations ready for the next administration on how to reorganize the boxes. Not just at the Pentagon, but State Department and throughout the national security structure. And certainly I think there probably is a need to rearrange the boxes. But we've got to do more than that. We've got to get down into that culture. And there's no one piece of legislation I can write that's going to solve that problem.

But Governor Bush in his excellent speech at the Citadel, which Ambassador Armitage had a big role in, set the goal out there, I think, which was, quote, "a culture of command where change is welcomed and rewarded, not dreaded." And there are, in each of the areas that we are to address, I think there are some things that can help get that culture. And let me just tick through a few of them right quick.

Number one, in the key area of people. It's nearly so basic you hate to say it, but it's so important you can't leave it out. We've got to get the very best people possible. People who can think for themselves. And the importance of attracting top quality people is going to be more important in the future, not less. Secondly, once we get these people, we've got to think about how we treat them. And one of the things I think we have to look at are promotions. Of what we reward and what we don't reward, what we may even punish.

Of course we've got to ensure that promotions are based on merit, not some sort of good old boy network. But I think we have to take a different look at the kind of people and the kind of skills we promote. For example, we are very dependent on technology. Technology changes rapidly. And yet some highly technical skilled folks are limited in their promotions because of the system we have. I think we have to consider different career paths for some of these people and to recognize the importance of different skills. And I think everybody here acknowledges that you can have all of the words and visions from the top that you can stand, but what speaks far louder is what really happens when those promotion boards meet and it can drown all out all of the high sounding words that can come out.

The other thing I think we've got to do is protect the innovators. If we allow them to be stifled, then the bureaucratic self-interest will rule the day. Congress has played a role in doing that in the past. Especially with confirmations. And one of the things I think we ought to look at is extending the tours of service for some critical positions. Admiral Moffit was in his position 12 years, Rickover was in his for like 30. Sometimes to make these changes happen, you have to be there for a longer period.

In the area of hardware, I think it's essential that we strengthen the CINCs' and the joint roles' voice in making resource decisions. Some people argue that the thinking elements of the military have no money and budget authorities for the bureaucratic and parochial elements call all the shots on programs, systems, and technologies. And I think we have to push, at every opportunity, experimentation and particularly joint experimentation. All of the folks that have written books and articles looking at how militaries have revolutionized in the past keep coming back to experimentation.

But it's got to be true experimentation. You've got to have failures as part of it. You have to have enough money. You can't just be focusing on the seams and you can't just be worrying about interoperability. You've got to be really testing things out and you have to have a seat at the table where resource decisions are made.

I think a lot of people have mentioned the importance of funding research and development. It is an embarrassment to have last year's Future Years Defense Program (FYDP) request come

out with nearly a 20 percent reduction in research and development. I think it's also an embarrassment to everybody in this room, the acquisition rules and regulations that we have to work with. And it just seems to me, as others have mentioned, that when Ford Motor Company can take a car from an idea to the showroom floor in less than two years and Compaq Computers can change their manufacturing requirements in a day, that the length of time it takes for us to field new technology is just an embarrassment.

One of the areas I'm hopeful about, about the Chief's reorganization of the Army is that maybe that will give us a chance to try some accelerated reformed acquisition procedures.

The other category of things is ideas. Edward Teller wrote that technology develops much more rapidly than the human mind accepts new ideas. And I think we all have a challenge in encouraging new thought. You know, in the business world the past couple of years, the hot book has been this one by Andrew Grove, the head of Intel, called *Only the Paranoid Survive*. Maybe we ought to ask are we paranoid enough in the United States military to survive in the next century?

As one writer put it when he was looking at the inter-war years, "The losers were forced by events to reexamine everything. Military losers are intellectual radicals. The winners, complacent in victory, feel the need for self-examination far less. Thus for the French, the lesson of World War I was that offensive warfare could not succeed."

I think a key to encouraging new creative thought is the system of professional military education. I think we ought to consider what a couple of European countries have and that is entrance examinations before you get into certain PME [Professional Military Education] schools. We ought to make sure you have a basic body of knowledge before you get there so we don't have to re-teach that. We can focus on strategy and on creative thinking. I think we ought to have higher expectations going in and a more rigorous course while you're there.

Now I suspect there may be a person or two in the room who are saying, yeah, all of that stuff sounds good, but what are you going to do with your own house? What are you going to do about Congress who is part of the problem? And you're right, Congress is. I'm not saying any of this is going to be easy, but I am saying that the folks here and some of the people in Congress are absolutely determined to try to create the kind of momentum towards an agile, responsive, flexible organization that can keep up with what we have in the future. I think that momentum to accept and encourage change is key.

In Governor Bush's speech, he referred back to Churchill. In one of his speeches, he talked about a period of consequence where the decisions you make now have implications over decades to come. And he went on to say that nothing in this generation could ever build or matter more than the means to defend our nation and extend our peace. I think this is worth the very best efforts of everybody in this room, whatever the obstacles are, and we ought to be committed to pursuing it.

Chilcoat: Dr. O'Hanlon. Please.

O'Hanlon: Thank you, General. It's an honor to be on this panel and at this excellent conference. I'd like to do two things with my presentation in the spirit that has been established here earlier today by the previous panel as well as ours. How do we pay for a lot of the creativity and innovation that people have rightly supported? And I think this is a bigger problem than most

people recognize right now. So I'd like to talk about the budget realities as I see them and then a couple of thoughts on my own prescriptions for how to prioritize to the extent that I think we'll need to more than we have so far.

Because to innovate and to push along some of the new technologies we're talking about, some of the new ideas we're talking about, I think we have to rock the boat and break some old china a little more than we're willing to right now. Just to kind of give a snapshot of my view of how the last two years have gone, in 1997, under Secretary Warner and others, the Quadrennial Defense Review was produced. A very good document and I think it had a very sound fiscal prognosis. Which was that defense would stay at about $250 billion into the indefinite future in real terms for funding.

Dr. Michael O'Hanlon estimates DoD's minimum procurement needs at about $90 billion per year in real terms, $40 billion more than the current program. "The problem's big."

At that time, the QDR hoped that privatization and outsourcing would provide, as Congressman Thornberry just mentioned, a lot of the money needed for modernization. Two years later, at least the way I see it, the debate's changed. We no long have quite as grandiose hopes about the savings from privatization and outsourcing. At least not in the five- to 10-year time frames that are most relevant. But we've deluded ourselves, in my opinion, into believing that defense spending is going to go way up. And if you listen to some of the rhetoric from both political parties, you can see why.

And what I want to do in the first part of my presentation is to say why I think the answer is that, no, in fact we will not get those sort of resources. And then to motivate some prioritization that I'll touch on in the second part. So I've got a couple of slides to show to try to back this up. And I want to thank very much Major Higgins who actually produced these slides for me in the last hour or so. So that's the kind of rapid response that you're after, General Shinseki, and I want to salute you for your great people working with you. And thank you, Major Higgins.

This is from the February budget proposal of the administration. And this is in constant 1992 dollars. I don't know why OMB insists on using 1992 dollars, but in any case, I decided to stick with the numbers even though they look sort of funny—since you know the actual numbers are up around 280 billion, 290 billion in 2000 dollar terms. But all I'm trying to show here is that President Clinton, for all of his, in my opinion, correct rhetoric about the need to reverse defense spending cuts did not really do a whole lot in order to reverse them in a meaningful way. Now as a self-proclaimed chief hawk, I don't have too many problems with that. I don't think the QDR

modernization agenda is essential to the extent that it's been laid out. But nonetheless, that is administration policy. And to fund that, you're going to need to do a lot better than this.

What this basically says is that, through the five-year period that was focused on in the budget proposal, resources are flat. Now in a minute I'll show another chart, it will be my third chart actually, to explain, as all of you know, something that you all know already, why flat resources will not be enough for the current modernization agenda of the Pentagon. But this is what is really coming out of all that talk about $112 billion defense spending increase that we heard from the administration last winter. In reality, if you get a $5 billion annual increase, you're doing pretty well. A lot of that $112 billion was measured against a baseline that was already headed downward. So a lot of it was just filling in the trough to keep things level. Only a little bit would actually push things up. That's point one.

Now if I could, with apologies, pick on the Congress for a second and have the second slide. This is in nominal dollars so we're going to have to adjust for inflation here in just a second. But what I want to say is that the Congressional Republicans, to my eye, have done a very good job of pushing the defense budget up. Maybe not in ways we would always agree with the last couple of years, but nonetheless, keeping a very attentive eye on readiness, and I salute them for that excellent effort. But that in some ways gives a false indication of where their budgetary priorities really have been.

This is from the budget resolution from Congress last winter as the basis for the Republican tax cut proposal of an $800 billion reduction over 10 years. We all know that's not going to happen right now, but my understanding is that's still most of Congress' and Governor Bush's basic tax agenda. If you have that sort of tax agenda, in my opinion it's inconsistent with even a Quadrennial Defense Review and, with all due apologies, even more inconsistent with the very good speech that Mr. Bush gave at the Citadel. A speech that I liked but which, in most cases, would have driven spending up.

Most of the things he talked about in specificity, increasing research and development, increasing pay, deploying missile defense, would have actually increased requirements above the Quadrennial Defense Review requirements. He talked a little about trying to reduce deployments, but frankly, if he can save a billion or two a year out of that area, I would be very impressed. So I think the overall gist of the Citadel speech is to show that Governor Bush has just as much of a problem as the Republican Congress.

What this line shows: If you wanted to even hold resources constant through the end of the next decade, you would need to increase the nominal spending level by about 20 percent. Just assuming about 2 percent inflation. Which means you've got to be up around $350 billion in outlays by the end of the next decade to have defense spending even remain at today's level. The Republican Congress is about $30 to $35 billion short of that. Now granted in the next few years they go up with the President modestly. The real defense budget would go up a little bit. But after that, it would fall even more than it had gone up. So we're looking at average resource levels that are, if anything, a little less than today's.

Now why is this a problem? You all know about the fact that the procurement holiday has to end. Let me just give you one chart to back that up and my final chart if I could. It's a busy chart so I won't ask you to look at everything. But this shows all the things we have to replace and the modernization agenda. It also points out something that many of you know and Congressman Lewis emphasized this summer. Which is we have to replace things that we don't even yet have plans to replace. And even if you cost out the modernization agenda of the

Quadrennial Defense Review, you get numbers up around $70, $75 billion a year for what you have to spend on procurement. That's a $20 billion increase relative to today.

If you then add on top of that replacing things that we haven't yet planned to replace but know we should—tankers, at some future date some support aircraft, various other sorts of things—according to CBO estimates, you have to spend $90 billion a year on procurement just to fund the Quadrennial Defense Review force. Now I grant you there will be debates about specific systems and cutting back here and there, but we're starting from a benchmark of $90 billion. Not the $60 billion that the Joint Chiefs popularized in the mid-90s. Ninety billion. That's the steady state requirement for procurement spending if you really want to stick with the force and the modernization agenda of the current administration.

That's a $40 billion increase relative to today. So I don't know what the right number is. And having worked at CBO myself, I know that you can never get these things very precise and I'm sure the number is accurate to within plus or minus $10 billion. And so none of this stuff is very exact science. But nonetheless, the problem's big. Now that's my basic reading of both the politics of increasing defense spending, which to me look fairly non-compelling. I don't see the political pressure there to really do it when the rubber meets the road. And at the same time, the upward pressure.

The other major parts of the defense budget I think will stay more or less flat in real terms. Governor Bush was certainly right, Ambassador Armitage is certainly right to push the need for research and development, Congressman Thornberry. I salute them for that. That's a very good initiative, but that's just going to drive things up even a little bit more. So I've already taken close to all of my time laying out this sort of sober budget message. So let me just tick off three or four points very quickly before wrapping up.

To me the answer for how you deal with this is that you have to work very hard in every single area of defense policy today. You're not going to just cancel the F–22 and solve this. That's the argument of the Air Force's that I agree with most on the F–22 today. The F–22 can't solve this, the V–22 can't solve this.

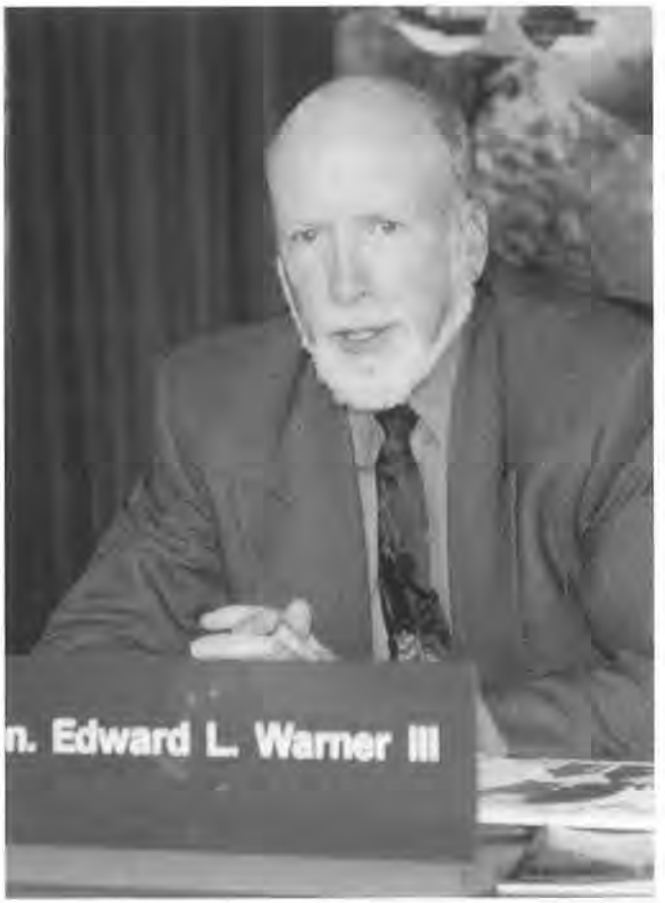
Together with all other modernization priorities and a rethinking of the way we do naval overseas presence and a rethinking of whether we need the current two-war strategy, with the possibility of some modest additional cuts in manning strength, if you look at all these different things together, I think that you can save $3 billion here, $5 billion there, and ultimately get by with a budget that's more or less at today's real-dollar level. But it's going to require work across a wide area of defense priorities.

And final word, let me just mention one quick thing on the modernization agenda. To me, I would go back to the original Admiral Owens vision. There have been a lot of Revolution in Military Affairs hypotheses and visions in the last ten years. I like Owens' the best. I think it's the most compelling. Which is focus on "systems of systems." Recognize how much is improving in the realm of electronics, computers, munitions, miniaturization. Emphasize those things, be willing to spend less on modernizing platforms. You've got to replace the platforms anyway because they're wearing out. There's no doubt about that.

But I personally would not buy 339 F–22s, 2,700 Joint Strike Fighters, 360 V–22s and so forth. I'd try to make do with a lot of existing technology. Buying new F–16s, buying new F–15s, buying new transport helicopters and equipping them with better munitions and CQs and computers, information systems, better sensors, to try to get maximum modernization benefit

for modest dollars and use that philosophy to try to scale back this agenda that right now is, in my eyes, simply unaffordable. Thank you.

Chilcoat: Thank you very much, Dr. O'Hanlon. Dr. Warner, you have the hammer.



The Honorable Edward L. Warner III: "We cannot continue to do what we need to do to sustain, supply, recruit, and operate military forces unless we pursue with real vigor this Revolution in Business Affairs."

Warner: I'd like to speak for a few minutes this morning on the issues of transformation, particularly transformation in our military capabilities to address the full spectrum of operations. If we could have the first slide, please. As an old member of the RAND Corporation and even as a result of my Air Force training before that, I've become addicted to the briefing format.

This chart goes back to the time of the Quadrennial Defense Review. It was during that review in the '96–'97 time frame that the administration got a better focus on some of the many elements we have to balance within our defense program. Much of this was alluded to by the presentations by the chiefs and the vice chiefs in the panel that preceded us. The three principal elements that we have to balance are outlined here, on this chart: the need to shape, respond, and prepare. We, on one hand, as the world's surviving superpower with strong leadership responsibilities throughout that world, have a responsibility to be able to meet the two major thrusts of our strategy in the near term. We must shape the international environment through engagement and deterrence and all the activities that go with those goals and, at the same time, we must be have the capability to respond across the full spectrum of conflict. Those responses range from humanitarian to non-combatant evacuation, to peace operations, to smaller scale interventions and coercive campaigns, and finally, at the high end, to major theater wars.

We all know this. The interesting thing in light of the fiscal realities that Michael O'Hanlon has just talked about is that getting both these objectives done in light of our global commitments is in itself an extremely demanding challenge. Then on top of shape and respond, the QDR identified the third arrow at the bottom of the slide, the "prepare now" arrow. This objective says that while meeting the challenges of today, we must in fact also prepare for tomorrow. And I'm in full concurrence with the previous speakers that this preparation means transforming our military, making it adaptive, making it flexible, while still assuring it is agile and lethal.

This is our joint military capability which in turn rests on the organize, train, and equip Title X responsibilities of the Services. I strongly applaud the new departure in the Army's direction that has come through General Shinseki's vision, announced within these last couple of weeks. That vision clearly reflects, by the way, some of the "prepare now" activities of the past decade which owe a lot to another man present tonight, General Gordon Sullivan. I'd like to focus the remainder of my remarks on the "prepare now" dimension of our strategy.

In that "prepare now" arrow as it shows on the chart, we have the issues of the Revolution in Military Affairs. And I'll speak in a bit more detail about that. The slide also makes reference to the Revolution in Business Affairs that says we must both free up resources through the streamlining possible in an RBA to focus on our warfighting efforts and must also keep up with the modern practices of large organizations, of large business organizations in e-commerce, e-trade. All of the things that are happening in these modern practices—outsourcing, commercialization, globalization—would be recognized and reflected in the Department's activities. The Department of Defense is a massive business entity operating in a U.S. and international context that continues to change dramatically. We must change also.

We cannot continue to do what we need to do to sustain, supply, recruit, and operate military forces unless we pursue with real vigor this Revolution in Business Affairs. We must also modernize, and modernization means both platforms and weapons and systems, implementing the C^4ISR revolution that has just been talked about. But along with the RBA and modernization we must try to develop organizational activities and culture and adequate resources in order to pursue the adaptation and the evolution of our force—to pursue the ongoing Revolution in Military Affairs. The central technological dimension of this RMA is in the area of information technology, in particular the computer and how they impact upon our military operations. Next slide, please.

Let's focus now on military transformation. This thinking owes a lot to the work that Andy Marshall did beginning in the late '80s on into the early 1990s in the Department of Defense. As with Andy's work, our definition of a Revolution in Military Affairs is heavily based on Russian or Soviet concepts of this approach in the 1960s, again, in the late '70s. Our view is that for a military transformation we must harness new technologies via new organizational concepts and doctrine. All the pieces that Representative Thornberry talked about are important. You can't just do the technology, you must adapt the organizations and you must adapt the doctrine and concepts.

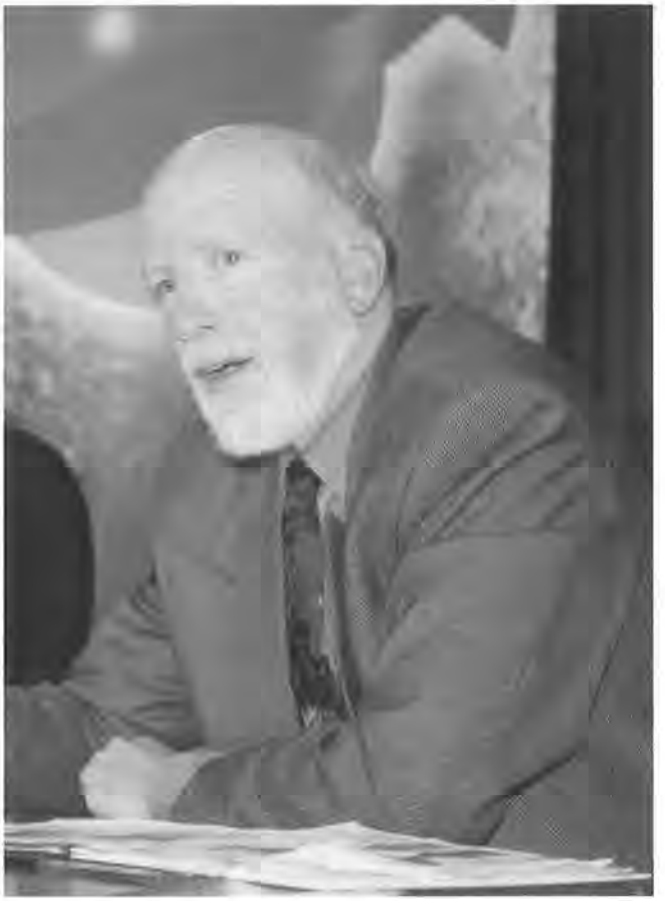
And below all those efforts, running as a constant thread through this, is people. You must have the innovative thinking; you must find, promote, protect, and foster this culture in the experimentation efforts and in the force more generally. And we must do this across the full spectrum of operations. We must forever remind ourselves, and I think this is another important part of the new emphasis of General Shinseki's vision for the U.S. Army, that all our forces must fight and win the nation's wars, but they also must continually, on a day-to-day basis, shape the international environment and respond to a set of contingencies.

So as we transform ourselves, we transform ourselves not only for the high end response of theater war, we transform ourselves for the day-to-day activities and the lower-intensity crisis response as well. Next slide, please.

The very good report on transformation that Representative Thornberry spoke about was by a Defense Science Board whose whole genesis owed itself to a congressional imperative, a

direction that Representative Thornberry initiated. I commend this report to all of you. It's on DoD war fighting transformation and was published just a little over a month ago. It is a half empty/half full depiction of where we stand in our military in pursuing the Revolution in Military Affairs. And half empty/half full is a very accurate depiction.

I am keenly aware of this issue because over the last several years I've been in the middle of this process as both a student of it, and as an individual with some responsibility to try to push it forward. In the early 1990s, activities in this area were largely confined to some pioneering efforts in the United States Army, such as the "Louisiana Maneuvers," and the first battle laboratory. There was little else in the Services. There was no joint component to this. Science and technology was most certainly being pursued, but it wasn't being closely linked to warfighting challenges. We weren't looking for technologies and trying to relate them to future security challenges across the spectrum of conflict. Because time is short, I won't go into this in detail.



Dr. Warner contends that DoD has pursued a tacit strategy to implement the Revolution in Military Affairs, but hasn't made that strategy adequately explicit.

One of the most telling criticisms that I found in this DSB report was an indictment that we lacked an overall strategy for the pursuit of the Revolution in Military Affairs. I think we've had a tacit strategy, but it hasn't been made adequately explicit and it needs to be improved. So I concur with that criticism.

I developed this slide in the last two days to try to pull together what I think is that strategy. I think that we are seeking to pursue transformation through a series of interrelated activities, all of which have some fairly well articulated annual and longer term plans. You can see the four areas there on the chart—Science and Technology, Service Concept Development and Experimentation, Joint Concept Development and Experimentation, and People.

In the first category, science and technology, we have over the last five years developed mechanisms for connecting the Services' visions of their future military operational challenges to how from a technical standpoint they might meet those challenges. And the further you go out into the future, the possible technical solutions are increasingly broad concepts and thoughts.

And we tried to link these military operational challenges to science and technology so these efforts will bring along in the near, mid, and longer term more fuel efficiencies, different kinds of munitions, different kinds of protection, and different C^4ISR systems to give us the battle space awareness that was spoken of so eloquently by the previous panel.

The second area is Service Concept Development and Experimentation. We have now created a culture and a commitment on behalf of the top leadership of the Services to transformation and embedded within each of the Services a set of activities, including warfighting laboratories, battle laboratories of one sort or another, major types of experiments, "generation after next" looks. There are a myriad of stories to be told about what's come out of these kinds of efforts and how they're already beginning to influence the effort to wisely adapt for the future the U.S. military force that remains the best in the world.

There's no better case study than the U.S. Army and the recent activities undertaken by General Shinseki. The image of the Army, which reflects the recommendations of the National Defense Panel of a couple of years ago, is very much embedded in a lot of the innovative research done first by Andy Marshall, then in cooperation with the Army, and then by the Army itself, particularly in its "Army After Next" process. There are story after story of these Concept Development and Experimentation efforts pointing the way for important reforms. Does this mean we've got it all right? Heck, no. What it does mean is that we've succeeded in getting a process underway, that we've begun to resource that process, and that we've gotten a push from the U.S. Congress to accelerate and sustain the process. That's perfectly appropriate, and in fact we must accelerate and sustain the process.

We do not have a compelling foe today. But we do have a compelling set of challenges that are difficult today and, they will remain difficult in the future. We must adapt the force to meet them.

The third category is Joint Concept Development and Experimentation. Launching this effort was a critical step. This effort got underway first in the Atlantic Command starting just a little over a year ago. This command has now been renamed the Joint Forces Command. They have a campaign plan for Joint Experimentation, but they are barely out of the starting gate. It is of the nature of this challenge that it will take some time to get needed work fully underway. They are not simply working on the seams between the Services, but are truly assessing joint challenges and capabilities.

They are working on fundamental challenges, key tasks that must be jointly met, key enablers, particularly in that C^4ISR backbone. Finally, I want to talk about one of the tasks that the top leadership must help perform, both the military and civilian leadership of the Department in concert with the top leadership of the Services, and that is to focus on the right joint problems. We have limited resources, limited time, limited activities. These activities cannot be open ended. What are the right questions? And, again, because the future is ambiguous, the questions we pose to the Department must be broad and challenging, not narrowly tailored issues.

Finally, the issue of personnel policy. Everyone on this panel has emphasized, and I certainly second it, that all of this is related to the initiative of people. There are two elements to this. One is all of our forces must be better able to exercise initiative. Rich Armitage was very strong underscoring, and I certainly concur with him, that the military force in the field in the last analysis, when enabled by the new C^4ISR architecture, must be able to react quickly, and this will require people with the skills and predelictions to do so. That is true. But the second element is that we must cultivate innovators in particular. We must create, nurture, protect, and promote the innovators; give them adequate support in every way.

Let me stop at this point. The time is certainly short. I'd be happy to respond to your questions.

Chilcoat: Thanks very much, Ted. Let me say thanks to each of our panel members. We have about 15 minutes left. There is much grist for the mill here. We welcome your questions. We have one over here.

Rothrock: Hi, John Rothrock, Colonel, Air Force retired. One of the imperatives that most people I think at this point agree comes with the information age is the diffusion and the flattening of decision-making structures. Yet this seems to run directly against the grain of what I think is also accepted as a still current principle, that you don't *manage* against .50 caliber that's opposing you, you *lead* against it. Which demands some sort of hierarchy. How does this tension play out in changing not only the structure, but the character of the service in the 21st century?

Chilcoat: Rich? Please.

Armitage: I'll give it a shot, sir. It seems to me that I'm in agreement if what you're saying is that we need to flatten out the hierarchy, the levels of command. If that's what you're about, I'm in full agreement. What I'm talking about, one of the things I'm talking about, we're talking about new structures and new doctrines. Whether you still need an army, a corps, an army division, and so forth, on down or whether you ought to flatten that. My own view is you ought to drastically flatten it. And I think that just the information age developments that you referred to is what allows us to do that.

Further, it seems to me that if we collectively and you, sir, in the Army specifically, put the huge emphasis on C^{4}ISR, it's going to drive you in just that direction. It will flatten the sort of structure. And it's my hope.

Thornberry: For me, I think you're hitting on one key example of what I was trying to get at. How culture and natural self-interest goes against the grain of the way some of these changes are happening. And when you have all these different rungs on the ladder between here and there and people are used to moving up pretty quickly, you flatten that down and you don't have the kind of movement perhaps that you have had before. So it is against the natural interest to promote one's career to do that flattening even though the technology and for a variety of reasons we're headed in that way.

That's an example of the kind of challenges I think we face in driving change that may go against the self-interest of a Service. And that is part of, I think, the tremendous challenge in making this transformation happen.

Chilcoat: Other questions. We have one over here, please.

Clarke: Thank you. Jeff Clarke, Army History Office. About 40 years ago, we had a brand new President and a brand new Secretary of Defense. They were going to be bringing in changes in DoD from the business community about how we did business. Bringing in practices from Ford Motor Company, etc. We were going to have a new way both the Army and our Services address missions. A full spectrum of the conflict. Getting away from just reliance on nuclear warfare, looking at both conventional capabilities, special forces, all sorts of new things. And we truly tried hard to bring about a cultural change starting in about 1960 and onwards

and we had some outstanding successes and perhaps some outstanding failures. But that cultural change was real difficult to bring about.

I know that all the speakers mentioned that. That that was really necessary to do. And I wondered if they have any more ideas about how you effect that sort of thing. Certainly you talk about the problems with zero defects in the Army and the other Services right today, but we have a Congress and an American public that really won't almost tolerate zero defects in operational commitments, casualties. And that makes even that very difficult for the Service chiefs to implement when, you know, the civilian, the American public won't stand for that, too. But do you have any insights into how, looking at the past, how we could do a better job making those cultural changes in the way we do business, the way we look at ourselves? Thanks.

Chilcoat: Ambassador Armitage?

Armitage: You bet. It seems to me that, first of all, I take great disagreement with your comment about the ability or the willingness of the American public to take casualties. They'd be nuts if they wanted to take casualties. But it seems to me that a short time ago during the Gulf War, the national leadership was talking about the possibility of 10,000 body bags. Ten thousand! Publicly. And the appetite for the sacrifice was in the American public, I think, because the national leadership was united, we had a very stirring and, at last, very edifying debate, in my view, in the U.S. Senate concerning the Gulf War and we came out with a position supporting the President.

So I think for reasons that are well understood and well explained to the American public, that you can get away from the no-casualty, antiseptic prosecution of war.

On the larger question of how do you get a whole organization to change *a la* McNamara, etc., clearly it starts with the President, it goes through the Secretary of Defense. In my view, it goes through all the lieutenants in that building. And I'm talking about the civilian lieutenants. And I think it's got to be very clear to our serving uniformed officers what is valued and what is not valued. And if what is valued is a sense of experimentation and willingness to get out and really seek the right answer, not be afraid of failure and that's what's rewarded. If people are out, and the term of art, I guess, is "wildcatting," then I don't think it takes long for that message to get through.

In fact, the very culture that you all who are in uniform embody—obedience, commitment to authority, and things of that nature—are what we count on to get the change. But I think internal to the Army, we'll just speak about here with your permission, that's who is assembled, it seems to me that there is an awful lot that we all can do to solve our own problems. And I'll give you a specific example.

It seems to me that we promote very well as a general matter right up through colonel. We get to general officer, it gets a lot harder. Why would, and I'm not singling you out, Chief, but why would a Service chief promote an officer to three stars if he didn't believe that officer had a chance for four stars unless it was a very unique situation like at West Point? Why? It doesn't make sense to me. But there is a reluctance generally to be very ruthless in these general officer policy matters. It seems to me that these are things that we have to solve in-house.

And it's been something, as you can see, that's bothered me for a long time because we promote, I think excellent, right up to colonel and then things go a little awry and you find officers who stay in some jobs, senior jobs, longer than they should when there's no hope of

promotion to another job. And it seems to me we ought to ask those folks to go home and bring in others and let them have a chance and really get some change in the organization. I just used that as an example.

Panel Member: It gets harder at the higher level, Mr. Ambassador. I would add to the ambassador's comments, we have the means at hand to change culture in our military forces.

Warner: For another key institution on that and that's the Joint Requirements Oversight Council which, as the systems are being born, a lot of systems until very recently were born Service and then have to be turned joint or at least joint-compatible. What we're trying to do with the Joint Forces Command is also to get both systems and concepts that are born joint. Now looking toward the future, and this is the piece the Joint Forces Command as its Atlantic Command antecedent was just officially assigned about a year and a half ago and took the baton with its start-up data on one October of last year, this is this question of joint concept development and experimentation.

I do not interpret General Jones' remarks in your ways and I've had a chance to talk to Jim on several occasions on these matters. I think General Jones is a strong supporter of the idea of Joint Forces Command doing important work on joint tasks, on joint enablers like the common operational picture or common operational database. Which in turn empowers the kind of more horizontal structure we're talking about. And I thought his initiative to say he was ready to provide Marine forces at the cost to the Marine Corps just to operate them to help do experimentation.

Now he said that he would either, because they themselves have both air and land and sea related components integral to them, he saw them as a potential test bed. We have an oversight board headed by the Deputy Secretary of Defense where we use the Resource Management Board to look at RMA on about a quarterly basis and try to provide, to help create the culture, provide the direction, provide the resources to pursue this innovation. It was General Jones, after discussions were made about can we dedicate funds to implementing what we find with experimentation, that he was supportive of doing that within his Service and he is supportive of doing that within the Joint Forces Command.

So I think on your broader question, which gets towards the resourcing piece, I'm less convinced that Joint Forces Command ought to be a major participant in the building of the budget other than it should be, like all CINCs, well represented about its sets of concerns that are budget related. And its sets of concerns would be the investments in, in fact, making good on our commitment to jointness. To joint capability, to joint interoperability, to joint training. In those areas, I would see it as a powerful voice that should be heard in the budget process.

I'm not convinced yet that this general thrust that I've heard from the Defense Science Board off and on for several years, there is a constituency that somehow thinks they can get the CINCs to almost be equal to the Services in the building of the programs. I think they need a voice in the Services and through the Chairman, but I don't think we need another participant in literally the specific building of the programmatics.

Chilcoat: Thanks, Ted. We have time for one more question. Let's take it and then I'm going to come down the panel, starting with Dr. Warner, and please wrap the answer to the question into your wrap-up comments. Thank you.

Hodges: Sir, Lieutenant Colonel Ben Hodges, Army Legislative Liaison. First, to Ambassador Armitage. Sir, I'm living proof that it's not a zero defects Army. My question to Congressman Thornberry, sir, what role does the Congress want to play in helping the Army transform?

Thornberry: Congress is 535 folks, and there is a wide disparity in the interest in what happens to the Army, much less what they want to see happen. And it is true that there's lots of people who would be more than happy to spend a fair amount of the money that goes into the military now on other things. And there are very few that are really focusing on what we do around the corner and what we do in the future. And so it becomes hard. But leadership inside Congress and among the Washington community is critical.

And that's why I commented on the momentum. Once we get the momentum going, once you have the Service chiefs come and talk to us about the need to change, once you have the Secretary of Defense talking about it and then following up the words with action, it can develop a momentum which can carry through to the Congress. And I told Dr. Warner that I viewed my role in Congress and others as being there to push every step of the way. Whatever he comes up with, I'm going to be pushing him to go further because I know all of the difficulties and obstacles towards making this transformation happen. And so I think a big part of Congress' role is to keep pushing so that we have an eye on the future.

Chilcoat: Did I get a signal that the Chief would like to make a comment?

Shinseki: I'd just like to invoke the host's opportunity just to say thanks to this panel. I think all four perspectives were very interesting and I think we'll give them a chance to also close up. I think for this Chief, this new Chief, in position about four months, you've described for me my great challenge in your varying perspectives that says don't turn lose of the war fight and do everything else, not enough money to do it all and so forth. And the challenge is how to get transformation with the innovators you're talking about in as short a time as possible. So I think you've described for me very much the environment in which all of the Chiefs operate and this one in particular.

I feel that I have to respond to Ambassador Armitage's comments. I share his concerns about the youngsters that we have serving in our force. And I would like to assure you publicly that is our concern as well. And by no means does a day go by where our seed corn are not very much at the forefront of our concern. Quality leadership is what it's about. From the day a youngster joins the force, whether enlisted or officer, we are about leadership and we do intend to keep faith with that regard. So the zero defect mentality is a concern for me as much as it was for Denny Reimer.

I would just caution us though. The more we talk about it, the more you force me to go down there and look at it and in some ways that reinforces the notion that something is in fact extant when it may not. And I would ask you to let me work that.

Not broad enough. I accept your comment on the vision. I'd ask you to give me a chance, and let all of us show you how far this vision is intended to go. The vision for transformation, as I've laid out as the 34th Chief's contribution, as Ted Warner says, to a process that should carry over to following Chiefs and to the degree the vision has any utility, it will be picked up by others. But give us a chance to lay that out.

The final comment I would make on Task Force Hawk, and this is really the reason I stood up, I share your concerns. No one in uniform, not this uniform or any one of the other uniforms represented here, ever likes to face the issue of soldiers or service people who die in training. Whether it's preparation for commitment or training just to keep our regiments' level where they ought to be, it's something we take seriously and we go and look at. And I assure you 11th Attack's readiness situation is something we have looked at.

There are several issues with Hawk. One of which is most commonly referred to and that's the amount of time it took to get there. It's common discussion. I would also suggest that the CINC, when I talked to him, says they were on his time line, he was satisfied with it. When you look at the deployment priorities for Taranta Airfield with the mobilization that it had, about 20 percent was allocated to Task Force Hawk. So there was greater capability to get them in there faster had those priorities been decided.

General Shinseki: Any time we use assets in a non-doctrinal way, we have to adjust. This was part of the story on Task Force Hawk, in which aviation assets were expected to operate independently of a ground component.

In terms of the tragic accident that occurred, I would say that any time we employ military formations in a way that we have not doctrinally prepared to be used, that is attack helicopters or any aviation asset without a ground component, we have to adjust. And that's a part of what was going on there. The loss of those two aviators is something we looked at closely. And that's the readiness issue you talk about. We're looking at that as well.

Chilcoat: Sir, thanks for those comments. We have about two and a half minutes left. I'm getting the signal from Dr. Pfaltzgraff, we've got to wrap it up. Dr. Warner, any summary comments, please?

Warner: Pursuing the Revolution in Military Affairs is inherently difficult. Push from the Congress is needed and appreciated. We have the capacity to do it. I am greatly impressed by the achievements of the last five years. We have seen the beginning of the embedding of both organizations and states of mind and commitments of top leadership, civilian and military, to make it happen. I almost chimed in on a much earlier question. Never underestimate the talent pool that is in the United States Armed Forces today. This all-volunteer force is staffed by professionals. The young people coming in, both officers and enlisted personnel, are coming in out of this electronic culture.

They bring with them more, I think, openness to new approaches, to how to do things. If we will provide the right environment for all those forces and for the civilians that work and support them, we can in fact transform this military. We can keep doing the day-to-day jobs, which are very daunting, and yet we can transform as well. It will be tough under the dollar conditions, it will always be allocating some scarcity because we seek to do so many things. It can be done. It is being done. But only with strong efforts can we continue.

Chilcoat: Dr. O'Hanlon?

O'Hanlon: I just very quickly say that when we think about platforms and modernization, it's nice that wouldn't it be nice to have all the F–22s, V–22s, Crusaders, and everything else. These are very good platforms. The only thing I actually think is bad to have for the safety of the country and the world is the current nuclear force which I think is far too large and far too alert in terms of ready to respond. Other things are desirable, but they have to be lower priorities in my eyes than readiness.

And I, as a person outside the process, am incredibly impressed by the way the U.S. Armed Forces and the whole national security establishment and the Congress and the Pentagon have performed in the 1990s. We can't mess with that readiness. Debates about whether it's headed downward are welcome, but the levels are high and we have to keep them there. Readiness is essential.

Procurement to keep the force reliable and safe is essential. We can debate about modernization, but we cannot debate about keeping things in the force only a reasonable amount of time to make sure that we're not operating 40- and 50- and 60-year-old platforms because that's too dangerous in most cases. And research and development, as Ambassador Armitage has emphasized, as Congressman Thornberry has emphasized, that's also essential. So these things to my eyes cannot be reduced in priority and, therefore, we have to look at things like a cheaper two-war strategy, less focus on platforms, and less spending on nuclear weapons.

Chilcoat: Thank you. Representative Thornberry?

Thornberry: If anyone expects that all of the challenges that we face in the military and defense are going to be solved by some new infusion of money on the top line of the defense budget, you're going to be disappointed. Because there may be some increases in the defense budget here and there, but it's not going to be the kind of money that comes and solves over all of the problems that we have. Governor Bush called for new thinking and hard choices and I think that's exactly what we have to focus on.

And that means there's going to be some pain. There's going to be pain in the culture of the United States Army, as well as the Navy, the Air Force, and the Marines. There's going to be some pain as far as Congress goes and some of our constituents. I try to step back every once in a while and look at this from a little broader perspective and see that throughout history, nation after nation has thought they were the dominant military power in the world and then, in the blink of an historical eye, they are no longer there. You can say that that's going to happen to us someday. It's inevitable.

But my goal is to put that day off as long as I possibly can. And that means that we have to change and adjust to new circumstances. I think we have to keep pushing in that direction because the obstacles to us getting there are so high.

Chilcoat: Thank you. Mr. Ambassador.

Armitage: Chief, General Keane, optimism is a force multiplier. I think you'll generally agree with that. I'm pretty optimistic. Mainly because, from my point of view, you stepped up big-time to a very difficult issue. And I would only in this last minute, urge you, sir, to, in addition to making good, tough decisions about technology, to simultaneously, and not, also make, try to make, begin to make tough decisions about structure, about doctrine, about personnel and promotion policy.

And I'm delighted, because I'll interpret what you said the way I like it, is that it seems to me you are enthusiastic about returning to one old way of doing business. And that is where you empower junior officers and NCOs to make the decisions they're very capable of making. I think that in itself will be a force multiplier. Thank you.

Chilcoat: Ladies and gentlemen, you've been a great audience to our panel members. Let me say deep thanks. You have contributed significantly to our strategic dialogue.

Setting Defense Priorities for a 21st Century Transformation

Day Two Luncheon Address
Dr. John J. Hamre

Wednesday, November 3, 1999—12:15 to 1:45 p.m.

Summary of Proceedings

- Corporate downsizing and the American inclination to invest in unproven high-tech companies because of their rapid stock price appreciation in anticipation of future earnings, rather than defense firms with proven earnings records, should be viewed with concern because of the effects on the defense industrial base.
- The U.S. government should abandon counterproductive practices that damage the relationship between government and defense industry.
- More stable defense budgets and vigorous efforts to streamline and greatly shorten the acquisition process are essential to preserving a vibrant defense sector.
- Transatlantic defense collaboration will reinforce interoperability while helping to diminish defense budget cleavages between the United States and Europe.
- A European Security and Defense Identity (ESDI) will help to reinforce transatlantic relations to the extent that it fields robust capabilities and does not undermine NATO, decouple the United States from European security, or duplicate existing capabilities.

Analysis of Proceedings

A robust defense industry will be indispensable to the transformation of the U.S. Army and the other Services. The "herd mentality" that has impelled many Americans to invest heavily in unproven high-tech companies based largely on their expected future earnings could damage the defense industrial base. Equity prices for such companies have risen quickly, while defense companies with proven earnings records have suffered sharp declines in their stock valuation. The quest for higher short-term profits could induce defense companies to reduce R&D spending or possibly even to get out of the defense sector altogether. Corporate downsizing could result in a hemorrhage of scientific and managerial talent. This shortsightedness could have severe repercussions for the future of the U.S. industrial base. A fundamental rethinking of the relationship between government and industry should be undertaken in order to compensate for such negative trends. Innovations could include easing regulations and accounting rules, as well as greater efforts to procure defense-related items from commercial vendors. U.S. national security will ultimately rest on the preservation of a thriving, profitable, and innovative defense industry.

There are several "first principles" for maintaining viable defense firms. First, more stable defense budgets must prevail over the rollercoaster budgeting of the past fifteen years. We must avoid the tendency of legislators to take contradictory actions. During the FY00 budget

debate, for instance, Congress first passed an authorization bill that boosted spending, followed by an appropriations bill mandating across-the-board spending cuts. Stabilizing procurement budgets will be particularly critical in the future, since the acquisition community has borne the brunt of the drawdown over the past decade. Severe reductions in procurement threaten the base of engineering and design expertise that sustained the United States during the Cold War. We must improve the acquisition process by adopting approaches such as multiyear contracts to assure greater predictability and stability for defense firms. The government should avoid such acquisition practices as fixed-price development contracts that place excessive risk on the private sector thus creating an inequitable partnership between government and industry. Acquisition decisions should be coordinated across Service lines in order to prevent a decision by one Service or civilian agency from undercutting the industrial base on which the other Services rely. Finally, maintaining competition in the defense sector is essential to promoting innovation and mitigating costs. While some defense consolidation was an inevitable outgrowth of the drawdown, the Department of Defense is now less inclined to approve future mergers and acquisitions.

The recent trend toward international alignments of defense firms deserves further scrutiny. The technological gap between the U.S. and NATO European armed forces was highlighted by Operation Allied Force. This suggests that greater international defense industrial collaboration could be part of the solution. However, there are two nearly insuperable (at least over the short term) obstacles to transatlantic mergers and acquisitions. First, the U.S. and NATO European governments have not yet developed the infrastructure needed to manage the industrial security problems associated with transatlantic defense industry consolidation. Second, the companies themselves are not freely prepared for the inevitable turmoil associated with such a mammoth undertaking. Indeed, transnational defense mergers have encountered severe difficulties even within Europe. Nonetheless, greater international collaboration could help to buttress NATO interoperability and prevent the emergence of a Fortress Europe and a Fortress America. Governments on both sides of the Atlantic should encourage defense industrial cooperation wherever it has genuine merit.

The estimated DoD's annual budgetary goals in Procurement and R&D are too low to maintain long term technological superiority. A combined goal of $90 billion has been established for these two areas. Of this total, $60 billion would be designated for procurement and $30 billion allotted to R&D. These goals will likely be met and they will probably be exceeded in the out years of the next Future Years Defense Plan. Procurement spending could range as high as $73 billion in these years. Effort to modernize the force should not be sacrificed to fund short-term operations and readiness, as has often been the case in the past. Modernization is the best way to preserve U.S. military strength in the rapidly changing security setting of the early 21st century.

Transcript

Hamre: Bernie [Dr. Bernard D. Rostker; Under Secretary, U.S. Army], thank you very much. As always, you're overly generous in your introduction, and I'm also a little embarrassed to say I'm probably not going to give the speech you think I'm going to give, since you anticipated what I would say.

I find myself often in this situation, but it's one of those cases where I have a very, very nice speech that someone else wrote for me. And of course it's gone through careful review and

editing, so it doesn't say anything. Well, I'm not trying to be cruel. I have very good speechwriters, and I hadn't had a chance really to sit down and say what I was interested in saying, so they've written a fine speech but it isn't really what [I want to say]. It would be rather mechanical, I think. So I'm going to depart rather dramatically from that, if I could.

I won't be long because I want to spend some time on questions. But I would like to pick up just briefly where Dr. Rostker brought us with this introduction, when you say that we are at a historic time, a time for real change.

I suppose every generation of leaders says that, but very few generations actually have the chance in life to make their own history. Most of us, after all, are forced to live out the forces that were set in some previous time; forces which we didn't have any control over.

All of us really grew up during the Cold War. None of us were participants in '46 and '47 and '48, in those times and those days that shaped the Cold War period. We inherited those forces and had to make sense out of them and be good stewards of the challenge and the directions that we were given at that time. And we are at an unprecedented period, I think. It's been almost 10 years to the day when the Wall really started to crumble catastrophically. I think it was on the 9th of November when it actually opened up in Berlin.

For the last 10 years, for other reasons, we really haven't stood back to say how we should shape our future. I think it's partly because we didn't know what that future was going to be. And in those wonderful days, '89 and '90 and '91, it looked like such a glowing future. We thought it would be so different than it has turned out. It's so much more challenging and complicated now. And certainly in those days, we didn't have the vision that we now have, and even now I would say we probably don't see all of the details of the new landscape terribly clearly. But we are in a position, I think, to start shaping our future.

We're one of those rare generations that is given a chance to shape its future and to put in place the forces that others will carry on. That's one of the reasons why I admire so much what General Shinseki and Secretary Caldera have done. And may I add on behalf of all the number two's in the world, a special thanks to you Bernie and Jack Keane, who I know are doing the real work. We have to give credit where credit's due because nobody will give us credit for what we do.

But this is a remarkably important time, and really the future health, and I think in many ways the vitality of the Army, really rests with the successful implementation of this new vision that's been outlined. This new vision may be only a month old in its public accounting, but there are so many details that are going to be unfolding over the next six months, and frankly, the details will be coming out for years to come. And it is so important that all of us realize that this is an historic opportunity for us, for all of us as Americans and friends of the Army and those who are in the Army, to make a new future. The future is ours to make, but also ours to lose if we don't step up to this opportunity.

Secretary Cohen is excited by what he has seen so far. Obviously we have many details in front of us. This couldn't be a worse time to launch such a new direction. There's not enough money, for one. There never has been, though.

I think it was in 1974 and '75 and '76 when the Army was really broken. At that time there were visionary people who said, "We're going to rebuild this outfit," and what did it give us? It gave us the M1 and it gave us the M2, it gave us the Patriots and the Apaches. It gave us the systems that fought so brilliantly in DESERT STORM. It also gave us remarkable people. I had a very good friend who said to me, "You know all the good guys left in '74 and

'75 and it took the rest of us to build the best Army in the world." I think that's really where we are right now.

These times aren't easy. These are going to be remarkably hard days ahead. Not just the next two months when we put a budget together that implements this vision, but over the next several years when there will be all kinds of pressures. It's going to be very difficult, but it's going to take people's conviction and courage to bring this forward. I think it's absolutely essential for the long term vitality of the Army and I really want to congratulate General Shinseki, you, Secretary Caldera, and all of the people that have been making this possible.

The other thing that I wanted to talk about today is very different. I looked over the agenda and lots of people are here talking about all the important issues. But there's one little issue that wasn't on the agenda and it's something I want to talk about here. That is the health and well-being and direction of our industrial base right now.

It's been in the news lately. Unfortunately, some of it is sad news because we see the way that the stock market in recent weeks has pummeled our contractors. It's a very tough time right now. It's caused me to sit back and to think a good deal. I know the forces that come to play in this, but it's caused me to think a good deal about it.

In many ways all of us in the Department are absolutely indispensably tied to the health and well- being of our partners in the private sector that have to build these systems that we're going to use. And we're not talking about it at this conference, so I wanted just to say something about it if I could.

As I said, I unfortunately got to thinking about this in light of the pummeling that our companies have been taking in the stock market. I must confess, I am startled by that, and frankly very disappointed. I'm disappointed that the owners of these companies have taken such a short-term view about the importance of defense industry in America.

I must confess, I don't understand the stock market anyway. I can't figure out what real value means when it goes through that process. Companies that don't make a penny of profits have the stock market values absolutely soaring. And then you find companies that have maybe had a disappointing quarter but are producing some of the most astounding technology are just absolutely clobbered.

In part, I think this reflects somewhat the herd mentality that seems to guide so many fund managers who may not know the details but sense that all of a sudden this isn't good. So all of a sudden you get into a real trough, and we're seeing that now with almost all of these companies. I mean, Martha Stewart goes public and makes a billion bucks the first day and all she does is carve pumpkins. You know? We have to reexamine who's going to defend this country 10 years from now and 15 years from now. It's going to have to be these companies that we work with.

Now there are real consequences from this short-sightedness in the stock market. I very much worry that the kind of pressure that this puts senior corporate managers under means that they will make some very serious decisions that will have a negative effect on their long term health so that they look good for the next quarter.

All of a sudden, if you cut back on research and development spending, that's going to have a very serious, long term implication for us, for our national security. But there's a lot of pressure to do that. Or when somebody pressures them to say, "You have to do more downsizing," how do we make sure that doesn't lead to a hemorrhage of scientific and managerial talent that we have to have right now? I must confess, I'm worried about it.

So I think we need to go back to some first principles and say what's important. We're trying to change the way that we work with our industry. We're trying to remove the rules and the regulations and the accounting restrictions, etc., that have created a hothouse defense industry, and we'd like to do as much, as commercial as possible, and as much commercial-like acquisition as possible.

But having said that, we are going to have defense companies. We're not going to be without defense companies. And we can't have a strong defense in the long run if we have wounded defense companies. So this has to be a priority for us at this time.

That means that we in the Department have to do something. We have to focus on our priorities and our first principles. This is one where I did write myself a few notes. So what are they?

First of all, we have to keep steady, stable defense budgets. We cannot have roller coaster defense budgeting, and we've had that here. This is the first year in, I think, 15 years where we haven't been on a downhill path on a defense budget. And we're counting on some increases in the future. I'm very nervous that we are closing out this year without a long-term agreement between the Administration and the Congress on budget resources for defense and non-defense spending. I think that's troubling, and it worries me that we pass a defense bill one week that increases the defense budget and then the next week we pass another appropriations bill that takes away, through across-the-board reductions, the same increase. This is a very hard thing for us to plan for now.

So we need to have stable, predictable, and, especially, investment budgets. We have tended for the last 10, 15 years, frankly, to accommodate the draw-down and put it on the backs of our acquisition community—both inside the Service and outside the Service in the private sector. And we really have loaded an awful lot of the downsizing on them. That's caused this tremendous consolidation in the industrial base. And I don't think that's inappropriate. We certainly had excess capacity.

But there does come a point when you can't lose the design and engineering expertise and talent that we have invested in through our private sector. I think we're at that point. So we've got to hold onto the investment budgets that we've been programming.

Second, I think we have to emphasize stability in the acquisition process, and if ever there was a time when we needed to promote multi-year contracts, now is the time. I mean we had quite a battle here this year. Fortunately, I think we were able to get a lot of that back. But now's the time when we need to make sure that we have stable programs that program managers can count on.

Third, I think we have to be careful that we don't, in the budgetary pressures of the moment, adopt some acquisition practices which turn out to be very tough on industry with unintended consequences. Or worse yet, that we adopt acquisition policies which have inherently great risk in them, like the old days when we had these fixed price development contracts. Those were really a disaster. And we are still digging our way out from under some of that here even now. So we have to at least eliminate acquisition policies that try to put all of the risk on our partners in the private sector. This is a partnership. We have to manage it together.

I think we have to find and improve the way we do decision-making in the Department, so that we integrate acquisition decisions across Service lines, so that we don't have an acquisition decision in one Service or one agency undermine the industrial base that the other Services are counting on. Unfortunately, we're getting close to that. We're going to have to start to focus on that.

Now I also—I have to be very careful how I say this. I think that the concentration, especially at the prime level here in our industrial base, has gone on about as far as it can go. We'll continue to look at proposals, but we're at a point now where invariably we're losing too much competitive opportunity with concentration. I think it's going to be a very tough test from this point on because we can't afford to slip by default into a sole producer world.

I think there are still opportunities at the second and third tier for realignments and consolidation. So that's not to say we're closing the window. But the test, that we still have competitive opportunities, is going to be very important to us.

If I could say something about international industrial alignments, there's been an awful lot of talk about that in the last couple of weeks and we've had a lot of discussions with our partners in other countries and counterpart industries of defense about this issue. There's a lot of speculation in light of the consolidations that have occurred in Europe that we now are ready for this next step, for some transatlantic mega-deals between defense companies.

Again, I think we need to step back and talk about first principles. I think we have to look at this in the context of what it is going to take for us to be able to hold the NATO alliance together so we can fight together.

Kosovo had some lessons in it beyond the obvious, and one was that the technological gap between us and our very good allies is widening. It's going to be hard for us to stay together as an alliance and fight together as an alliance with an even wider gap growing over time, technologically, on the battlefield. So alliance interoperability has become, I think, an enormous challenge for all of us.

I think there is an industrial dimension to that. To my mind, we're not going to be able to keep this alliance close together technologically unless we are able to find ways for greater collaboration between our industrial sectors.

I personally don't think that anybody is ready in the near term for a mega-merger. I think there are two reasons for that. One, although I think we're getting close in certain areas, we don't yet have in place the security infrastructure that would let us understand and manage the security challenges, technology and industrial security challenges, of a transnational corporation. We're very far along in some discussions with the United Kingdom, and I think those are very promising. We've indicated we're very open for comparable approaches with France and Germany and other countries because that will be essential if we would be able to agree to a transnational, transatlantic industrial alignment.

I also don't think that our companies, or the companies in Europe, are ready right now. Consolidation involves a good deal of hard management, and some turmoil. We're seeing that in our companies here. And that is all in the future for these two big companies that are emerging in Europe. They haven't confronted any of it yet. This is probably not the time that it is going to be possible for anyone to launch into yet another round of even more complicated transatlantic mergers.

Now I don't think this is a calendar-driven problem. I don't think there's a magic date. Rather it is a situation-driven issue. The next step really is going to have to depend on constructive conditions that emerge, both on the security level—that's our responsibility as a government—and then healthy companies that decide that it makes good business sense for them to link up. I think it is in the future and it really depends on these things coming to pass here.

We should use the time we have now to put in place that security infrastructure so that we can indeed see greater alignment of these companies. We should encourage collaborative projects

where they make sense. I'm not talking about science fair projects that you do for political reasons. Those usually don't go anyplace. They aren't grounded in Service requirements. But I think they ought to be grounded in what makes good business sense and has genuine military merit. We ought to find a way to promote that.

Ultimately, if there are two fortresses that emerge—a fortress Europe and a fortress United States industrially—we're going to lose as an alliance. So in this new era that's unfolding, we'll have to find ways to drop the drawbridges and open the gate so that we have stronger commerce going on back and forth between these two communities which are so important to us for our national security.

I think we also need to take a hard look at what we're doing to ourselves. We've made it very hard for alliance interoperability, when it's so hard for U.S. companies to export their components and put them into systems overseas. I was startled during this conference to learn that DASA has put out a directive to their engineers to engineer American components out of their systems because they are having too much trouble getting licenses approved. That's a very bad development for us for interoperability.

All of the words we say at a NATO Summit get undercut if we have those sorts of impediments standing in the way. So we have an awful lot to do. And I think people are realizing that and are stepping up to the challenge. And while this is a very tough subject politically, I find very good people working on it with more energy than I've seen in a long time on the Hill. I applaud that. I think it's very good.

Okay, this was not at all what Bernie thought I was going to talk about but I think it's somewhat related. I don't know that we're going to have a strong defense in the future without having strong industrial underpinnings. You all are certainly depending on that. The globe isn't getting any smaller, and there sure aren't any smaller number of aggressors in the world.

So it's going to take a smaller and more capable Army to cope with the security challenges that we have. We're not going to fix that problem without technology. Technology gives you the knowledge so that every round you shoot is effective; the efficiencies so that we can get the kind of firepower without taking a mountain of stuff to support a deployed unit—all things that General Shinseki is pushing. I think it's exactly the right direction. It really does depend on these strong partners of ours.

Let me stop with that. And, Dr. Pfaltzgraff, I guess you are going to moderate any questions and I will stay till, say, in a half hour.

Pfaltzgraff: Well, thank you very much, Dr. Hamre. This is an area that we had talked around during the conference. And I don't know what your planned remarks were, the speechwriter's remarks for you, but this is a very important contribution to what we're doing at this conference. So I thank you in advance. We'll thank you later, but thank you for doing this. So we also have here, I might add, quite a large number of people who signed up at least from defense industries. So this is an opportunity for them to take part more formally in this discussion.

So who would like to open the question and answer period with Dr. Hamre? Yes, please. And again, wait for the microphone.

Baumgartner: Yes, sir, hi. Neil Baumgartner, *Defense Daily*. The question is—

Hamre: Hello.

Baumgartner: Thank you. With the mergers between *Aerostazio*, *Matra*, and DASA, if that's not fortress Europe, I guess the question is "what is?" You know, with all the companies they bring with them, what's left for opportunities? You know, again, if this isn't fortress Europe, what would be?

Hamre: At the get-together we had last week, we had the senior CEOs from DASA and *Aerostazio*, *Matra*, other companies from Europe, and I said this looks an awful lot to us like fortress Europe. The one difference is, is that they know that that's a dead end and they said so. They know that in the long run they have got to find ways to work with us and not to become a fortress if they're going to be healthy in the long run.

So it has the outside appearances of fortress Europe. And by the way, every time I talk about this, I always say I'm not self-righteous about fortress Europe because there's no fortress that's more impenetrable than fortress America when it comes to industrial competition. It is virtually impossible for anybody from outside to come over here and compete here if you're not here. I mean you don't get to sell things in the United States if you're not in the United States.

You know, and it isn't because people outside aren't any good or we don't trust them or they don't have good technology, it's just that it is so hard to get any acquisition program going over here and you have to be so close to your customer and there are so many hurdles to get through, both inside our building and on the Hill, that you've just got to have a very deep knowledge and presence across the board of the department. And that's just very hard for outsiders to do. So I'm not being self-righteous, but this has all the potential of being a fortress Europe except that the CEOs who are going to be heading these organizations know that they can't let it become that way.

Pfaltzgraff: Okay, our next question is from over here.

Hawken: Sir, Tim Hawken from the U.S. Army. I want to thank you for your thoughtful remarks today. It's a topic that I share your interest in. My question is a follow-on to the last. To what extent can the European Security Defense Identity (ESDI), or initiatives like ESDI, act as a mechanism, a facilitator to drop the gates that you speak of? What can we do in these partnerships to begin to do partnerships in the industrial base?

Hamre: We're very supportive of ESDI. Frankly, efforts that would help to strengthen the European side of the NATO organization, of the NATO alliance, we think those are constructive steps. But we've always said that if all they are is a set of meetings to go to and a new secretariat and a new secretary general and that, if that's all that ESDI is going to be, and, frankly, you know, they're stumbling over all these kinds of organizational issues, then it will not be productive. I mean, you've got to put capability on the ground.

What really is so badly missing right now is real capability. You know, and this is what the Secretary launched when he went over a year ago called the Defense Capability Initiative. Which is you've got to start buying sustainability. You've got to start buying command and control. You've got to start buying airlift and logistics support. You've got to start buying what it takes to be effective on the ground if we're going to have genuine expeditionary capability. If all it's going to be is another set of, you know, protocols and meetings and talking societies, then it's not really solving the problem.

So we will continue to try to be supportive, but you don't need another organization that all it's going to do is to compete with NATO as the security alliance for Europe. And to that extent, we will be helpful in any way we can. But we've got to make it real.

Now as it relates to the industrial base, you know, you can't have an industrial base if you don't buy anything. That's what it really comes down to—so all the words and all the plans and all that don't buy you an industrial base. You've got to buy something. And so what you really have to look at are what are these defense budgets like. And I share what George Robertson said recently when he was here. He was up in Canada, he's been around. And he said, you know, you guys have got to start focusing on your defense budgets. And now I know what they've said in return to me is, well, we need to do the consolidation because we've got to eliminate the inefficiencies that come with having too much redundant excess capacities so we get more output. I agree with that, you know. We had a slightly different view about how it would be better for that to proceed, but they didn't go that way. Okay, I understand that.

So this is not a bad thing that they want to have consolidation if it really does lead to more efficient output. But they frankly need to look again. This isn't a surrogate for having solid defense budgets.

Pfaltzgraff: Okay, next question. Yes, over here, please.

Whalen: Dick Whalen, Raytheon Systems, Strategic Planning. I about fell out of my chair when I heard the mention of the industrial partners in terms of our strategic responsiveness for the 21st century and my congratulations to you, Secretary. You have always been a strong advocate of our end of the bargain. My question is, when we try to sell, when we try to come forward with questions about acquisition policy, is there a possibility that at some high level in SecDef a defense advocacy department or organization could be installed where companies with issues of this nature could go directly to people at that level and put them on the table? So I'm sort of asking can we have an advocate? A real advocate?

Hamre: Well, I'm sorry I disappointed you. No, Dennis Picard used to call about every two weeks, I mean, so I . . . Of course we do have a central place and a strong place and that's the Under Secretary for Acquisition and Technology. I mean, this is, by our protocol, the third ranking position or the fourth, sort of fourth, in the department. And of course in each of the Services, there's an assistant secretary. So there are places to go.

And I think that, you know, part of it is that we just have to realize that we have a long term strategic responsibility, you know, for your health as well as our health going into the next century. I think we've had the luxury of taking that a bit for granted because we had so much excess capacity that we could live off of that in the short term as things were getting smaller. But I think we're now at the stage where we have to very seriously, you know, look at the long-term viability of our companies.

You know, and here again, I do not want to change the way we do funding for corporate America. The stock market is a marvelous thing. And one of the great advantages that the United States has over our competitors in Europe is that we have a rich and sophisticated venture capital system here in this country that the Europeans don't have. And I don't want to undermine that at all. But we're at a time now where there's nobody in the world is as good as we are at money management, you know, in this country.

But there are times when the current system seems to punish the stable, high tech companies that don't register 20 and 30 percent growth forecasts every year. You know, 6 percent or 5 percent isn't enough sometimes in this stock market. And that's part of what we're seeing. I mean, when there are, you know, forecasts of growth for companies that have never made a profit that have incredible capitalization, you know, at the stock market, and yet companies with this astounding talent and expertise, you know, don't. But it's largely because, you know, the finance world doesn't see the sort of growth potential in defense companies that they see in, say, in communications, telecommunications companies.

And we're going to have to take a look at that. You know, how do we deal with that? We, DoD, we're going to have to come to grips with that because this is a long-term issue. You know, if I said something now, I'd get in trouble because I don't know what I'm talking about, but I do think we've got to study this over the next couple of months. So I gave you a long roundabout answer to say I think it has to be the responsibility of the Secretary and the Deputy Secretary. Obviously, the day-to-day responsibility will be the Under Secretary Acquisition Technology, Jacques Gansler.

Pfaltzgraff: Next question? We have time for one or two more. Please.

Audience Member: Secretary, sir, there's been a lot of discussion of a figure kicked around, about $60 billion investment for modernization. We just heard recently that it's closer perhaps to $90 [billion]. Would you share your thoughts on *wants* versus *needs* and what do you think the actual appropriations will be in the future?

Hamre: I think how I reconcile those two numbers is the $60 billion target that we have is for procurement. And if you add the research and development, which, given research and development together would constitute investment, it would be $90 billion. We're going to make $60 billion as a target. And that was General Shali[kashvili] several years kind of put a marker down and said we needed to get there. We're going to get there. I'm not sure that that at that level still represents the pace of recapitalization that we're going to need in the long run.

Now part of that depends on what it is that we're going to buy and, you know, there's a very different picture that's emerging. This is why it's so hard for the Army right now to pull the budget together because we insist on such granularity and such detail in putting budgets together and we're at an important shift in thinking. And, all of a sudden, to be able to say we've got to have a brand new concept and we've got to have the kind of fidelity we have that normally put budgets together, it's a very tough thing to do.

And one of the things I will say every time I have a chance to Congress is please don't judge this important initiative if you find some little hiccups along the road, you know, in the budget that we send you. We'll undoubtedly have some of it wrong. But the direction is absolutely right.

Now that is going to affect how much recapitalization the Army is going to need over time. But I personally don't think that at $60 billion is adequate for making up for the last 10 years, 12 years, and I think we're going to have to do better than that over time. Now our budgets right now show us getting up to $72, $73 billion in procurement here toward the out years of the five-year plan. We'll get better than $60 [billion]. You know, the history has always

been you had to trade away some of that, you know, to make up for holes in your operating accounts along the way.

So I don't know. I won't forecast what number we will get to. But we can't let the pressures, the short term pressures, you know, take our eye off the need that we've got to continue to march back up the curve on modernization.

Pfaltzgraff: We have time for one more question. Who would like to be the final question? Yes, right here, please.

Melcher: Sir, Colonel Melcher. Just to shift subjects for a moment. We recently completed a Kosovo quick-look in DoD to try and glean some of the lessons learned from that campaign. Do you think there should be an equivalent cabinet level review of that campaign to determine lessons learned across interagency and, at some point in the future, should there be a Kosovo relook at that level to see whether we're accomplishing our objectives and whether we ought to adjust the mix of our elements of national power?

Hamre: Well, I know that part of the after action report that came to the Secretary and the Secretary and the Chairman endorsed was that we take a look at how well we did interagency. There were a lot of things about that. Most of which worked, I think, fairly well. But there were some things that didn't go as well and that's part of an after action assessment. Obviously, you know, anything interagency is just a lot harder to do because, you know, it's competing with so many other things that have to happen on a day-to- day basis. But, yes, I think there are some we ought to. And my understanding is that we've started that already, but I'm afraid I don't know the details personally on where we are in that sort of a review.

It will never have, you know, the structure and discipline of a DoD after action, frankly. I mean, we're kind of compulsive about that sort of stuff. But I think that's why it's such a remarkable organization, too.

If I could use though as a jumping-off point to say one thing. I know that there have been some voices that have said that there was just undue political micro-management of the Kosovo air operation. And I think it's obvious that we certainly wouldn't have fought the Kosovo air operation the way we did had we been doing it alone. You know, we would have done it quite differently. But the reality is we weren't ever going to be able to fight that war alone. We couldn't have fought the Kosovo air operation if we couldn't have used the air bases in Italy. We couldn't have fought that operation if we had been denied access and over flight for Hungary.

Like it or not, NATO went to war, not the United States. And so much of what people now say and characterize as being we fought inefficiently is really misunderstanding the nature of this conflict. This was the first time NATO as an alliance had to go to war. And there are constraints that come with that. After all, if we had just fought the war ourselves—assuming we could have, which we couldn't—how would we then have had the Europeans invested in resourcing 85 percent of the forces on the ground for peace enforcement? No. I mean, they wouldn't have been committed to that if we'd done all the work and just did the air campaign.

So I think we have to be realistic. You know, the environment that we were in dictated a path that differed from how we would have done it had we done it just ourselves. But we didn't have that. I was going to say that we didn't have that luxury. I'm not sure that would have been

a luxury because I'm not sure any American was prepared to fight that war just by ourselves. And I think the outcome would have produced—we wouldn't have been able to follow through on it. While airplanes alone won the war, they sure didn't win the peace. You've got to put guys with boots on the ground to do that. And we're still in the process of that.

And I think that's the other lesson of Kosovo which, if I may, is to say I celebrate the wonderful things that our air forces did. To include Task Force Hawk. Which I thought, given everything that it was asked to do, did a remarkable job. But it reinforced again in my mind that political reality is control on the ground. I mean, until we could actually send troops in and to make that peace happen, you know, end of the barrel, it wasn't going to happen just with airplanes.

And that's not to take a thing away from the courage or the bravery or the skill of the pilots that made it such a success. They did a wonderful job. But it reinforced again in our minds why it's so important to have the full spectrum of capability that a superpower has to have. Thanks for giving me a chance to give you a little lecture. You didn't ask for it, but I just wanted to . . . Yeah.

Pfaltzgraff: Dr. Hamre, may I ask our collective thanks to you for adding, as I said when we began the question period, a very important new dimension to the conference that we've had over the last two days. The defense industrial base is indispensable to what we are trying to do as we all know in this room. And you, both in the work that you do in the Department of Defense and in the discussion that we have had in this session at lunch, have added a great deal to our understanding. So many thanks for being with us. Thanks also for the questions and answers to the audience and your wonderful answers. We wish you the very best. Thanks again.

Hamre: Thank you very much.

Realizing True Jointness in the QDR Process and Product—How We Do It Right

Panel 6
Senator Jack Reed
Dr. David S.C. Chu
Dr. Jacquelyn K. Davis
Dr. Richard H. Shultz Jr.

Wednesday, November 3, 1999—2:00 to 3:30 p.m.

The 2001 Quadrennial Defense Review will offer unique opportunities and challenges. The last QDR provides valuable lessons that could improve both the process and the outcome of the next review—chief among these is the recurring theme of the conference: cooperation. The next QDR will challenge old modes of thinking, offer alternatives to the status quo, and call many Service equities into question. Our challenge is to find a way, as a defense community, to garner the greatest possible value out of the process. In order to develop the best defense strategy and program for the nation as we enter the 21st century, we must approach the process jointly.

Summary of Proceedings

- The 2001 Quadrennial Defense Review (QDR) will be a critical vehicle for reassessing the future of U.S. defense strategy.
- While the 1997 QDR produced important results, the next review must be much less cautious and far more forward-looking.
- Innovative strategic thought must drive the review process in order for the QDR to serve the nation's national security interests and needs.
- The assumptions, analyses, and conclusions embedded in the previous QDR need to be challenged in order to produce a new QDR that is truly driven by strategy and 21st century national security requirements.

Analysis of Proceedings

The forthcoming QDR will serve as the primary vehicle for a fundamental reassessment of U.S. defense strategy and priorities for the next administration. Therefore, this strategic reappraisal must challenge present assumptions, analysis, and conclusions. In order to benefit from the QDR process, the U.S. government and the broader defense community must undertake several critical tasks. First, we must harness the intellectual capital now and provide a framework for identifying key issues and assessing our range of options. Second, we must draw upon the useful lessons learned from the 1997 QDR. Third, the civilian leadership must be actively engaged in the process at an early stage, providing guidance and articulating priorities. And fourth, strategic principles set within the new security environment of the early 21st century must guide and drive the review.

The QDR provides a framework for developing defense strategy by: identifying and prioritizing national interests and threats; allocating resources in accordance with those priorities; and reconfiguring the force structure based on the resource decisions. The 1997 QDR identified many of the emerging security trends and defense priorities in the post–Cold War era. The review foresaw small-scale contingencies as a priority and for the first time addressed extensively asymmetric threats as a new challenge. Criticisms have included its overly cautious analysis, its failure to prioritize adequately the military's missions, and its budget-based rather than strategy-driven approach. The next QDR must prioritize America's national interests and threats through a concerted effort between civilian and military leaders as fully as possible. The impact of commercial globalization on acquisition practices must pervade the QDR process. The next QDR must match resources with mission requirements. In this resource allocation process, many Cold War defense systems that are no longer needed must be discarded. For instance, the need to invest and acquire counterproliferation capabilities for missions ranging from missile defense to consequence management are now greater than ever given that WMD use is among the most likely threats to the United States and it forces abroad.

The 1997 QDR was organized around strategy, force structure, and modernization. While this was a useful approach to understand and shape the debate, different methods have been suggested. For example, the General Accounting Office has recommended a mission-based template while some foreign policy experts have constructed a range of strategic paradigms that might unfold in the next 25 years as the basis for security planning. Alternative worlds ranging from multipolarity to chaos could determine the key requirements for the Armed Forces. A more novel methodology that focuses on the fundamental assumptions underlying the current defense strategy has also been proposed. The following factors illustrate the compelling need for reassessing the assumptions of the previous QDR:

- Congress has challenged the DoD's approach to defense, particularly in the area of resource allocation.
- Defense strategy must move beyond a Cold War paradigm to reflect as fully as possible the new security landscape.
- The QDR must shift from a Service-centric perspective toward a decidedly joint approach.
- New assumptions are required to help identify the most pressing issues confronting the United States in framing force structures based on national security strategy.

Future missions are not likely to resemble those of the Cold War and new requirements such as missile defense, homeland defense, and information operations must be central to the debate. Future conflicts will not necessarily resemble the two major theater wars (MTW) scenario envisioned by the last QDR. Further, the last review neglected the changing role of NATO and failed to anticipate contingencies such as Operation Allied Force. This deficiency in addressing conflicts beyond the MTW construct was particularly glaring given that the airpower used in that campaign resembled what would have been required in a major theater war. Declining public support for smaller-scale contingencies, such as the operations in Haiti and Bosnia, may erode our ability to cope with MTWs. Future opponents will not operate according to our standards and expectations of short wars and few casualties, making the commitment to a MTW more complex and perhaps more difficult. The level of U.S. forward-deployed

forces overseas should be considered in the next QDR. Some have questioned whether U.S. military presence in Europe and Asia presently totaling 100,000 respectively is essential for the future. New technologies will decrease reliance on manned platforms to deliver munitions and enable the United States increasingly to execute the same missions with robotics and unmanned aerial vehicles.

New equipment in the future will not necessarily lead to lower operating costs. The Department of Defense must consider the financial impact of new platforms in order to prevent the diversion of modernization funds to support Operations & Maintenance costs. Given that the defense budget will probably not remain at current levels in real terms in the coming years, a fundamental reassessment of how the DoD allocates resources is sorely needed. Last but not least, the driving force throughout the QDR process must be national security needs in a changing global setting in which the United States must prepare for a spectrum of contingencies and threats.

Transcript

Flournoy: If I could have your attention, we'd like to go ahead and start panel six. Which is on realizing jointness in the QDR process and product—how do to it right. I think it's only fitting that the subject of this final panel in this strategic responsiveness conference is on the QDR as the next QDR will provide us with the next opportunity to fundamentally reassess our current defense strategy and program. It will also be the primary vehicle that the next administration has to form a new joint consensus on defense priorities and directions for the 21st century.

If it is a strategy-driven exercise, it may well challenge inherited modes of thinking, offer alternatives to the status quo, and call some service equities into question. And as such, the QDR will be a high-stakes enterprise for the nation, for the Department of Defense, and for the individual Services. These high stakes suggest several imperatives for the next QDR.

First, the need to begin developing intellectual capital, building intellectual capital for that review now. Starting to frame key issues, identify and assess a range of options in those issue areas. If we wait until the review begins, we will find ourselves flat-footed. We will find ourselves without enough time to bring hard issues to decision in the course of a review.

The second imperative is to take account of lessons learned from the last review and from the previous one before that and to incorporate those lessons, particular process lessons, into the next QDR.

The third imperative I would identify is the need for early top-down leadership. And by that, I mean full and early ownership and engagement in the review by the new SecDef and his or her team. Articulation of desired outcomes for the results of the review at the outside. Creation of the mechanisms needed, the management structures to ensure that the review actually reflects Secretary guidance and priorities.

The fourth imperative I'd mention is the need to empower strategy to drive the process. Yes, the QDR will be a resource-constrained exercise. Yes, it will be about deciding programmatic priorities. But if it is not driven by strategy, it will not serve the nation's needs as best it can. Above all, we must be explicit about where to place emphasis and where to take risk in the strategy. And those choices need to be tied directly to specific programmatic tradeoffs.

With these imperatives in mind, let me put several questions on the table for our distinguished panel. First, what are the lessons that we should learn from the last QDR and how can we improve the QDR process? Second, what are the most important strategy and programmatic issues that we need to address in the review? Third, what are the leadership demands of making the QDR as valuable as it can be? Both for the civilian leadership and also for the uniformed leadership in the joint staff and the Services. What kind of preparation should we be undertaking now to position ourselves for a successful review?

And finally, what can we as a broader defense community do to ensure that the next review process produces the best possible defense strategy and program within our means for our nation as we enter the next century?

With that, let me provide some brief introductions to our panelists. We have a wonderful collection of the right people to speak to these issues. First is Senator Jack Reed. Senator Reed was elected to the Senate in 1996. He represents the great state of Rhode Island and he serves on the Armed Services Committee among several others. Prior to becoming a senator, he served three terms in the U.S. House of Representatives. And he also has a strong Army background, having served in both the 82d Airborne Division and the Department of Social Sciences at West Point. I expected that line to get applause in this audience.

The second speaker is David Chu. Dr. Chu is currently Vice President responsible for RAND's Army Research Division and also Director of the Arroyo Center. Previously, he served in the Department of Defense as Assistant Secretary, and Director for Program Analysis and Evaluation from 1981 to 1993. Which is probably one of the longest Pentagon tenures of anyone I know. Any civilian anyway. Prior to that, he also served as an Assistant Director of the Congressional Budget Office for National Security and International Affairs.

Our third speaker is familiar to many of you. Dr. Jacquelyn Davis is Executive Vice President of the Institute for Foreign Policy Analysis and President of National Security Planning Associates. She has written widely on security issues ranging from force planning to our relations with our NATO allies, the Persian Gulf, East Asia, counter-proliferation. One of her most recent publications is very relevant to our discussion today and that is *Strategic Paradigms 2025: U.S. Security Planning for a New Era.*

And last, but not least, we have Dr. Richard Shultz who is an associate professor of International Politics at the Fletcher School of Law and Diplomacy and also Director of Fletcher's International Security Studies Program. He, too, has lectured and written on a wide range of security topics and we are very pleased to have him here with us today as well. We have asked our panelists to keep their comments brief so that we have maximum time for discussion. And with that, Senator Reed, I'll hand over to you. Thank you.

Reed: Thank you. Thank you very much. It's a pleasure and a privilege to be here. I'm particularly delighted to join my distinguished colleagues on this panel. I want to commend General Shinseki for not only sponsoring this seminar, but also for his leadership today as the Chief of Staff of the Army and also General St. Onge and his colleagues for putting this excellent seminar together. Just briefly with respect to the Quadrennial Defense Review. I believe from my perspective it was a very useful first step to begin to grapple with some of the issues of strategy which have been alluded to.

And in the context of strategy, there are several elements, but ones I'd like to highlight out first, the identification of significant national interests and the threats to those interests. And

then prioritizing those interests and those threats. Then based on those priorities, allocating resources. And in addition to allocating resources, reconfiguring force-structured institutions to deal with those threats and protect those national interests. Those are some of the key elements and I believe that the QDR in 1997 made a very good first attempt to try to do those things.

Indeed, it was at an optimal time. We had just entered, in many respects, the post–Cold War world and I recall a comment that I read—attributed to Ash Carter—that the term "post–Cold War" is very suggestive. It suggests we know where we came from, but we don't know where we're going. That we knew about the Cold War, but we're now in something after that. Something we don't know quite a bit about. And so the 1997 QDR, as I said, was a very good and useful first step. What it essentially evolved into was the development of a strategy of "shape, respond, and prepare." The shaping was an attempt to be proactive, to preempt threats to our national interests. Respond and prepare I think are obvious.

It turns out in the last several years we've been doing a lot more responding, I believe, than shaping. And in fact part of the QDR process put emphasis on the many small contingencies that we might be involved with. Indeed, we've been involved with many of them almost unremittingly over the last several years. Also the QDR talked about, for the first time in a comprehensive way, the asymmetrical threats that we now face in this post–Cold War world.

All of these things have been very useful to try to begin to redefine our interests and our response to threats to that interest. There has been, as you would guess, within Congress criticism of the QDR. I think the most prevalent criticism was it was a bit too cautious, that it did not look boldly ahead. That might be another indication that in this new age it's difficult to look boldly ahead because the age is still defining itself. The other aspect is that it tended to try to do everything and not prioritize among different missions, different roles, different threats. And then it also has been criticized as something that was budget-driven rather than strategy-driven. And to a significant degree, these criticisms are all valid.

Now I think as we look forward to the next QDR, there's a couple of issues that I think we should in fact emphasize. First, we should take advantage of experience obviously that we gained in the intervening years to try to shape the QDR process in terms of our deployments, in terms of trying to be more precise in prioritizing both national security interests and threats. It would be nice if, from the perspective of the Congress, if we could simply ask the QDR to come up and say what issues are important and what aren't important.

As I thought through that, this is one of those imprecise historical analogies, we've done that before. Ad hoc, I can recall in the late '40s where Dean Acheson said that Korea was out of our aspect of security and then a few months later when the North Koreans invaded, suddenly it was the primary focus of our national security policy. So we have to be very careful. But it would help to try to, in more detail, prioritize for the Congress what is a significant national interest, what are the threats to those interests, and not essentially suggest to us that everything is equal.

I think also we have to look and be concerned about the role of the civilian and uniformed leadership in terms of shaping this QDR. It goes back to the point that was made by our chairperson. And that is, without active civilian leadership, and this is going to be the next administration, there's a tendency that the bureaucratic forces within the Pentagon will dominate. It will be too late when the civilian leadership decides to enter into the fray to provide guidance, direction, and strategic sort of emphasis.

The other aspect that the next QDR I think should be conscious of is the evolving and changing industrial base. We're a world where there's more off-the-shelf acquisition and we're a world in which acquisition is globalized. In fact, this morning we had Klaus Naumann talking precisely about how there should be more cooperation between European defense industries and United States defense industries for mutual advantage. That should be part of it.

Then in addition to the Revolution in Military Affairs, we hopefully will emphasize the Revolution in Business Affairs and try to make the department in the context of the QDR also more efficient in terms of its use of resources in the way it does business. I guess try to boil it down also to perhaps an overly simplistic concept. From the perspective of the Congress, we often see ourselves as the guardian of all the resources within the administration—the one who dictates the mission. And one of the great disconnects over the last several years has been this disconnect between the resources we're asked to apply and the missions that keep accumulating.

One would hope that in the context of the QDR, this construct between resources and mission would be much more closely integrated and that we would have a much clearer sense of the range in missions and the range of resources that are demanded by those missions. These are all, again, hopeful improvements over the process that began back in 1997. The other aspect here is that we have to make tough choices.

And it's much easier, I must say, on this panel to make tough choices than it is on the Armed Services Committee. But we have to understand the notion of "sunk horse." That there are some Cold War systems that no longer are most effective in providing national defense and that we should be capable, easier said than done, in recognizing what systems are no longer useful to us and taking these resources and investing them in other systems. But I say it's very easy to do that here, it's very easy to do that in the setting of a discussion, conceptual discussion. It's much harder in reality to make these changes.

And one other point I might add, too, is that in the context of QDR, in its development and also its implementation, I think one has to think consciously about a political strategy. Not an electoral strategy, but a political strategy in which these changes can be presented in a way that the Congress can accept them rather than instinctually reject them—particularly the difficult, tough choices about platforms and systems.

I am just very optimistic that—hopefully (I'm a naturally optimistic person)—but optimistic that, based on the lessons of the last QDR, based upon the kind of discussion and input that you are providing and the work that's going into it right now, that we can have even more success with QDR. And we can come away with a strategy that will serve the best interests of the United States and a force structure and a military organization to serve that strategy. Thank you.

Chu: Michèle, thank you. It's a great pleasure to join this panel, and to have the privilege of speaking to this conference. As a realist, I recognize that the military Services and defense agencies are already preparing their *answers* for the next QDR. But as an optimist, in the spirit of Dr. Hamre's challenge at lunchtime – that this is an era of potentially important possibilities for change—let me speak to what I think the *questions* might usefully be in that coming debate.

The last QDR, the first with that formal name in the country's history, was organized, as you all know, around a series of subject panels: strategy, force structure, modernization, and so

on. And while that's a useful way to think about how you might write the report for the Congress, I'm not sure it's the best way to organize the debate. The General Accounting Office, as people in this audience are aware, has urged the debate be structured around missions. That could be a useful template.

I'd like to suggest a yet different way of thinking about organizing the debate, and that is focusing it on the key implicit and explicit assumptions that underlie our current defense planning—assumptions that might usefully be revisited as part of this review, revisited both in terms of their implications for national security strategy, as well as for the national military strategy that attempts to carry out those global objectives.

Dr. David Chu questions current assumptions about defense spending, saying that substantially higher levels of spending are within the economic capacity of the U.S.

There are four reasons I think it's useful to focus on the assumptions that we are using. First, the most practical, is that people like Senator Reed are challenging the Department of Defense about the assumptions. You can see that challenge in the requirements for the report due in 2001. You can see that challenge in such events as Mr. Lewis' mark on the aircraft programs in this year's appropriations debate—a challenge both to the level of investment in that particular area of endeavor as well as to how the money is being spent. You can see it in events like the formation of the National Security Strategy Group, and you can certainly see it in the early speeches of the potential candidates for president running in next year's elections.

Second, I think it's essential to look at these assumptions if we are indeed going to move beyond Cold War paradigms for structuring and managing the Department of Defense.

And third, I think it is a constructive way to try to promote a more joint perspective on defense solutions for the future. The present assumptions have a very Service-centric character, I would argue.

Perhaps most compelling, it may be one of the most efficient ways to identify the pressing questions in front of the Department of Defense.

Like Ted Warner, as a veteran of the Pentagon, I really can't speak too long without charts. I do have just two to impose on you. I've tried putting together a short and non-representative list of vulnerable assumptions that could be the focus of the next QDR. In this first chart, there are several that relate to missions and the structure and equipment of the armed forces. The next chart, which we'll come to in just a second, speaks more to the business operations of the department.

The first assumption I think deserves debate is whether future missions will be like those that were so important in the Cold War. At a minimum, will the emphasis in the distribution of effort across missions resemble that of the Cold War? The mission emphasis of the two major theater war planning construct now uses. I think the presidential candidates and others are talking about new missions, whether those are missile defense or homeland defense or information operations. In this morning's panel, I was struck by the degree to which the Services are moving away from those Cold War emphases. I'm not quite so convinced the rest of the department's leadership is yet prepared to make that shift.

The second assumption I think worth revisiting is where we are most likely to engage in conflict in the future. As you know, our present planning paradigm emphasizes the Persian Gulf and the Korean Peninsula. It's remarkable given that NATO is the preeminent alliance of concern to the United States that the planning guidance doesn't speak to how we might have to use military forces on the European continent—even though we have just done so.

A third assumption worth debate is the implicit conviction on the part of the United States that our opponents will behave rationally in these conflicts. Faced with the might of the United States or the United States and its allies, we believe that opponents will "see the light"—as we had hoped would early be the case with Serbia. The long struggle with Iraq further demonstrates that this assumption may be invalid in many future conflicts.

Fourth, one of the candidates has already promised he will immediately review upon taking office whether the United States should keep major combat forces overseas. Both the present administration and its predecessor have measured American commitment to Europe and the Far East in terms of "100,000 troops on duty" in those spheres of the globe. I would question whether that's the right metric, to say nothing of whether that's the right answer.

Finally, on the acquisition front, I am struck by the degree to which our plans still assume that most ordnance is going to be delivered by manned platforms—in the face of developments in robotics, in the face of the obvious possible use of unmanned platforms as a vehicle for aerial delivery.

Let me turn now to possible candidates for debate among assumptions that characterize the business operations of the department. The first relates to personnel.

One of the remarkable changes in the demographics of the United States in the last generation is that the majority of young people, including the majority of young men, who graduate from high school, now intend to go on to college. That's obviously a reaction to marketplace results, and the returns a college degree can now earn. But I think it calls into question the fundamental division of our personnel structure between officers and enlisted personnel. What is the difference in background characteristics or responsibilities that continues to justify this personnel model, in the face of this important social development?

Second, one of the most wrong assumptions of the present decade, in terms of the department's forward planning, was that new equipment would lower operating costs per unit. That was always promised whenever a new system came up during my time in the department. That has been wrong. It's one of the things causing what Bob Soule likes to characterize as the migration of funds from the investment accounts to the operating and support accounts in the department. It's one of the things we need to think about carefully in terms of what's truly going to be characteristic of the future.

Third, probably the least likely forecast for the defense budget is it will remain level. One of the problems with this assumption, of course, is it doesn't really encourage a free ranging

debate (to which the Congress has opened the door) about the returns from a higher—perhaps substantially higher—level of defense spending. Such a level is well within the economic capacity of the United States to sustain, although not necessarily something that we will politically agree to do.

Finally, the department assumes the Congress will continue to govern defense in the future as it has governed it in the past, including how funds are appropriated. The appropriations process originates in a much earlier view of how governance of federal expenditures should be organized: that is, a focus on objects of expenditure. This causes all sorts of difficulties for those who want to execute the budget, because it's not the way you really carry out a program. It's also probably the wrong mind set for thinking about how we spend money on defense.

My view is that if we're willing to return to a debate about these kinds of assumptions, we can indeed make the next QDR—as Michèle has properly suggested—a quadrennial *strategy* review, which is, I would argue, where our focus ought to be. Thank you.

Davis: Thank you very much. Following on from David's comments and I think that my presentation will fit very nicely with that which was just said, I'd like to raise the issue of the strategy-derived quadrennial review process. And in so doing, I think we need to address three basic sets of questions.

The first is of course the nature of the rapidly changing global security setting and the types of threats or challenges or risks that we will face and that U.S. forces will face stationed overseas or operating overseas.

The second set of issues I think this review certainly needs to address are the new challenges that are emerging to threaten security at home in the United States. And that encompasses the whole range of issues that we traditionally have begun to talk about in terms of consequence management. It also includes national missile defense capability and it also includes counterterrorist activities.

And thirdly, I think the third set of broad, general issues that we need to address in this review is the changing nature of our alliance partnerships. Of which NATO's use of force over Kosovo, as I mentioned yesterday, I believe is the most recent and very vivid example of the constraints that military commanders are more and more likely to face with respect to the application of military power, rules of engagement, and command decision making.

I would just like to take a moment parenthetically to state for the record at this point in time that, given the difficulties that this whole Kosovo exercise presented the alliance and specifically the United States as the lead partner in the audience supplying the major military power, I for one think that General Wes Clark did a superb job of holding together an alliance of 19 nations that had very, very different interests in this conflict. So I just wanted to say that parenthetically.

Getting back to the question of the next strategy-derived review. From that, if we start to address the three sets of questions, should flow a more specific rendering of future force structure requirement and acquisition priorities. This is what, for example, we tried to do in our book on 2025. Craig, may I have the first graphic, please? This graphic that you see, and I know it's an eye chart and it's a little bit hard to read, but it is contained in the book, sets forward alternative paradigms as we thought through what the world of 2025 might look like.

Then I identified two planning considerations and then went on to talk about the key types of capabilities that might be required for each of the four paradigms.

The four paradigms we outlined were a coalition of opposing states. For example, China and Russia and India decide to get together to oppose U.S. unilateralism or U.S-European initiatives somewhere in the world.

Multi-polarity. A true multi-polar environment as the Chinese now are talking about as their desired end state for the world of tomorrow.

Uni-polarity. A uni-polar world in which the United States is the one, the only superpower in the world, and acts unilaterally on behalf of its interests worldwide.

And the fourth world we talked about was chaos. It's a world in which you have a lot of failed states.

None of these paradigms are exclusive necessarily of characteristics in the others, but we tried to emphasize the kinds of predominant characteristics that each of the paradigms might manifest in order to think about key planning considerations. In terms of the key planning considerations, it was very interesting to me as I went through this exercise that several capability sets seemed to jump out as important to all four contingencies. Perhaps less so the chaos state that we painted, but certainly for the coalition of opposing states world, the multi-polar world, and the uni-polar world.

Dr. Jacquelyn Davis asserts that the strategic environment through 2025 will force important changes in how we forward-deploy military forces—with major consequences for stategy.

And the first set of capabilities that we have determined that is going to be very important for the world of tomorrow is a whole set of capabilities embracing counter-WMD kinds of capabilities. And that's a whole other conference to talk about what counter-WMD entails and how the Services should structure their forces to respond to those types of threats.

There are also implications in each of these worlds for a forward presence. David just mentioned power projection. And the difficulty in assuming, for example, that 100,000 is a figure that we are going to be able to maintain in Northeast Asia, particularly when Korean reconciliation is on the board as a very real possibility. So power projection, forward basing. And what does that mean then for pre-positioned equipment? What does it mean for Task Force Hawk types of mobility considerations? What does it mean for F–22 type of aircraft which have shorter legs than may be necessary for the kinds of contingencies that we'll face tomorrow?

These are the kinds of questions that I think we need to think through. In addition to the whole set of questions relating to allies, coalition combined planning. How can we develop a plug-in type of force structure for Combined Joint Task Force development in which the United States races ahead with high tech development and its principal allies may or may not meet the

challenge in this area? Do we identify specific allies that we think we're going to be operating with? For example, the United Kingdom seems to be an obvious example or even perhaps the Japanese in the Asian Pacific theater.

And do we try to foster development of our combined planning concepts with those specific allies in mind? Or do we step back and think about NATO as an alliance of 19 member states? Those are the kinds of issues I think the next QDR exercise certainly needs to address. And then there is the whole bag of consequence management issues.

The third set of issues that we looked at and we tried to relate on this chart are the key capabilities requirements that questions revolving around these considerations might imply in terms of what the Services ought to keep in their force structures. And it seems to me the important point to make here is that the debate that's very popular to have these days with respect to the Army, for example, is the future of heavy forces. Well, it seems to me if we think about some of the contingencies we're talking about, heavy forces continue to have relevance.

They may be in different numbers, they may be in different configurations in tomorrow's Army, but the need for heavy forces remains important for the United States Army as the spear for the other forces. As we heard earlier today in the discussion of the Chiefs' panel.

So these are some of the considerations we tried to set forth in *2025*, thinking through the world of tomorrow. But for the purposes of this meeting, however, I have developed another graphic for your consideration. If you would just flash up the first part of this graphic. It depicts the specific functional areas in which I believe U.S. military forces will be challenged to operate in coming years. Most are self-explanatory and require little further comment on my part.

The two that are the most contentious are the military's potential use and support of domestic contingencies, as Waco has already demonstrated and as the development of Joint Task Force–Civil Support is beginning to focus attention with the American Civil Liberties Union, and operational deployments for peace support purposes. And it remains to be seen to my mind whether future administrations will attach as much importance to PSOs, for example, as does the Clinton administration.

But what must be understood, I believe, and certainly by members of Congress, is that if the American people support the use of American military forces in future Haitis or Bosnias, then they must be willing to pay the price for readiness for major theater war operational planning, and personnel retention and maybe even recruitment, depending of course on the state of the economy and national employment statistics.

What will be needed as the second set of issues and concerns outlined and this chart talks about is a closer look at the role of the United States in the 21st century world. Everyone proclaims that the United States cannot be the world's policeman. But what does this mean in terms of our policy and what does it mean in terms of our national military strategy? Also necessary, I believe, will be an assessment of how the likely mission areas, that I've outlined in the first part of the chart, can be planned for or implemented in the joint, interagency, and combined planning arenas.

Now looking at some of the mission areas in the second part of the chart, the issues and concerns, I disagree a little bit with Mike O'Hanlon this morning who talked about strategic deterrence as being less important. I think "strategic" is in the eye of the beholder. I think deterrence remains a critically important mission area for all of the U.S. Services. Now how we define that deterrence I think needs to be broadened.

It needs to be broadened to include conventional deterrence which we've already begun to do certainly in this country. But also to include theater missile defenses and national missile defenses. Because I believe that theater missile defenses and national missile defense capabilities in the face of so-called rogue nation threats or smaller nuclear force capabilities will give the United States a crisis management capability *par excellence.*

It will also give to us, I believe, a capability for reassuring allies so that, for example, perhaps our Japanese friends don't really need to think seriously about nuclear proliferation in the world of 2025 when they may face a united Korea, a different China with more formidable weapons than it already has, a Taiwan considering independence. So I think, for all of those reasons, missile defense capabilities are extremely important.

I also think when we look at the world of 2025 or you think about the world of 2025 and you look at the technology trends, the proliferation trends, the regional planning trends that are apparent today, other considerations really need to be factored in. And I'm coming back to the question of the forward basing issue. The United States Army and indeed all of the Services of the United States depend to a greater or lesser extent on forward basing in order to project power into key regional theaters. And more importantly, to engage allies and potential adversaries on a day-to-day basis to influence their thinking and, in times of crises, to have a role in helping them respond to a particular challenge.

Without the availability of forward basing, it will cause us to have some fundamental reconsideration of the basic assumptions that certainly went into the last QDR and certainly for the future QDR will have implications for strategic mobility, for combined planning, for Combined Joint Task Force development, for interoperability, and for space-oriented warfare, information warfare.

Finally, I thought I should, since this is an Army predominated meeting, talk about Army equities in some of the key mission areas that I talked about earlier today. And I think the Army has a great deal of equity in all of the future missions that one might posit today for tomorrow. The Army has some particularly unique capabilities that are very, very important if we think about counter-WMD. If we think about information warfare. If we think about peace support operations. If we think about power projection. If we think about active defenses and if we think about special operations and consequence management.

In conclusion, however, as the Army thinks through where it wants to be in 2025 and as we think through the kinds of capabilities that we need to acquire or procure for our military services to be able to meet the world of 2025, I think we need generally Service by Service, but also on a joint basis, to be much more serious thinking about the active/reserve force components. The Army has housed a lot of things in the reserve component today that I believe will be necessary for the world of 2025. Medical capability, counter-WMD capabilities. Things that you will want to call up very quickly and get to an event as quickly as possible to mitigate and contain an event.

And I think employers increasingly are becoming frustrated with the tempo of operations. I was recently down at Special Operations Command talking to General Schoomaker. And he told me that, as you all know in this room, many of the civil affairs, and psychological operations personnel are housed in the reserve component. Well, he's now starting to see some employers being very hesitant about letting the same personnel deploy over and over and over and over again. I think we really need to look at this reserve force component–active duty issue much more closely and in a much more systematic way related to what our future strategy will require us to do.

In the three critical mission areas of missile defense, consequence management, and day-to-day engagement activities, the Army, I think, is the premier Service in terms of engaging and has the potential to meet, given all the work you have done in biological warfare, counter-WMD, the challenges of tomorrow. I applaud you for doing it. I urge you to keep it up. And I urge the Army and the Joint Staff as it looks through and the civilian staff of the Pentagon, as we look at the QDR, the next QDR, we are a little more creative about our thinking about the world of tomorrow.

I'm not talking about getting rid of legacy systems. I hope I made that point from the very beginning of my presentation. I'm talking about perhaps using them differently and perhaps reorganizing them differently. Thank you. With that, I'll stop.

Shultz: Well, let me first, as director of the program in Security Studies of Fletcher, to really thank General Shinseki for having us. And this is terrific for my program and for the school and it's great to be able to work with you.

I want to talk about special operations first. Now the goal of this conference is to gain a more precise understanding of the strategies and capabilities the U.S. will require, in fact, across the broad spectrum of probable security challenges we're going to face in the years ahead. And we've said over two days here that a critical ingredient in this process is close cooperation between the Services in planning and in executing future military actions. I would like to spend a few moments discussing the role of special operations forces in this process, if you will, of forging closer cooperation and true jointness.

Given the kinds of future threats the U.S. will face, I believe it's essential that those drafting this new QDR consider the contributions of Special Operations Forces (SOF) within a joint context. Now I feel like beginning simply by stating, looking at the SOF mission statement. It comes right out of U.S. Special Operations Command (SOCOM) Publication One. And it says special operations are conducted in war and peace, either independently or integrated with conventional operations. They are targeted on strategic and operational objectives in support of a joint force commander's campaign plan if they're in war, or the geographic CINC's regional plan or the U.S. ambassador's country plan in peacetime.

Now political and military considerations frequently shape operations and require clandestine, covert, and low visibility techniques. And this is what I really want to zero in on. The covert and the clandestine. Now this mission statement, if you will, has generated a number of special missions and collateral activities for SOF. These include missions that have received high visibility because they fit into peace operations, they support peace operations, humanitarian assistance. And of course SOF plays an important role in operations other than war. These are the visible or the overt actions of SOF and they are very much taking place in a joint and interagency context, and I think we've learned that and we know a lot about that.

However, there is a black or a covert side to SOF that is and, I believe, will be very important in the early years of the next century. Probably well into the next century. And these include direct action, special reconnaissance, unconventional warfare, combating terrorism, counter proliferation, psychological operations and information warfare conducted covertly.

Now we think, if we look back over the last 20 years, we look at the 1980s as the decade that SOF really came of age and was revitalized. And by the early 1990s, it was increasingly integrated into the Services' joint approach. And I think that that's been a great success story. However, I would note that this success did not come without opposition. If we look back into the

'80s, what we see is that SOF revitalization was a real dogfight. It wasn't too different from the kind of dogfight that the Kennedy administration faced in the early sixties when it tried to build up special warfare capabilities. A dogfight took place between what I would call the mainstream military and the special operations community. Now while great strides have been made, I think it's in the area of covert SOF missions that we need to pay some attention to today.

Now recently I wrote a book and you probably saw it outside. It's called *The Secret War Against Hanoi*. The story is the largest, I think, covert paramilitary campaign that the U.S. conducted in the Cold War. And you might say, well, that's a long time ago. The U.S. created a special organization to do that. It was a black organization. It was called the Studies and Observation Group, SOG. And it's true, SOG was a long time ago. However, I believe and I try to argue this at the end of the book, the epilogue, that there are lessons from the SOG experience that point to enduring challenges and problems in using SOF in this area of covert operations.

And these challenges and problems endure at the policy level, they endure at the operational and at the joint level, the interagency level, and even at the level of liaison. And so QDR planners, I would argue, need to understand and address these enduring challenges because there are future threats that the U.S. will face that will necessitate the use of many of the different techniques that SOG used. Techniques are the same. Maybe technology allows you to do them in different ways, but there's a whole range of things that we did covertly that involved special operations forces that we will probably need in the future.

In this book, I try to talk about these lessons and how they affected SOG, but how they endure. And as I said, they exist first at the policy level. Where you have, on the one hand, presidents. All presidents, some more than others, have turned to the covert instrument. They've been drawn to it. This was true of Kennedy, by the way. The allure of covert action was definitely at play in 1961. From the early days of his administration, he embraced its use. Fit his act or his mentality. He made it clear that if Hanoi could foster insurrection and subversion in the south, he wanted to do the same thing in the north.

So presidents and others have had this enthusiasm for it, but they all tend to not understand the complexities that are involved. And that's an interesting dynamic. Enthusiasm on the one hand, but a misunderstanding of what these instruments can do and not do, how to use them. And this was true for Kennedy, it was true for other presidents. It also was true for their advisers. So as we look over this period, if you will, through the sixties to the present, we find that presidents and their advisers have wanted to play hardball, they've recommended the use of covert operations. But in many cases, they've not understood the complexities of it.

That's the misunderstanding at the policy level. But there's also been a great deal of micro-management and concern over how far to go with this covert instrument. And in fact, while most Cold War presidents have been interested in the use of covert action, they also have worried about the trouble it can get you into and they've spent a lot of time micro-managing that. That was true of SOG and true of other instances. So on the one hand, most presidents have been eager to employ covert methods. On the other hand, they've been apprehensive over the trouble that they could cause if exposed. And this seeming incongruity is epitomized in the SOG experience.

Now beyond the policy level, there are important lessons from the SOG experience and from other covert operations about the role of the military in this. And I would make two points here. You know, in the early '60s when Kennedy got tired of CIA's unwillingness to move out smartly in using covert action against North Vietnam, he turned to the military and said, well,

we've built up special forces and, therefore, military, you do this and do it quickly and escalate it and accomplish all these things I want to accomplish.

This proved hard for even the special operations forces to do. And the reason is that there were many what I would call esoteric skills that dealt with human intelligence and agents and black-side war and other esoteric activities that they weren't ready to do. And although much has changed since this experience, and of course in the case of SOCOM it has developed some very detailed special operations capabilities for the covert arena, nevertheless, some of these esoteric areas still need to be addressed. And it includes spies and agents and human collection. Unconventional warfare as a technique that we might want to use, black-side war and so on.

So in the case of the military, while in the overt area we could say, well, gee, SOF has really come of age, there may be some growing to do in these less visible areas.

Now another lesson on the military side in terms of the use of military forces in covert special operations has to do with the kind of opposition there was to SOG. The opposition from senior military leadership was strong and the chiefs grudgingly accepted the mission, but didn't believe that it could accomplish much and never tried to fit it into some larger approach to the war. It was contentious. And indeed, if we looked at the history of SOF and even its revitalization, some of the things that SOF does remain contentious to the mainstream. And I guess I think we need to get over that and understand that this is a capability that should be part of our overall approach to military operations.

SOF had an interagency element to it because it had to work with CIA. This didn't work well at all. Just the opposite. And in fact over the years, this relationship or this interagency component for covert or black operations has increasingly been one that hasn't been seamless, but just the opposite. And I think we need to address those factors as well. So in the SOG experience, there are lots of interesting lessons that endure. And they endure in terms of broader policy lessons as well as many operational ones, interagency ones, liaison ones, and these weren't unique to SOG. Through the Cold War, you can see other places where the same kind of problems emerged.

Now these lessons I think are important. And I think they're important because of my answer to the following questions. Will future presidents need to turn to covert paramilitary operations in an effort or as a means of countering new threats and challenges? And it won't be surprising to many in this audience who know me. I think the answer to that is yes. If I look at the agenda that Jacqui has talked about, I believe that there are several areas of threat and potential challenges where covert SOF capabilities have to be part of our larger effort.

And of course one of these that has received tremendous attention is the acquisition of weapons of mass destruction. And we think about this in terms of rogue states. But we also need to think about it in terms of non-state actors. Now just as an example of this, I want you to consider the following statement by a fellow named Shamil Besayev. Some of you may know the name. The Russians know this name. He's the fellow who went into Dagestan. He was the Chechens' most able commander. He is driving the Russians crazy.

They just put a million-dollar bounty on his head, which is sure to make him even more popular in Chechnya. And what does he say about modern warfare? We call people like this "warlords." You know, we assume, I don't know, they're out there but they don't have much of an intellectual capability. Some journalist asked Shamil Basayev, you know, what do you think about warfare? And he said, "I rejoice in the fact that developments in the 20th century have

usually improved my chances of succeeding where generations of freedom fighting ancestors of mine failed." And he particularly pointed to weapons of mass destruction. And he said that he would like to destroy Moscow.

He's thinking about it. There are many people out there who are non-state actors who are thinking in this way. And so this is an area where covert SOF may have an important role to play. There are other areas as well. The disruptive policies of regimes like Iraq and Libya and Iran and North Korea may lend themselves to some of the things that covert SOF can do. Terrorism, of course, is on my list. The end of the Cold War didn't bring an end to terrorism as you all know. Groups of movements motivated by religious ideas and ethno-national passions are more than willing to employ these tactics indiscriminately and may well escalate ethnic and religious violence and its impact on regional security. There are others in there that covert SOF may have a role to play. Organized criminal organizations. A good target, I think, for covert SOF. The linkages that exist between organized crime, ethnic and religious movements, terrorist and insurgent groups compound the gravity of this challenge, and the proliferation of non-state actors is a real issue. So the United States will face each of these emerging security challenges in the years ahead and each will be difficult to counter. When developing policies and strategies to respond, all the instruments of statecraft should be considered including special operations forces employed in covert action missions.

However, if presidents decide to select from among the operational measures employed by SOG many years ago, they will have to resolve obstacles and complications that limited SOG's effectiveness during the Vietnam War. And given the fact that these impediments not only thwarted SOG, but generally frustrated the use of covert special operations forces by U.S. presidents throughout the Cold War, this will be a formidable task for post–Cold War presidents. Thank you. Throw a little fire out there.

Flournoy: Thank you very much to all of our panelists. I'd like now to open it up to the floor for questions. And I'd encourage anyone who has a question for Senator Reed, in particular, to raise your hand first as I believe we're going to lose the Senator to a vote very shortly.

Murray: I'm Colonel Murray, Army Reserve Command. What I've heard from the other panelists that really intrigues me is the use of reserves. We just got done talking about using the reserves in Kosovo through 2002. How do you see the role of the reserves and do you see them possibly taking another tack like joint reserves in the future?

Davis: Since I addressed this issue head on, I would like to suggest that I have no clear vision on how we ought to use the reserves. But I certainly think we need to think through what mission set capability kits we place into the reserves and, as a second set of issues, address the personnel issues attendant upon the continual deployment of people with certain expertise to continue to areas time after time after time. I don't know how many of you saw that *Nightline* program. It devoted the entire week to the Anthrax incident in the hypothetical subway system, which was Washington, D.C., a few weeks ago.

And a couple of things were very interesting in the way the program presented that issue. The first was there was not one military person on the stage to talk about capability sets. There were civilians from other agencies represented, but no military representative or OSD representative. Now if you think about an incident with Anthrax somewhere, you're going to think

about medical needs right away. And where are the medical units in the bulk of our forces today? If they exist, if they're not contracted out to civilian agencies, they're in the reserve, for the large part, reserve components.

The point I'm trying to make is some of the capability sets that I believe we really will need because of the changing nature of the challenges we will face are being housed in the reserves or were housed in the reserves for the last 20 years or migrated there over the last 10 years. Maybe it's time now to sit down and do a fundamental scrub of what we're placing where.

The other part of that issue is, for example, the Marine Corps has just decided to take organic air defense units out of its active service structure. If we're talking about a world in which ballistic missile capabilities are going to be prevalent in theater environments for use by non-state actors, Usama Bin Ladin comes to mind, etc., is it proper to think through in terms of future needs to have the Marine Corps rely on the Navy or the Army for tactical missile defense capabilities in an expeditionary scenario?

I just pose that as a fundamental question that we have to start thinking through. And in the Army's case also. You're putting a lot of your Patriot units in your reserve components. Is that really where we want to place them if the world of tomorrow is talking about a different kind of challenge? I pose that as a question. I don't have a clear answer in my own mind. I have an inclination as to where I think I would go, but I don't have an answer. In terms of how we would use the reserves in a specific contingency, I think that question also remains to be looked at much more closely than has been done.

Reed: Let me make two quick points though, or three quick points. First, we've come to appreciate the critical role that reservists play. Particularly in the Kosovo environment. It's something that we might have been aware of, but it's quite explicit now how critical the reserves and National Guard are. The second issue gave me the sense that the same type of operational burnout affecting reserves is affecting regular forces and we have to be very sensitive of that in terms of looking ahead. That might require additional authorization for more reserve forces given the fact that you can't pull someone out of their hometown every six months. Which is happening.

I've got a civil affairs unit in Rhode Island. They've gone back and back. In fact the leader retired rather than go again.

The third point is, as we struggle with this issue, many European armies are beginning to recognize the value of more extensive and formal reserves and are beginning to think about organizing themselves along our lines because the same demands have been placed on them in places like Kosovo and Bosnia. So the role of the reserves has been enhanced, I believe, within the last several years and we have to treat it as an enhanced component.

Flournoy: Another question? Yes, sir.

Nagle: Thank you. John Nagle from the Department of Social Sciences at West Point. I have a question for Senator Reed. Sir, you and your fellow congressmen have mandated that the Department of Defense undergo the Quadrennial Defense Review and that is a good thing and a good process. I'm wondering what your thoughts are on turning the process the other way? Whether you think that there are changes that Congress needs to make institutionally in the way it oversees the national security process of the United States?

Reed: I think that's an excellent point. I was reacting to David's comments too, with respect to don't assume that we're going to be the same we are now 10 years from now. However, I would say, given my experience in legislatures at both the state level and the federal level, if you have to bet on the status quo versus radical, innovative change, I'd always bet on the status quo. So I think we're going to be doing this just about the same because of personalities, because of institutional stakes, because of political dynamics.

But we, too, should be responsive to a new environment in terms of the way we proportion out responsibilities institutionally in terms of committees. And, you know, I think we should take the challenge up, as you suggest, of looking at ourselves in terms of how we deal with these issues of national security.

The other issue though is, as I tried to allude to in my opening remarks, is it seems that our responsibilities are, by the founding fathers, clearly separated in terms of the Congress raising resources and also, back then, declaring war. And I think the original context of the Constitution was we pick the missions and we pick the resources and logically we would be operating in that world and we'd do that. Well, we all realize that the missions are now primarily dictated by the President, not by the Congress, and so we're left with this disconnect.

That inhibits our ability, I think, to do what you suggest. Reforming ourselves very efficiently, very effectively, so that we can be comparable to the strategic viewpoint that the Pentagon is trying to develop and the administration's trying to develop.

Tanready: Thank you. Sam Tanready. I'm a Navy captain. I pose this out to the panel in general. And my question in a nutshell is where can we take risk? You've all talked a bit about having to restructure and having to make choices. And I think in making choices what has to happen is that we have to decide that there's some things happening in the world that we won't touch or there's some missions that we won't touch or there's some missions that we can kind of de-emphasize for now and then bring focus. Either the reserves, perhaps, in our mission area or something like that. Would anybody like to hazard a statement as to what we can put at risk?

Flournoy: Any takers? David?

Chu: Well, let me underscore one that I identified in my remarks and then add a second. I would argue that, given the state of the world, the United States does not need to undertake on a routine basis all the overseas deployments it now has committed itself to. Many of which are deeply rooted history. I think this debate is starting. General Shinseki in the Pentagon. That doesn't mean that we want to go back as sort of a, I think, to Acheson-like, unfortunate statements about things being outside our ambit of interest.

But I'm arguing that, particularly given the kinds of capabilities the United States has built, is building, will build, that we don't have to keep as much in a forward-deployed mode, especially combat as we have in the past.

Second, I think it's ironic to me that the two-major-theater-of-war scenario tried to replicate the Cold War planning paradigm so faithfully, albeit on a smaller scale. The emphasis on the nearly two simultaneous wars. I just wanted to say that it is tied down some place and that's the argument of the strategist in committing to something different. But I think a bit more ambiguity on our part about just how far the forces would go might be helpful in this regard. Particularly

because in an uncertain world, I think what we really are trying to do with our force structure and investment decisions is hedge our bets against the uncertainties.

And the problem with focusing so much on this one object is that we are perhaps overspecializing in that capability to the expense of everything else we need to be doing.

Flournoy: Anybody else like to respond to that? Okay. Any hands over here? Yes.

Muchmore: Tim Muchmore from the Army Staff. And, pardon me, my voice is almost gone. But for those who know me, that's good. I guess primarily for Senator Reed and then Dr. Chu. The legislation calls for the QDR to be conducted immediately after a new president, assuming he's a first-termer, assumes office. And we learned from QDR '97, that it's extremely difficult to pull together such a complex process in a very, very short period of time. And yet Congress put legislation in place to immediately impose upon a new administration such a process. What was your thinking for doing that as opposed to perhaps making it in the second year when the administration had its feet on the ground?

Reed: If you're looking for a rational response, I'll try. The feeling was that the administration should own not only the process, but also the outcome and be committed to implementing the outcome. And that's done probably early in the administration when they haven't by default locked themselves in other positions because of the budget process, everything else. The defect which you suggest is that we have a situation now where one could argue the most important part of the process takes place way before the administration gets in power. At this juncture.

Where you have the Clinton administration is departing and I'm sure the Services are working hard and Secretary Cohen's working hard, but they know it's not going to be a final product on their watch. And no one knows and we won't know until the end of next year who will succeed him. So as a result, that's a flaw. But the rational reason, and again, there might have been other political reasons which I'm not privy to, but the rational reason was if you assume a four year term, if you assume any type of impact on the budget processes and everything else, it's better early than late.

But there's a tradeoff between really being involved in the beginning, which I think would make a great deal of sense, or not really having an impact on the budget process as you develop them in the first two months of your administration.

Chu: If I could add a practical reason. If you look at the history of the first year of most first term presidents, within roughly nine months of taking office, the president has to complete his revisions of the budget. And back to this morning's comment of a vision without money is a hallucination. I think that's where the rubber does meet the road. What does the new president say he wants in the budget that is either the same as or different from what the previous president said. And I think the Congress was thoughtful in choosing September of 2001 for the deadline.

Using history as a guideline, most administrations get their visions done by that time. The Congress of course will insist that it's going to act anyway by the fall even if the administration's not ready. So that, inconvenient as it might be and unhelpful to the analyst perspective, I think this is a realistic time at which to try to accomplish such a review.

Reed: The only other point I'd make is that the politics of this is very often strategy evolves *ad hoc* on the campaign trail. And by the time you get there, even if you have second thoughts, you're stuck with the strategy. Particularly when it comes to procurement of different platforms. But, as you point out, David, this is closely tied into the procedural and the process of coming up with their budget and their add-ons and their systems, recommendations.

Flournoy: Yes, right here.

Hulin: I'm Rick Hulin with *U.S. News and World Report* magazine. Question, I guess, for Dr. Chu and Senator Reed. If getting out of the two-major-theater-war construct seems like the right thing to do, how do you do that politically, as much as anything, given that if you withdraw or appear to withdraw from one of those scenarios, you are, you know, perceived as sending a signal to the North Koreans or the Iraqis that maybe you're not going to be there. That gets to the ambiguity you talked about, Dr. Chu. But just exactly how might that happen?

Chu: Well, I think it's useful to remember how we got into this two-major-theater-war paradigm. And that is gradually. In fact, originally, as you may recall, what Colin Powell tried to advocate was the use of illustrative planning scenarios. And that broke down because they lacked enough detail to be truly helpful in making decisions in the Department of Defense. And so I don't think there needs to be some—in fact I think some of the rumblings in the present administration are potentially helpful in this regard—this doesn't have to be some watershed change. It could be done gradually.

Particularly given the opening the Congress has provided the Defense Department by mandating a QDR and the willingness of the present administration to allow some preparatory steps to be taken, this can be evolved in debate. I would underscore it does not mean the United States is abandoning its commitment either to the security of the oil resources in the region or to peace on the Korean Peninsula. Those are different statements. This is an issue of what the planning focus of the Department of Defense is going to be.

And what I obviously would argue for is that planning focus needs to be wider than a concentration on just these two particular scenarios to the exclusion effectively. And I think that was really one of the conclusions the last QDR, that exclusion was mistaken. Although I don't think we went far enough. To the exclusion of other things as my fellow panelists have emphasized, the American military must be prepared to ensure our security over the long term.

Reed: I think as you try to make any significant changes, the first thing is getting the idea out there and running it up and see who agrees or disagrees. And that's the process, how most things change very slowly here in Washington. Because there's the notion of thinking out loud about whether this two-major- war scenario works, is helpful. And gradually, if the discourse is such like we're having today where people start commenting about how it's no longer useful or practical, that helps build up sort of support for decisions that have some political consequences to make those decisions.

And I think part of it is just continuous dialog. At some point, that dialog might yield a change in the official position about planning for two major regional wars.

Davis: Michèle, if I could only add on that. I think that probably you're overstating the perceived importance of that particular issue in the context of the broader national security strategy that the president or a future president will articulate. I think it's far more important to a North Korean leader what the leadership in the White House says, what the foreign policy objectives of the United States are articulated to be, and the strategic framework within which then the QDR will place itself, comes out to be for the force sizing exercise.

And I think we have to keep in mind then that the QDR is part of a much larger tapestry that I think sends a signal that is far more important than what decisions of the QDR very specifically will send in terms of perceptions of regional strength and potential foes.

Flournoy: Any other questions? Yes.

Audience member: I asked an earlier panel a question that had to do with the narrowing social- economic identification of the overall enlisted force. In that context, I'd like to carry that concern a bit further. The Pew Trust has a substantial body of research which some of you might be aware. That they update regularly. Which is showing an increasing divorce between the priorities of various opinion elites and John Q. Public. What are the strategic implications of that and this class issue that's evolving in the context of the overall force? How do you think is really going to play out for us in terms of deciding what missions not only need to be done, but can be done?

Davis: Well, I think you already see this playing out to a certain extent in the debate over Kosovo. You saw the military leadership being slightly more conservative with respect to employment of forces and types of force packages that needed to go in to meet the objectives that military commanders suggested they needed to meet. And the political civilian leadership of the alliance, in particular, which was saying from the outset, get troops on the ground in there right away. That's one manifestation, I think, of this asymmetry, if you can call it that, between military/civilian perceptions in thinking about specific issues.

There was another study done by Duke University which has been widely referenced in the press as well. And I think that's even a much more interesting study with respect to what it says about the willingness to use the military as an instrument of public policy. And I think that that is a debate that really needs to be joined at some moment on the national level. And I don't know if a presidential election is the place to do it unless there is some devastating incident which forces the mind of the American political community and the American public alike to address the issue of the role of force in international relations.

But I think this could have consequences for how we do decision making, how quickly we are able to respond to contingencies, and the types of force packages that will be required to do a response if the civilian leadership decides to intervene or have U.S. Forces intervene in a crisis.

Flournoy: Senator Reed, did you want to comment on that?

Reed: Yes. As I think about the question, which was a fundamental one, about how the American society relates to the military and that there's this separation. My sense, again from spending a lot of time up in Rhode Island and with my constituencies—I'm sorry, I guess the

mike is not working, but I'll . . . My sense is that probably less than this pulling away of the military from civilian life, the issue might be more generally—and I don't know if indifference is the right word—but a sense that the threats out there are no longer of the same consequence of the Soviet Union. And therefore, the use of military power, it's not a question everyday on the tables and the coffee shops of America.

And the other thing is that the military succeeded so well in these operations that there's a sense of we've already got the solution. Air power works. We don't have to extend, use people on the ground. All these things are circulating today. And interestingly enough, I think we've reached this point where it's difficult to read sort of the public mentality or mindset when it comes to real use of force. One example that struck me recently is we have for years ongoing commitments to Taiwan in case of a unprovoked assault by the People's Republic of China.

And there was some polling recently done that, despite that, a significant member of Americans would not support that even it if was an unprovoked attack. And we all operate here in Washington in these policies, you know, these elites, with this notion of "of course we'd do that," we'd have to defend our commitments we've made over several administrations. But yet I wonder, having done that, would the American people, weeks, months into such an operation, be supportive or not.

So that I think is one of those manifestations of some of the things you're talking about. We take for granted the support of the American people if we get into a hard struggle which requires casualties, it requires extraordinary resources. And perhaps, unlike 10 years ago or 20 years ago, we might not be able to do that.

Flournoy: No other questions? If I could just use the prerogative of the chair to ask one more question before Senator Reed leaves. You've mentioned the Revolution in Business Affairs and I think a number of people have raised this issue—streamlining infrastructure, adopting better business practices in order to balance the books, to move more resources to the war fighter. Do you have any advice for the executive branch on how to be more successful in pursuing that agenda with Congress?

Reed: Well, you always run into parochial concerns. I know the Army particularly has been trying to close down depots or reallocate work to depots, they're running into some fierce opposition from people, my colleagues, who have interests there. I can speak because I don't have a depot. But essentially, the best way to do it is to make the case that you are saving resources in a way that does not necessarily imperil a highly visible project someplace or facility. And also that these resources are necessary to help us solve another issue which bedevils us.

How do we keep funding the Defense Department in constrained budgets? And the notion that David suggests and others suggest is that we're going to have, you know, flat budgeting over several years. You might have to question that. We're in a very difficult situation today. Had this across-the-board cut in the budget impacted, it would have been significant costs to the Department of Defense as well as civilians. And so despite our surplus, we still have budget concerns.

So I guess the way I would best advise is you've got to pick your shots. You've got to have very compelling evidence that you're really saving money and improving service. And then you have to be sensitive to the political, who's going to oppose you. And then finally, I think you have

to make the argument that if we don't do this, we have to do something even worse down the road to stay within our budget caps.

Flournoy: Well, please join me in thanking our panel for a very enlightening debate. And I'll turn it over to Dr. Pfaltzgraff.

Pfaltzgraff: It was agreed that I would make some, and I underscore, very brief closing remarks for the conference today. And I begin by saying that although it is impossible in the very, very short time that remains this afternoon to summarize or synthesize or even to reflect extensively on the many outstanding presentations and discussions that we have had during these past two days, it nevertheless is useful it seems to offer a few brief concluding comments. You noted I've used the word brief quite a few times, so I'll be very brief.

First of all, we all agreed that the U.S. military establishment remains the best in the world and we've seen this amply demonstrated. This superiority amply demonstrated in conflicts from the Gulf at the beginning of the 1990s to Kosovo at decade's end.

Secondly, since the end of the Cold War, our armed forces have been deployed in far greater numbers of situations, extending across a very broad spectrum from armed conflicts to peacetime operations. Indeed, I would add, given the security setting that was described many times during this conference, we probably can conclude that this is unlikely to change. Or if it does change, that the demands made upon our armed forces in the early decades of the next century are more likely to grow than they are to diminish.

Thirdly, in the last decade, the types of conflicts and peacetime operations have brought into sharp focus, as we saw so often over the past few days, the need for the Services to work much more closely together to create and implement a *Joint Strategic Vision* in order to achieve maximum synchronization and synergy among land forces, maritime capabilities, and aerospace and now cyberspace information warfare.

Fourthly, what can be said about the implications of the challenges of the new security setting that we talked so extensively about for joint operations encompassing U.S. military forces is fully applicable, and perhaps even equally applicable, also to alliance coalition operations. Nearly all of the tasks that the U.S. military undertakes, as we saw so often these past two days, will have an alliance coalition dimension. At least one dimension, if not many. Here we face numerous challenges and opportunities as Operation Allied Force in Kosovo and the other operations of the 1990s have demonstrated.

They include, I would argue among other things, not only political factors, and we can underscore political factors, that shape the options available to the alliance, but also of course the implications of the Revolution in Military Affairs for the ability of allied coalition forces to operate together and to achieve necessary options of cooperation, integration, and interdependence.

Fifthly, precisely because the United States will continue to possess the world's most advanced military force well into the 21st century, as long as we can hopefully, the incentive will grow for asymmetric strategies and operations against it undertaken by various types of actors, including terrorist groups and extending possibly to the homelands of the United States and its allies. Therefore the *sine qua non* for effective strategic responsiveness will lie of course in our ability to think strategically. That is an important statement even though it sounds trivial.

For example, homeland defense and strategic responsiveness are inextricably linked in a seamless web that constitutes 21st century national security strategy. If we are vulnerable at

home, we will not be able to maximize our potential for strategic responsiveness abroad. Another theme that I saw come out very often in this conference.

Sixth point. Even with its superb armed forces, the United States faces numerous problems that must be fixed in the years ahead. And we talked about these quite extensively in the last two days. First of all, people, personnel, recruitment, and retention at present high standards must be maintained in a rapidly changing technological environment and full employment civilian economy.

Seventh, achieving the appropriate balance between near-term readiness and longer-term modernization and recapitalization. Even without the numerous demands placed upon our forces in recent years as we all know in this room, we would face the need to replace aging equipment. Something else we talked extensively about.

Eighth, one of the major themes of this conference has been the need to move larger as well as smaller forces, divisions, and combat capable brigades much more rapidly to wherever they are needed as part of the joint package if we are to achieve strategic responsiveness.

Last, but not least, if we are to surmount the challenges and maximize our opportunities, we will need, as we all so often discussed, a transformation strategy that retains what is best from the past while casting aside obsolete modes of thinking about military capabilities and their relation to the other elements of national security strategy. Indeed, again, as we saw repeatedly during this conference, each of the Services has taken major strides forward. Shaped both by the crises and other situations that we as a nation have faced in the past decade and by innovative thinking that has gone on within and among them about their vision of the future.

As we heard during these past few days, much is being done and yet much remains to be done if we are, as General Shinseki stated in a recent speech and I quote, "To train soldiers and grow leaders and to create a multi-component integrated force that can operate as part of a joint and combined team capable of commanding multinational operations." End of quote.

I wrote down as I listened to the many discussions, both from up here and down in the audience there, some of the very many sound bites or simply terms, if you want to state them as such, that helped to focus our thinking about strategic responsiveness. And I am almost about to prepare, I suppose, a lexicon for us that we could have before us. But in any event, here are some of them.

Effectiveness, integration, innovation, adaptation. Of course transformation. Lethality, complementarity, rapidity, vision, versatility, agility—I'm going to lose my ability to pronounce some of these terms—agility, deployability, sustainability, interoperability, superiority, decisiveness, endurance, flexibility, dominance, mobility, and I could perhaps add others. But all of which it would seem to me are to a greater or lesser degree essential if we are to achieve strategic responsiveness.

Our task is to find what exactly is the mix and the relationship among these many variables as we think about the equation that leads us to strategic responsiveness—it was the title that we had, indeed, it was the nature of the discussions that we had.

We hope to have the opportunity to hold another conference of this kind which will hopefully build upon what we have done today in the next year. Perhaps just after the year 2000 election, presidential election.

I would like then to conclude by expressing thanks not only to our co-sponsors, but also to all of our speakers and to the other participants who have made this endeavor such a great success. Again, many thanks. The conference is now adjourned.

Biographies

Ambassador Richard Lee Armitage

Mr. Richard L. Armitage, the President of Armitage Associates L.C., is engaged in a range of worldwide business and public policy endeavors as well as frequent public speaking and writing. From March 1992 to May 1993, with the personal rank of Ambassador, Mr. Armitage directed U.S. assistance to the new independent states (NIS) of the former Soviet Union. In January 1992, Mr. Armitage was appointed Coordinator for Emergency Humanitarian Assistance. During his tenure in these positions, he completed extensive international coordination projects with the European Union, Japan, and other donor countries. From 1989 through 1992, Mr. Armitage filled key diplomatic positions as Presidential Special Negotiator for the Philippines Military Bases Agreement and Special Mediator for Water in the Middle East. President Bush sent him as a Special Emissary to Jordan's King Hussein during the 1991 Gulf War. In the Pentagon from June 1983 to May 1989, he served as Assistant Secretary of Defense for International Security Affairs. From 1981 until June 1983, Mr. Armitage was Deputy Assistant Secretary of Defense for East Asia and Pacific Affairs in the Office of the Secretary of Defense. In 1967, Mr. Armitage graduated from the U.S. Naval Academy. He has been awarded the Department of Defense Medal for Distinguished Public Service four times, the Presidential Citizens Medal, and the Department of State Distinguished Honor Award.

The Honorable Louis Caldera

The Honorable Louis Caldera became the seventeenth Secretary of the Army on July 2, 1998. As Secretary of the Army, Secretary Caldera has statutory responsibility for all matters relating to Army manpower, personnel, reserve affairs, installations, environmental issues, weapons systems and equipment acquisition, communications, and financial management. Secretary Caldera has overall responsibility for the Department of the Army's annual budget of nearly $70 billion. He previously served as Managing Director and Chief Operating Officer for the Corporation for National Service. Before coming to Washington, D.C., he served for five years in the California State Legislature, where he represented the nearly 400,000 residents of the 46th Assembly District. He served as Chair of the Assembly's Banking and Finance Committee, Revenue and Taxation Committee, and Budget Committee. He also served as a member of the Intergovernmental Policy Advisory Committee to the U.S. Trade Representative. Secretary Caldera served as a commissioned officer in the U.S. Army from 1978 to 1983 and was awarded the Meritorious Service Medal. On active duty, he served as a military police platoon leader, battalion intelligence officer, and battalion executive officer. He later served in the U.S. Army Reserve. Secretary Caldera graduated from West Point and earned a law degree from Harvard Law School and an M.B.A. from Harvard Business School in 1987.

General Michael P. C. Carns, USAF (Ret.)

General Michael Carns, USAF (Ret.), is the President and Executive Director of the Center for International Political Economy (CIPE), a policy research firm that specializes in strategic assessment of international issues in the areas of international capital flows, international energy assessments, and Pacific Rim security. Previously, he served as the Vice Chief of Staff, United States Air Force (1991–1994); as Director of the Joint Staff during the Gulf War and the Panama invasion (1989–1991); as Deputy Commander in Chief, U.S. Pacific Forces, in the late 1980s; and as Commander of the 13th Air Force, Republic of the Philippines, during the Philippine government crisis (1986–1987). General Carns has authored and published a

number of articles on topics such as the need to alter substantially the military acquisition process, the benefits of privatizing military logistics functions, the lagging role of the United States in space, the role of the military warfighter, Thailand's financial crisis, and the evolving role of military force. General Carns graduated from the United States Air Force Academy in 1959; from the Harvard Business School, with Distinction, in 1967; and from the Royal College of Defence Studies, London, in 1977. He was awarded the Silver Star and has also been awarded senior decorations by the governments of the Philippines, South Korea, and Thailand.

The Honorable Ashton B. Carter

Dr. Ashton Carter is Ford Foundation Professor of Science and International Affairs at Harvard University's John F. Kennedy School of Government and Co-Director, with William J. Perry, of the Harvard-Stanford Preventive Defense Project. From 1993 to 1996, Dr. Carter served as Assistant Secretary of Defense for International Security Policy, where he was responsible for national security policy concerning the states of the former Soviet Union (including their nuclear weapons and other weapons of mass destruction), arms control, counterproliferation efforts worldwide, and oversight of the U.S. nuclear arsenal and missile defense programs. He also chaired NATO's High Level Group. He was twice awarded the Department of Defense Distinguished Service Medal. Dr. Carter continues to serve DoD as an adviser to the Secretary of Defense and as a member of DoD's Defense Policy Board, Defense Science Board, and Threat Reduction Advisory Council. Before his government service, Dr. Carter was director of the Center for Science and International Affairs at the Kennedy School and chairman of the editorial board of *International Security*. In addition to authoring numerous scientific publications and government studies, Dr. Carter was an author and editor of a number of books, most recently *Preventive Defense: A New Security Strategy for America* (with William J. Perry). His current research focuses on the Preventive Defense Project, which designs and promotes security policies aimed at preventing the emergence of major new threats to the United States. Dr. Carter received bachelor's degrees in physics and medieval history from Yale University and a doctorate in theoretical physics from Oxford University.

Lieutenant General Richard Chilcoat, USA

Lieutenant General Richard Chilcoat is currently the President of the National Defense University. General Chilcoat's previous assignments include Commandant, U.S. Army War College; Deputy Commanding General of the U.S. Army Training Center; Chief of Staff of the 3d Infantry Division; Executive Assistant to the Chairman of the Joint Chiefs of Staff; Deputy Director, Strategy, Plans, and Policy, Office of the Deputy Chief of Staff for Operations and Plans for the U.S. Army; and infantry assignments including command at all levels through the brigade level. He is a graduate of the United States Military Academy, the Infantry Officer Basic and Advanced Courses, the Command and General Staff College, and the National War College. He is also an honorary graduate of the U.S. Army War College. General Chilcoat holds an M.B.A. from Harvard University.

Dr. David S. C. Chu

Dr. David Chu is currently the Vice President responsible for RAND's Army Research Division. Dr. Chu is also Director of the Arroyo Center. Previously, he was Director of RAND's

Washington Office and Associate Chairman of RAND's Research Staff. Dr. Chu served in the Department of Defense as Assistant Secretary and Director for Program Analysis and Evaluation, 1981–1993. Earlier, Dr. Chu was Assistant Director of the Congressional Budget Office for National Security and International Affairs, 1978–1981. Dr. Chu was an economist with RAND from 1970–1978 and served in the U.S. Army from 1968–1970. Dr. Chu was educated at Yale University, receiving his B.A. in economics and mathematics and his Ph.D. in economics. He has been awarded the Department of Defense Medal for Distinguished Public Service with Silver Palm and the National Public Service Award of the National Academy of Public Administration, of which he is a Fellow, and on whose Board he serves as Treasurer.

The Honorable William S. Cohen

The Honorable William S. Cohen was sworn in as Secretary of Defense on January 24, 1997. He previously served three terms in the U.S. Senate for the State of Maine, 1979–1997, and three terms in the House of Representatives from Maine's Second Congressional District, 1973–1979. Secretary Cohen served on the Senate Armed Services and Governmental Affairs Committees from 1979–97. He was a member of the Senate Select Committee on Intelligence from 1983–91 and 1995–97, serving as Vice Chairman from 1987–91. Secretary Cohen played a leading role in crafting the Goldwater-Nichols Defense Reorganization Act of 1986. He was the Senate sponsor of the GI Bill of 1984 and the subsequent enhancements to this landmark legislation. Secretary Cohen's efforts led to the creation of the Rapid Deployment Force, which later developed into the Central Command, and the maritime pre-positioning program. He also co-authored the Intelligence Oversight Reform Act of 1991, as well as legislation designed to overhaul U.S. counterintelligence efforts and defend against foreign political and industrial espionage. Secretary Cohen served on the board of directors of the Council on Foreign Relations from 1989 to 1997, and in 1996 he chaired the Council's Middle East Study Group. He has also chaired and served on numerous study groups and committees at the Center for Strategic and International Studies, the Johns Hopkins University School of Advanced International Studies, and the Brookings Institution on issues ranging from DoD reorganization to NATO enlargement and chemical weapons arms control. In 1996, he received the U.S. Special Operations Command Medal. Secretary Cohen received his B.A. in Latin from Bowdoin College in 1962 and his LL.B., cum laude, from Boston University Law School in 1965.

Dr. Jacquelyn K. Davis

Dr. Jacquelyn Davis is Executive Vice President of the Institute for Foreign Policy Analysis and President of National Security Planning Associates, Inc. Dr. Davis is an authority on force planning and military technology trends; U.S.-allied security relations in NATO-Europe, the Persian Gulf, and the Asian-Pacific region; counterproliferation and deterrence issues; and regional security dynamics, especially as they affect U.S. policies regarding forward presence. Her other areas of expertise include defense problems related to the former Soviet Union and the CIS republics and the security policies and programs of key European countries, particularly the United Kingdom, France, and Germany. As a member of the Chief of Naval Operations' Executive Committee, she has written and lectured extensively on issues of naval strategy and maritime power. Dr. Davis has written and collaborated on numerous books, articles and IFPA special reports. Her recent publications include: *Strategic Paradigms 2025: U.S.*

Security Planning for a New Era (co-author) and *CVX: A "Smart" Carrier for the New Era*. Dr. Davis served a four-year tenure (1992–1996) on the Board of Advisors at the Naval Postgraduate School in Monterey, California. In addition, she was a member of the Defense Advisory Committee on Women in the Services (DACOWITS), serving as National Chairperson from 1986–1988. Dr. Davis is a member of the Council of Foreign Relations, the CNO Executive Panel, the Hart-Rudman Study Group, and the International Institute for Strategic Studies. Dr. Davis received her M.A. and Ph.D. from the University of Pennsylvania.

Dr. Richard A. Falkenrath

Dr. Richard A. Falkenrath is an Assistant Professor of Public Policy at the John F. Kennedy School of Government, Harvard University. He completed a three-year term as Executive Director of the Kennedy School's Belfer Center for Science and International Affairs (BCSIA) in 1998. He is principal investigator of the Executive Session on Domestic Preparedness (a DOJ-funded joint project of BCSIA and the Kennedy School Taubman Center for State and Local Government) and of the Jeddah Forum project funded out of Jeddah, Saudi Arabia. He is the author or co-author of *Shaping Europe's Military Order: The Origins and Consequences of the CFE Treaty* (1995), *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material* (1996), *America's Achilles' Heel: Nuclear, Biological, Chemical Terrorism and Covert Attack* (1998), and numerous journal articles and chapters of edited volumes. Dr. Falkenrath has been a visiting research fellow at the German Society of Foreign Affairs in Bonn, as well as a consultant to the U.S. Department of Defense, the intelligence community, several congressional offices, the RAND Corporation, and a range of private companies in the defense sector. He is a member of the International Institute for Strategic Studies, the Council on Foreign Relations, the American Council on Germany, and the American Economic Association. He holds a Ph.D. from the Department of War Studies, King's College, London, where he was a British Marshall Scholar, and is a summa cum laude graduate of Occidental College, Los Angeles, with degrees in economics and international relations.

Ms. Michèle A. Flournoy

Ms. Michèle A. Flournoy is a Distinguished Research Professor and Director of the QDR '01 Working Group at the National Defense University's Institute for National Strategic Studies. Previously, she served as Principal Deputy Assistant Secretary of Defense for Strategy and Threat Reduction and as Deputy Assistant Secretary of Defense for Strategy. She was the principal author of the "shape, prepare, respond" strategy and of PDD–56. Prior to joining DoD, she was a Research Fellow at Harvard's Center for Science and International Affairs. Ms. Flournoy has published two books and more than fifty articles on international security issues. She received a B.A. in social studies from Harvard University and an M.Litt. in international relations from Balliol College, Oxford University. She is a member of the Defense Policy Board, the Council on Foreign Relations, the International Institute of Strategic Studies, and the Executive Board of Women in International Security.

General John R. Galvin, USA (Ret.)

General John Galvin is the sixth dean of The Fletcher School of Law and Diplomacy, Tufts University. He served as NATO Supreme Allied Commander, Europe, and Commander in Chief of U.S. Army, Navy, and Air Forces in Europe during the five years that ended the Cold

War. More recently, he was an envoy of the U.S. State Department with the rank of Ambassador to assist with negotiations in Bosnia. Dean Galvin played a central role in many of recent history's defining moments, including the Gulf War, the redesigning of NATO strategy, humanitarian support in Central and Eastern European nations, the rescue of 450,000 Kurdish refugees in northern Iraq, East-West negotiations on arms control, and U.S. military operations in Zaire, Liberia, and other African nations. He has published several books and articles on U.S. military strategy, transatlantic relations, and the future role of NATO. A graduate of West Point, Dean Galvin holds a master's degree in English from Columbia University and continued his military education at the Army Command and General Staff College and the Army War College. He also did postgraduate study at the University of Pennsylvania and attended The Fletcher School of Law and Diplomacy on a fellowship in 1972–73.

Dr. John J. Hamre

Dr. John Hamre was sworn in as Deputy Secretary of Defense on July 29, 1997. Prior to assuming the duties of the Deputy Secretary of Defense, he served as the Comptroller of the Department of Defense (1993–1997). As Comptroller, Dr. Hamre was the principal assistant to the Secretary of Defense for the preparation, presentation, and execution of the defense budget and management improvement programs. Before coming to the Department, Dr. Hamre served for 10 years as a professional staff member of the Senate Armed Services Committee. He was primarily responsible for the oversight and evaluation of procurement, research and development programs, defense budget issues, and relations with the Senate Appropriations Committee. From 1978 to 1984, Dr. Hamre served in the Congressional Budget Office, where he became its Deputy Assistant Director for National Security and International Affairs. In that position, he oversaw analysis and other support for committees in both the House of Representatives and the Senate. In 1978 Dr. Hamre received his Ph.D., with distinction, from the School of Advanced International Studies, Johns Hopkins University. In 1972, he received a B.A. with highest distinction from Augustana College. The following year he studied as a Rockefeller Fellow at the Harvard Divinity School.

Lieutenant General Patrick M. Hughes, USA (Ret.)

Lieutenant General Patrick M. Hughes, President of PMH Enterprises, is a private consultant and adviser. Previously, he served as Director of the Defense Intelligence Agency from 1996–1999. He was Director of Intelligence (J–2) on the Joint Staff from 1994-1996 and Director of Intelligence, U.S. Central Command, from 1992–1994. General Hughes served as Commanding General, U.S. Army Intelligence Agency, and Assistant Deputy Chief of Staff for Intelligence for Foreign Intelligence from 1990–1992. From 1988 to 1990, General Hughes served as Commander, 501st Military Intelligence Brigade, Republic of Korea, and from 1984–1986 as Commander, 109th Military Intelligence Battalion, Fort Lewis, Washington. General Hughes received his B.S. in commerce from Montana State University and his M.A. in business management from Central Michigan University. In addition, he received a doctorate (Honoris Causa) in business from Montana State University and a doctorate (Honoris Causa) in strategic intelligence from the Joint Military Intelligence College.

General James L. Jones, USMC

General James Jones assumed his current post as 32nd Commandant of the Marine Corps in July 1999. Immediately prior to this assignment, he served as the Military Assistant to the

Secretary of Defense. Previously, General Jones served as Deputy Chief of Staff for Plans, Policies, and Operations at Headquarters, Marine Corps; Director, Expeditionary Warfare Division (N85) in the Office of the Chief of Naval Operations; and Commanding General, 2d Marine Division, Marine Forces Atlantic. General Jones also served as Deputy Director (J–3), U.S. European Command, before being reassigned as Chief of Staff, Joint Task Force Provide Promise, for operations in Bosnia-Herzegovina and Macedonia. Earlier, General Jones served as Commanding Officer, 24th Marine Expeditionary Unit, and participated in Operation PROVIDE COMFORT. Earlier in his career, General Jones served as Senior Aide and then Military Secretary to the Commandant of the Marine Corps and as Commander of the 3d Battalion, 9th Marines, 1st Marine Division. General Jones' decorations include the Defense Distinguished Service Medal, Silver Star Medal, Legion of Merit with three gold stars, Bronze Star Medal with Combat "V," and the Combat Action Ribbon. General Jones holds a B.S. degree from the Georgetown University School of Foreign Service and has attended the National War College.

General George A. Joulwan, USA (Ret.)

General George A. Joulwan retired in 1997 as Commander in Chief, United States European Command (CINCEUR), and as the eleventh Supreme Allied Commander Europe (SACEUR). As CINCEUR, General Joulwan conducted over 20 successful operations in the Balkans, Africa, and the Middle East. He established the first-ever strategic policy for U.S. military engagement in Africa and orchestrated the State Partnership program linking American reserve forces from 23 states with the former non-NATO countries and newly independent democracies of Europe and the former Soviet Union. General Joulwan also served as the Commander in Chief of U.S. forces in Central and South America. As CINCSOUTH, he was instrumental in bringing peace to El Salvador and democracy to Panama, professionalizing the militaries of Latin America, and directing multinational and multiagency operations at the source countries for narcotrafficking and illegal drugs. In addition, he served two combat tours in Vietnam, served in the Pentagon as the Executive Officer for the Chairman, Joint Chiefs of Staff, was Special Assistant to the President of the United States, and was Special Assistant to the SACEUR, General Alexander Haig. He is a graduate of West Point and holds a master's degree in political science from Loyola University in Chicago.

Mr. Robert D. Kaplan

Robert Kaplan, a correspondent for *The Atlantic Monthly*, is the best-selling author of seven books on international affairs, including *Balkan Ghosts* and *Ends of the Earth*. Mr. Kaplan is also a provocative essayist. His article, "The Coming Anarchy," in the February 1994 *Atlantic Monthly*, was hotly debated in the United States and around the world, as was his December 1997 essay, "Was Democracy Just A Moment?" Mr. Kaplan's essays have also appeared in *Forbes* magazine and the editorial pages of the *New York Times*, the *Wall Street Journal*, the *Washington Post*, and the *Boston Globe*. He has been a Fellow of the World Economic Forum in Davos, Switzerland, and a consultant to the U.S. Army's Special Forces Regiment. He lectures at war colleges, the FBI, universities, and business forums. In 1995, Mr. Kaplan delivered the Secretary of State's Open Forum Lecture at the U.S. State Department. He has reported from nearly eighty countries. A collection of his most famous essays, entitled *The Coming Anarchy: Shattering the Dreams of the Post-Cold War*, will be published by Random House in February 2000.

General John M. Keane, USA

General John Keane assumed duties as the 29th Vice Chief of Staff of the Army on 22 June 1999. General Keane is an infantry officer who has commanded at every level, from company to corps, and has experience in all types of infantry—airborne, air assault, light, and mechanized. His commands include the XVIII Airborne Corps, the 101st Airborne Division (Air Assault), the Joint Readiness Training Center, the 1st Brigade, 10th Mountain Division (Light), and the 3/39th and 4/23d Infantry (Redesignated), 9th Infantry Division. He served as Chief of Staff, 10th Mountain Division (Light); Chief of Staff, 101st Airborne Division (Air Assault); Assistant Division Commander, 101st Airborne Division (Air Assault); Chief of Staff, XVIII Airborne Corps; and most recently as Deputy Commander in Chief, United States Atlantic Command. General Keane's awards and decorations include the Defense Distinguished Service Medal, the Distinguished Service Medal, the Silver Star, five Legions of Merit, and the Bronze Star. He holds a bachelor of science degree from Fordham University and a master of arts degree from the University of Western Kentucky. General Keane's military education includes the Infantry Officer Basic and Advanced Courses, the United States Army Command and General Staff College, and the United States Army War College.

Congressman Jerry Lewis

Congressman Jerry Lewis represents the 40th Congressional District of southern California, including most of San Bernardino and Inyo counties. Congressman Lewis is a senior member of the Appropriations Committee and Chairman of the Defense Appropriations Subcommittee. Lewis also serves on the Foreign Operations Appropriations Subcommittee and the Legislative Branch Appropriations Subcommittee. In addition, he is Vice-Chairman of the House Permanent Select Committee on Intelligence. In this capacity, Congressman Lewis is responsible for legislative oversight and budget review of all classified U.S. intelligence and national security activities. Lewis is the immediate past Chairman of the VA-HUD and Independent Agencies Subcommittee. Prior to his election to Congress in 1978, he served in the California State Legislature. He graduated from UCLA in 1956 with a bachelor of arts degree in government and continued his education with a graduate fellowship in public affairs at the Coro Foundation in San Francisco.

Senator Joseph Lieberman

Senator Joseph Lieberman represents Connecticut in the U.S. Senate. He is currently in his second term and became the Ranking Democratic Member of the Governmental Affairs Committee in January 1999. He is a member of the Armed Services Committee, the Environment and Public Works Committee, and the Small Business Committee. Since 1995, he has been Chairman of the Democratic Leadership Council. From 1982 to 1988, he served as Connecticut's 21st Attorney General. He was elected to the Connecticut State Senate in 1970 and served there for 10 years, the last six as Majority Leader. In addition, he is the author of four books: *The Power Broker* (1966), *The Scorpion and the Tarantula* (1970), *The Legacy* (1981), and *Child Support in America* (1986). He received his bachelor's degree from Yale College in 1964 and his law degree from Yale Law School in 1967.

General Lester L. Lyles, USAF

General Lester L. Lyles is Vice Chief of Staff, Headquarters, U.S. Air Force, Washington,

D.C. As Vice Chief, he presides over the Air Staff and serves as a member of the Joint Chiefs of Staff Joint Requirements Oversight Council. Immediately prior to this assignment, General Lyles was the Director of the Ballistic Missile Defense Organization from 1996 to 1999. From 1994 to 1996, he was Commander, Space and Missile Systems Center, Los Angeles Air Force Base. In 1992 he became Vice Commander of Ogden Air Logistics Center, Hill Air Force Base, and subsequently served as commander of the center from 1993 until 1994. He became AFSC Headquarters' Assistant Deputy Chief of Staff for Requirements in 1989 and Deputy Chief of Staff for Requirements in 1990. He has served as Director of Tactical Aircraft Systems at AFSC Headquarters and as Director of the Medium-Launch Vehicles Program and Space-Launch Systems offices. General Lyles received his B.S. in mechanical engineering from Howard University and his M.S. in mechanical and nuclear engineering from the Air Force Institute of Technology Program, New Mexico State University. In addition, he has attended the Armed Forces Staff College, the National War College, and the Defense Systems Management College. He is the recipient of the Defense Distinguished Service Medal, Distinguished Service Medal, Defense Superior Service Medal, and Legion of Merit.

General Sir Jeremy Mackenzie GCB OBE

General Sir Jeremy Mackenzie became Governor of the Royal Hospital Chelsea in August 1999. He retired from the British Army in 1999 after having served in the post of Deputy Supreme Allied Commander Europe under three Supreme Allied Commanders over four years. As Deputy SACEUR he had special responsibility for the Partnership for Peace Program, involving 27 nations of Central and Eastern Europe; the expansion of NATO; and the generation of NATO forces in the former Republic of Yugoslavia, Bosnia, and most recently Kosovo. He was an Aide de Camp to Her Majesty, Queen Elizabeth II, from 1992 to 1996. From 1991 to 1994, he was the first Commander of the Allied Command Europe Rapid Reaction Corps. Previously, he was Commander, 1st British Corps, Commander, 4th Armoured Division in West Germany, and Commandant of the Staff College. He was made a Knight Grand Cross of the Order of the Bath (GCB) in 1999. He graduated from the Staff College at Camberley.

Lieutenant General Thomas G. McInerney, USAF (Ret.)

General Thomas G. McInerney is President and CEO of Business Executives for National Security (BENS). He was Vice President of Command and Control for Loral Defense Systems from 1994 to 1996. General McInerney retired from the Air Force in 1994 after having served as Assistant Vice Chief of Staff and Director of the Defense Performance Review. Previously, General McInerney served as Commander, 11th Air Force, Alaska, Vice Commander in Chief, U.S. Air Forces in Europe, and Commander, 313th Air Division, Okinawa. He holds a B.S. from the U.S. Military Academy and an M.A. in international relations from George Washington University, as well as diplomas from the Armed Forces Staff College and the National War College.

General Klaus Naumann

General Klaus Naumann was Chairman of the North Atlantic Military Committee of NATO from 1996 to 1999. Immediately prior to this position, he served as Chief of Staff, Federal Armed Forces, from 1991 to 1996. Previously, he served as Commanding General of I Corps in Münster. Earlier assignments included Deputy Chief of Staff (Politico-Military Affairs and

Operations) and Deputy Chief of Staff (Planning) on the Armed Forces Staff, Ministry of Defense (MOD), Bonn. In addition, he had two Assistant Branch Chief tours in Bonn and an assignment as Executive Officer to the Vice Chief of Staff, Federal Armed Forces, at MOD. He also served on the staff of the German Military Representative to the NATO Military Committee in Brussels, where he was Chief of the Military Policy, Nuclear Strategy, and Arms Control Section. Among his many publications, General Naumann is the author of the book *Die Bundeswehr in einer Welt im Umbruch* (*The Bundeswehr in a World of Transition*). Among his military awards and decorations, General Naumann has received the Commander's Cross of Merit of the Federal Republic of Germany and the Gold Cross of Honour of the Federal Armed Forces. General Naumann's military education includes the 13th Army General Staff Officer Training Course at the Federal Armed Forces Command and Staff College in Hamburg, and courses at the Royal College of Defence Studies, London.

Dr. Michael O'Hanlon

Dr. Michael O'Hanlon is a Senior Fellow at the Brookings Institution specializing in U.S. defense strategy and budgets, military technology, northeast Asian security, and humanitarian intervention. He has been a senior scholar at Brookings since 1994 and an adjunct professor at Columbia University's School of International and Public Affairs since 1996. From 1989–1994 he worked in the national security division of the Congressional Budget Office. His most recently published book at Brookings was entitled *How to Be a Cheap Hawk: The 1999 and 2000 Defense Budgets.* "Technological Change and the Future of Warfare," his latest effort, is forthcoming. He and Ivo Daalder are now writing a book on the war over Kosovo. Dr. O'Hanlon received a bachelor's degree in physics and a Ph.D. in public policy from Princeton University.

Dr. Robert L. Pfaltzgraff, Jr.

Dr. Robert L. Pfaltzgraff, Jr., is the President of the Institute for Foreign Policy Analysis and Shelby Cullom Davis Professor of International Security Studies at the Fletcher School of Law and Diplomacy, Tufts University. He has held a visiting appointment as George C. Marshall Professor at the College of Europe, Bruges, Belgium, and as Professor at the National Defense College, Tokyo, Japan. He has advised key administration officials on military strategy, modernization, the future of the Atlantic Alliance, nuclear proliferation, and arms control policy. Dr. Pfaltzgraff has published extensively and lectured widely at government and industry forums in the United States and overseas, including at the National Defense University and the NATO Defense College. Dr. Pfaltzgraff leads the Institute's research projects on future security environments and technology diffusion and curricular development on issues associated with weapons of mass destruction. His work encompasses alliance relations, crisis management, missile defense, the development and conduct of gaming exercises, arms control issues, and strategic planning in the emerging security environment. He holds an M.A. in international relations, a Ph.D. in political science, and an M.B.A. in international business from the University of Pennsylvania.

Admiral Donald L. Pilling, USN

Admiral Donald L. Pilling, USN, assumed his current duties as the thirtieth Vice Chief of Naval Operations in November 1997. Prior to this assignment, Admiral Pilling served as Deputy Chief of Naval Operations, Resources, Warfare Requirements, and Assessments (N8) from July 1996 to November 1997. From 1993 to 1995, he was the Director for Program-

ming (N80) on the staff of the Chief of Naval Operations. A member of the National Security Council staff from 1989 until July 1992, Admiral Pilling had broad responsibilities in foreign policy and national security issues. From 1986 to 1988, Admiral Pilling was assigned to the Office of the Chief of Naval Operations, where he was responsible for the development of the Navy Five-Year Defense Plan (FYDP). He has commanded USS *Dahlgren* (DDG 43); Destroyer Squadron 26; Cruiser-Destroyer Group 12; the USS *Saratoga* Battle Group; the U.S. Sixth Fleet; and Naval Striking and Support Forces Southern Europe. Admiral Pilling has published articles in both mathematical and professional journals and is also the author of a monograph, *Competition in Defense Procurement*, published in 1989 by the Brookings Institution. His personal awards include the Defense Distinguished Service Medal (two awards), Distinguished Service Medal, Legion of Merit (five awards), Meritorious Service Medal, Navy Commendation Medal (three awards), and the Navy Achievement Medal. A 1965 graduate of the U.S. Naval Academy, he also holds a Ph.D. in mathematics from the University of Cambridge.

Admiral Joseph W. Prueher, USN (Ret.)

Admiral Joseph W. Prueher is Ambassador to the People's Republic of China (Designate). In January 1996, Admiral Prueher became the seventeenth naval officer to hold the position of Commander in Chief, U.S. Pacific Command. As the senior U.S. military commander in the Pacific and Indian Ocean areas, he led the largest of the unified commands and directed Army, Navy, Marine Corps, and Air Force operations across more than 100 million square miles. He was responsible to the President and the Secretary of Defense through the Chairman, Joint Chiefs of Staff, and was the U.S. military representative for collective defense arrangements in the Pacific. Prior to his service at USPACOM, Admiral Prueher served as Vice Chief of Naval Operations. He has commanded the U.S. Sixth Fleet, NATO's Naval Striking and Support Forces Southern Europe, and Carrier Group One. He also served as the seventy-third Commandant of Midshipmen at the U.S. Naval Academy. Before reporting to the Naval Academy, Admiral Prueher commanded two carrier air wings, Carrier Air Wing Eight and Carrier Air Wing Seven. He has received numerous personal, combat, unit, and campaign awards. Admiral Prueher is a graduate of the U.S. Naval Academy and holds a master's degree in international affairs from George Washington University.

Senator Jack Reed

Elected to the Senate in 1996, Senator Jack Reed is the 47th United States Senator from Rhode Island. Senator Reed serves on the Armed Services Committee; Banking, Housing, and Urban Affairs Committee; Health, Eduation, Labor, and Pensions Committee; and the Special Committee on Aging. Previously, Senator Reed served three terms as a Member of the U.S. House of Representatives from Rhode Island's 2nd Congressional District. In addition, Senator Reed served three terms in the Rhode Island State Senate. Senator Reed, an Army Ranger and a paratrooper, served in the 82d Airborne Division as an infantry platoon leader, a company commander and a battalion staff officer. He later served as an Associate Professor in the Department of Social Sciences at West Point. Senator Reed holds a Bachelor of Science from the United States Military Academy at West Point, a Masters of Public Policy from the John F. Kennedy School of Government at Harvard University, and a law degree from Harvard Law School.

The Honorable Bernard D. Rostker

Dr. Bernard D. Rostker became the 25th Under Secretary of the Army on October 26, 1998. He serves as the deputy and senior adviser to the Secretary of the Army and as Acting Secretary in the absence of the Secretary. As Under Secretary, Dr. Rostker assists the Secretary in fulfilling statutory responsibilities for recruiting, organizing, supplying, equipping, training, and mobilizing the Army and managing its of nearly $70 billion annual budget and more than 1.3 million active duty, National Guard, Army Reserve and civilian personnel. For the four years prior to becoming Under Secretary, Dr. Rostker was Assistant Secretary of the Navy for Manpower and Reserve Affairs. On November 12, 1996, he was also named Special Assistant to the Deputy Secretary of Defense for Gulf War Illnesses. He continues in this assignment and is responsible for coordinating all activities related to Department of Defense inquiries into the nature and causes of Gulf War illnesses. From 1990–1994, Dr. Rostker held the position of Director of the Defense Manpower Research Center in RAND's National Defense Research Institute. Previously, from 1984–1990, Dr. Rostker helped establish the Army studies and analysis center, The Arroyo Center, at RAND where he was Program Director of the Force Development and Employment Program and Associate Director of the Center. Dr. Rostker received a bachelor of science degree from New York University in 1964 and holds master's and doctorate degrees in economics from Syracuse University.

The Honorable Warren Rudman

Warren Rudman is a co-chairman of the U.S. Commission on National Security, 21st century, and a partner in the law firm of Paul, Weiss, Rifkind, Wharton, and Garrison. He represented New Hampshire in the United States Senate from 1981 to 1993, co-authoring legislation such as the 1985 Gramm-Rudman-Hollings Deficit Reduction Law. Senator Rudman served on the Senate Ethics, Appropriations, Intelligence, and Governmental Affairs Committees, as well as the Permanent Subcommittee on Investigations. He was a co-founder of the Concord Coalition; Chairman of the President's Foreign Intelligence Advisory Board; and Vice Chairman of the Commission of Roles and Capabilities of the U.S. Intelligence Community. Senator Rudman earned a bachelor of science degree from Syracuse University and a bachelor of law letters degree from Boston College Law School. He is a U.S. Army veteran of the Korean War.

General Henry H. Shelton, USA

Commissioned a second lieutenant in the infantry in 1963 through the Reserve Officer Training Corps, General Shelton spent the next 24 years in a variety of command and staff positions in the continental United States, Hawaii, and Vietnam. He completed two tours in Vietnam, the first with the 5th Special Forces Group and the second with the 173d Airborne Brigade. Following his selection for brigadier general in 1987, General Shelton served two years in the Operations Directorate of the Joint Staff. In 1989, he began a two-year assignment as Assistant Division Commander for Operations of the 101st Airborne Division (Air Assault), a tour that included the division's seven-month deployment to Saudi Arabia for Operations DESERT SHIELD and DESERT STORM. Upon returning from the Gulf War, General Shelton was promoted to major general and assigned to Fort Bragg, North Carolina, where he assumed command of the 82d Airborne Division. In 1993, he was promoted to lieutenant general and assumed command of the XVIIIth Airborne Corps. In 1994, while serving as corps commander, General Shelton commanded the Joint Task Force that conducted Operation UPHOLD DEMOCRACY in Haiti. In March 1996, he was

promoted to general and became Commander in Chief of the U.S. Special Operations Command. General Shelton became the fourteenth Chairman of the Joint Chiefs of Staff on 1 October 1997. In this capacity, he serves as the principal military adviser to the President, the Secretary of Defense, and the National Security Council.

General Eric K. Shinseki, USA

General Shinseki graduated from the United States Military Academy in 1965. Since his commissioning, he has served in a variety of command and staff assignments, both in the continental United States and overseas. These assignments included two combat tours in Vietnam with the 9th and 25th Infantry Divisions, as an Artillery Forward Observer and as Commander of Troop A, 3d Squadron, 5th Cavalry. He has served in Hawaii at Schofield Barracks with Headquarters, United States Army, Hawaii, and Fort Shafter with Headquarters, United States Army, Pacific, and taught in the United States Military Academy's Department of English. General Shinseki's 10-plus years of service in Europe included command and senior staff assignments in Schweinfurt, Kitzingen, Würzburg, and Stuttgart. He served as the Deputy Chief of Staff for Support, Allied Land Forces Southern Europe, in Verona, Italy. General Shinseki commanded the 1st Cavalry Division at Fort Hood, Texas. In July 1996, he was promoted to lieutenant general and became the Deputy Chief of Staff for Operations and Plans, United States Army. In June 1997, he was appointed to the rank of general before assuming duties as Commanding General, United States Army, Europe; Commander, Allied Land Forces Central Europe; and Commander, NATO Stabilization Force in Bosnia-Herzegovina. He assumed duties as the 28th Vice Chief of Staff, United States Army, on 24 November 1998. General Shinseki assumed duties as the 34th Chief of Staff, United States Army, on 22 June 1999.

Dr. Richard H. Shultz, Jr.

Dr. Richard H. Shultz is an Associate Professor of International Politics at the Fletcher School of Law and Diplomacy, Tufts University. Since 1988, Dr. Shultz has served as Director of the Fletcher School's International Security Studies Program (ISSP). He has lectured and written extensively on several security topics encompassing the role of force in international relations; the evolution of U.S. military doctrine; intelligence and national security; low intensity conflict and power projection; the causes and control of international terrorism; and ethnic and religious conflict. Dr. Shultz is a member of several boards of trustees, including the Board of Trustees to the Carnegie Council on Ethics and International Affairs. His consultant work for the government has focused on U.S. peacekeeping policy, out-of-area interventions, counterproliferation issues, and the growing impact of international organized crime on U.S. security interests. He received his Ph.D. at Miami University and conducted postdoctoral studies at the University of Michigan.

Major General Robert J. St. Onge, Jr., USA

Major General Robert J. St. Onge, Jr. assumed his present duties as the Director of Strategy, Plans, and Policy, Office of the Deputy Chief of Staff for Operations and Plans, Headquarters, Department of the Army, in August 1998. Immediately prior to this assignment, General St. Onge served as the Deputy Director of Strategy, Plans, and Policy, Office of the Deputy Chief of Staff for Operations and Plans, Headquarters, Department of the Army. Previous assignments include serving as the 65th Commandant of Cadets at West Point, the Assistant

Division Commander for Maneuver, 1st Cavalry Division, and Chief of Staff for the 1st Armored Division. From October 1991 to August 1993, he commanded the 3d Brigade, 24th Infantry Division (Mechanized). A 1969 graduate of the U.S. Military Academy, St. Onge also holds a master of science in industrial relations from Purdue University. In addition, he has attended the Command and General Staff College and the Army War College. He earned a Master of Military Art and Science degree from the School of Advanced Military Studies.

Representative Mac Thornberry

Representative Mac Thornberry was elected to the U.S. House of Representatives in 1994. He is a member of the National Security Committee, the Committee on Resources, and the Joint Economic Committee. Previously, Congressman Thornberry worked in the cattle business with his brothers and practiced law in Amarillo. Earlier in his career, he worked for the Reagan administration as Deputy Assistant Secretary of State for Legislative Affairs. In addition, he spent several years in Washington working on Capitol Hill, first as Legislative Counsel to former Representative Tom Loeffler, then as Chief of Staff to Representative Larry Combest. Congressman Thornberry has served on the Board of Directors of both the Children's Rehabilitation Center and the High Plains Food Bank. He graduated from Texas Tech University in 1980, summa cum laude, with a degree in history and earned a law degree from the University of Texas Law School in 1983.

Dr. Edward L. Warner III

Dr. Edward Warner has been the Assistant Secretary of Defense for Strategy and Threat Reduction since June 1993. As such, he is principal adviser to the Under Secretary of Defense for Policy and to the Secretary of Defense on national security and defense strategy and on resources, forces, and contingency plans necessary to implement that strategy. He works closely with the National Security Council, the Defense Acquisition Board, and the Joint Staff on strategy and force posture issues. After retiring from the Air Force with 20 years of service, Dr. Warner became a senior defense analyst with the RAND Corporation, conducting studies on American national security policy, the defense and foreign policies of Russia and other successor states of the former Soviet Union, and East-West arms issues. He has authored numerous articles, reports, and books and has taught graduate seminars at the Johns Hopkins University School of Advanced International Studies and George Washington, Columbia, and Princeton Universities. He has been adviser to the National Intelligence Council, the Central Intelligence Agency, and the United States Strategic Command. Dr. Warner graduated from the U.S. Naval Academy and earned both his M.A. and his Ph.D. from Princeton University.

Senator John Warner

Senator John Warner was first elected to the United States Senate from Virginia on November 7, 1978 and in 1996 was reelected to serve his fourth six-year term. In 1998, he became Chairman of the Senate Armed Services Committee. He is also the second most senior Republican member of the Environment and Public Works Committee and a member (former Chairman) of the Senate Committee on Rules and Administration. Senator Warner served on the Senate Intelligence Committee from 1987–1995, as Vice Chairman from 1993–1995. From 1974–1976, Senator Warner served in a position representing the Executive Branch in a wide range of bicentennial programs and activities in the fifty states. Previously, Senator Warner

had been appointed Under Secretary of the Navy in February 1969 and completed his service in 1974 as Secretary of the Navy. During that period he also had special assignments in the field of diplomacy. He served as representative for the Secretary of Defense to the Law of the Sea talks in Geneva (1969–73), and later as principal negotiator and signatory for the United States of the Incidents at Sea Executive Agreement (INCSEA) between the United States and the Soviet Union (1970–72). He served in the Navy during World War II and later in the Marine Corps during the Korean War. Following his active service in Korea, Senator Warner remained in the Marine Corps Reserve for 10 years. He holds a bachelor of science degree in basic engineering sciences from Washington and Lee University and a law degree from the University of Virginia Law School.

Dr. John P. White

John P. White is a Lecturer in Public Policy at Harvard University's John F. Kennedy School of Government. From 1995–97, he served as Deputy Secretary of Defense. From 1993–95, he was director of the Center for Business and Government and a Lecturer at the Kennedy School, following his active involvement in both the Perot and Clinton presidential campaigns in 1992. He chaired a Presidential Commission on Defense and has participated in previous IFPA-sponsored meetings. Dr. White also served in the federal government as the Deputy Director of the OMB (1978–81), Assistant Secretary of Defense, Manpower, Reserve Affairs, and Logistics (1977–78), and an officer in the U.S. Marine Corps, on active duty from 1959–61. He has held corporate management positions in the private sector at the RAND Corporation, Interactive Systems Corporation, and Eastman Kodak Company. Dr. White holds a B.S. in industrial and labor relations from Cornell University and an M.A. and Ph.D. in economics from Syracuse University.