Global Security: A Broader Concept for the 21st Century

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> German Minister of Defense Peter Struck, MdB Keynote Address

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Keynote Speaker of the Twenty-first International Workshop on Global Security

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Welcoming Remarks

General George A. Joulwan¹

t is a pleasure to be with you once again at the 21st International Workshop on Global Security—and particularly in Berlin. Berlin is a special place for me. I first came here as a young Second Lieutenant in 1962 as the Berlin Wall was being built and witnessed the desperation of people willing to sacrifice their lives to live in freedom. What a joy it was to return in 1989 when the Berlin Wall and Iron Curtain were torn down. Again in 1994 when the occupation of Berlin ended—and troops in the eastern part of Germany came under NATO and SACEUR operational control.

There is no better place to be when the world is in crisis than in Berlin. It was here that we demonstrated Alliance solidarity and mutual trust and confidence. It was here that the Cold War threat was most visible and the transatlantic link between Europe and the United States best demonstrated. And we prevailed—as an Alliance, as one team with one mission.

Today the threat is different but equally dangerous. Again, we must meet the threats not alone but together. We must not forget the unity and solidarity demonstrated by our Alliance during the forty years of the Cold War, a unity that we witnessed more recently in Bosnia and the Balkans, and how effective like-minded nations can be in the defense of freedom. One nation did not do it alone—but we did so as an Alliance: Then at 16 nations, now at 26.

While military capability is important as we transform the Alliance, it is equally important to retain the shared values and ideals, the mutual trust and confidence and the friendship between our peoples and our militaries. Today—as in the past—this great Alliance must demonstrate its solidarity, its cohesion and its competence to meet today's challenges. My hope is that this workshop will provide a venue to reinforce those attributes.

1

General George A. Joulwan (Ret.) is a former Supreme Allied Commander, Europe and a past Workshop Honorary General Chaiman.

General George A. Joulwan

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Opening Address

Mr. Rainer Hertrich¹

or the last several years, it has been almost unthinkable to have the Berlin Air Show without the *International Workshop on Global Security* preceding it. This Workshop provides us with a highly welcome and much needed opportunity to meet and reflect on the security environment in which we operate; it is a crucial occasion for discussing where we as politicians, members of the armed forces, and industry leaders want to go–and how we want to get there. In a word, the Workshop provides Berlin, the city that has played such a unique role in history, with the conference on security it needs and deserves.

With the enlargement of NATO and the European Union, we are laying the foundations on which we can build a broader concept of security—an inclusive concept of cooperation, both on the European and the transatlantic levels. Experience has proven that alternatives such as "Europe versus the United States" or "the old versus the new Europe" are getting us nowhere. Instead, we must understand that only joint European and transatlantic efforts on all levels—economic, diplomatic, and defense—will open up the necessary perspective for global stability and security.

Hence the first tasks we should dedicate ourselves to are to ensure that the enlarged European Union fully accepts its role as a global security actor and to do everything to support a strong NATO in which Europe teams up with the United States. Only if we achieve these goals will we be able to meet the challenges we are facing.

In my brief remarks I would like to focus on what both politics and industry can contribute to bringing to life a broader concept of security.

EUROPEAN CONTRIBUTIONS

With the shocking terrorist attacks in Madrid, Europeans learned that we are not immune to international terrorism. It took a long time, but I think we can say that Europe has finally gotten the message. Our nations now know that we must create a joint security framework—a framework for a world that has both unmatched freedom and increased instability and new threats.

The new European security strategy, worked out by Javier Solana, formulates such a framework. It clearly lays out Europe's role as a global security actor and the need to enhance European defense capabilities. While the momentum for this transformation does not compare with that in the U.S., armed forces across Europe are already shifting towards worldwide deployability and network-centric operations.

1

Mr. Rainer Hertrich is co-CEO of EADS (European Aeronautic Defense and Space Company) and was the Honorary Chairman of the *Twenty-first International Worksho*p.

However, European defense budgets are still flat or almost flat, perhaps with the exceptions of those of the U.K. and France, which have seen two years of double-digit investment increases. As long as Europe lags behind in economic growth, defense resources will not increase enough to meet global needs.

Therefore, it is essential that we create European structures that allow us to significantly enhance the efficiency of our security efforts. Better technology and fewer troops are essential for improving European defense. It is also crucial to increase our defense budgets, though this will come about only with true economic recovery.

One of the core European structures in this work will be the European Defense Agency, which will be set up in Brussels. However, the first draft for the operation of this agency was disappointing, showing it to be weak, with no budget, and more an advisory institution than an institution that could create a European defense identity. Still, the war is not lost, not even the battle, because the many people who support a strong agency still aim to turn things around.

It is my belief that it is imperative to attribute real political weight and real decision-making power to this agency. That is because:

- Through the agency, Europe will be able to define common capability requirements so that we can assure interoperability and overcome the fragmented approach of the past.
- We need to coordinate and fund joint security research and technology.
- The agency must have a budget of its own so that it can function as a full-fledged procurement authority and take care of all common European procurement programs. This does imply a shift of sovereign power to the agency, but the success of the Euro has shown that such a shift is possible–and advantageous for everyone.
- Only an agency with procuring powers will foster an open European defense market and free competition for defense programs.

What we need, in a word, is a common European defense market, because only with such a market will we create a truly European defense industry across all sectors—not just aerospace, but land and naval systems as well.

A defense agency with this profile—and the corresponding funding—would help overcome the national boundaries that in the past have hampered consolidated defense programs, larger production runs, and faster decision processes. Thus it will represent a great leap forward for European defense.

TRANSATLANTIC CONTRIBUTIONS

While Europeans must work together, transatlantic cooperation is also important, and will remain so for the foreseeable future. MEADS, the joint missile defense system, and Euro Hawk are outstanding examples of transatlantic cooperation. The Euro Hawk, which is based on the Global Hawk platform by Northrop Grumman and equipped with European sensors, is part of NATO's new Airborne Ground Surveillance and a paradigm of what industry initiative can achieve. These "eyes in the sky" were achieved by NATO choosing a transatlantic consortium in which EADS and Northrop Grumman played crucial roles.

While experience shows that technology transfer works at the industry level, industry needs the backing of long-term and robust government-to-government cooperation. To engender that cooperation, trust, at least to a certain extent, is needed. And to establish that trust, we need ongoing dialogue and exchanges of views on all political levels.

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Opening Address

This means, with regard to the U.S., transparency in technology transfer matters as well as the promised relief in export control. Both of these are essential if we want to make programs like MEADS a success— which is our objective. What's more, transparency is also essential for promising new projects on the horizon.

In Germany, for instance, there is broad support from all political groups for a new heavy transport helicopter since helicopters are critical pieces of equipment especially in out-of-area peacekeeping and peace-enforcing missions. The planned heavy transport helicopter will be able to carry more passengers and a higher payload than all predecessors, and will replace the ageing fleet of CH-47s and CH-53s. The new helicopter is scheduled to enter service in 2015.

But why not make this work a transatlantic project between EADS and Sikorsky or Boeing? Such a joint venture would greatly contribute to interoperability, reduce development costs, and create substantial economies of scale. Imagine the boost to transatlantic cooperation that would be generated by an agreement between the governments of the U.S., Germany, and France! (Of course, the doors are open for any other government that wishes to join.) And imagine the incredible benefit to taxpayers on both sides of the Atlantic. This type of cooperation would make security more affordable and facilitate coalition war fighting within the NATO framework.

NATO'S ROLE

To my mind, NATO is and will remain the indispensable link between our two continents, and it will be strengthened in the future. No other institution will play as pivotal a role as NATO when it comes to responding globally to the global threats we face. I believe this will be true because NATO has proven its strengths. It was successful against the old threats and has mastered new challenges, as in the Balkans. Moreover, it is a platform of joint interests and ongoing dialogue.

However, I do not assume that NATO is an exclusive tool—other coalitions will probably exist in parallel. But as industry leaders and as politicians, we should do everything we can to strengthen NATO and to foster the transformation of NATO forces. I am absolutely convinced that both the United States and Europe should commit themselves to open markets and free competition, and that decisions regarding this goal need to be made in the near future. However, I do not believe that Europe should accept continued unequal conditions for market access and unequal conditions for competition.

CONCLUDING REMARKS

I would like to sum up by saying we must remove the obstacles we are still facing in the area of defense cooperation. We must also build a level transatlantic playing field, a prerequisite for taking full advantage of what industry can contribute to a broader concept of global security. I am sure our discussions will be fruitful and help us to even better understand what our challenges are—and how we are to respond to them.

EADS Co-CEO Mr. Rainer Hertrich

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Invitation to the Berlin Air Show

Mr. Hans-Joachim Gante¹

s a partner of the International Workshop and an organizer of the ILA2004 Berlin Air Show, I would like to cordially invite you to visit our aerospace exhibition, which will be formally opened on May 10 by Chancellor Gerhard Schröder.

I am certain that once again this year's ILA will be an exhibition of superlatives. The mood at the 2004 Berlin Air Show will be shaped by European integration. It is a very moving experience to witness the culmination of a process that became unstoppable when the Berlin Wall came down fourteen-and-a-half years ago.

Speaking as a German with a sense of history, I am well aware that the only correct response of all German governments since 1989 was to view German unity simply as an interim stage on the road to the more important European unification. For political reasons and because we feel enormous gratitude to our neighbors, we Germans had to act as the driving force behind the expansion of the old EU. The German government's activities in this respect were firmly backed up by the German business sector, including the German aerospace industry.

Let me now turn from the historical dimension of this Berlin Air Show to the concrete challenges facing our two alliances, NATO and the EU:

Over the next few years, we Europeans will have to be ready to shoulder a greater responsibility for global security. This means that we must work closer together so that, for example, our resources can be used more efficiently in military research and future weapons projects. The 2004 Berlin Air Show will be showcasing many examples of successful European developments, which in the military sector include the Eurofighter along with the Tiger and NH90 helicopters, as well as the joint guided missile programs.

I believe that one especially important task, following the expansion of the EU and NATO, is to strengthen partnership with the new member states and, above all, with Russia. Through our cooperation with Russian companies and institutions, we in the aerospace industry intend to act as economic and technological lynchpins. In our sector, some 20 joint activities large and small are currently underway—and the Berlin Air Show is one of the most important platforms for this.

In the other direction across the Atlantic, the friendship between Europe and the United States must be more intensively cultivated again. We are united by the Western community of values, which the U.S. has always staunchly upheld, especially in Europe. The United States also helped us in our own region in Yugoslavia, and even shouldered the main burden. Moreover, transatlantic cooperation projects such as the Euro Hawk UAV program and the MEADS air defense system will be major elements of the 2004 Berlin Air Show.

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Mr. Hans-Joachim Gante is Managing Director of the German Aerospace Industries Association (BDLI).

We can counter the new asymmetrical threat now facing many states with a range of skills offered by our aerospace industry. We have the right expertise in reconnaissance and communication, in pinpointing targets and reaction, as well as the means of transport needed for rapid troop deployment—as you will be shown at the 2004 Berlin Air Show.

Over the past three days we have discussed many aspects of security in great depth. I can hence heartily recommend you to visit the Berlin Air Show tomorrow to take in the fascination of aerospace. Flying is something that captivates mankind on a very emotional level.

You'll be able to see more than 300 aircraft and helicopters on a large static display. Moreover, a whole range of aircraft can be observed in the air during a flight display. Almost all the major players in the aerospace industry are represented.

I hope very much to be able to welcome you all at the Berlin Air Show—the aerospace industry's international exhibition.

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Dr. Roger Weissinger-Baylon

he 21st International Workshop on Global Security was presented in Berlin, Germany on 7-10 May 2004 in order to address the theme of "Global Security: A Broader Concept for the Twenty-first Century." Given the gravity of the current security challenges, this year's Workshop offered a much-needed opportunity for senior government leaders, military commanders, industry officials, and academic experts to consider, frankly and openly, the full range of the global threats and the best ways for the transatlantic community to respond.

We are therefore fortunate that the Workshop was invited this year to Berlin, for the third time, by BDLI (German Aerospace Industries Association) with the cooperation of the German Ministry of Defense. We were also pleased to present the Workshop once again in conjunction with the prestigious ILA Berlin Air Show, which German Federal Chancellor Gerhard Schroeder opened at the conclusion of the Workshop.

Keynote address, panel of ministers, and principal speakers. German Defense Minister Dr. Peter Struck, MdB, presented the keynote address. A special panel on Security in the Black Sea Region was brought together and chaired by Romanian Defense Minister Ioan Mircea Pascu, with the participation of Bulgarian Defense Minister Nikolai Svinarov, Georgian Defense Minister Gela Bejuashvili, Turkish Defense Minister Vecdi Gonul, Ukrainian Ambassador to NATO Volodymyr Khandogiy, and Deputy Chief of the Russian General Staff Colonel General Aleksandr Skvortsov.

Other principal speakers included Lithuanian Defense Minister Linas Linkevicius; U.S. Ambassador to NATO Nicholas Burns; NATO Military Committee Chairman General Harald Kujat; NATO Supreme Allied Commander Europe, General James L. Jones; Italian Chief of Defense Admiral Giampaolo Di Paola; Estonian Chief of Defense Vice-Admiral Tarmo Kouts; The Honorable Michael W. Wynne, U.S. Under Secretary of Defense for Acquisition, Technology, and Logistics; The Honorable Dale Klein, Assistant to the U.S. Secretary of Defense for Nuclear, Chemical and Biological Defense Programs; Mr. Marc Perrin de Brichambaut, Director for Strategic Affairs of the French Ministry of Defense; Dr. Linton Wells II, U.S. Assistant Secretary of Defense for Networks and Information Integration; Bruce George, MP, Chairman of the Select Committee on Defense of the British House of Commons; and Dr. Ing. Bacharuddin Jusuf Habibie, former President of Indonesia.

Principal Sponsors of the Twenty-first International Workshop on Global Security

Principal sponsors. The principal sponsors of the Twenty-first International Workshop were:

- *BDLI (The German Aerospace Industries Association)* including BDLI members Rolls-Royce Deutschland Ltd & Co. KG; Liebherr Aerospace Lindenberg GmbH; Airbus Deutschland GmbH; Military Aircraft, EADS Deutschland GmbH; and the ILA Berlin Airshow;
- Northrop Grumman Corporation;

- U.S. Department of Defense (Under Secretary of Defense for Acquisition, Technology, and Logistics; Assistant Secretary of Defense for Networks and Information Integration; the Office of the Director of Net Assessment in the Office of the Secretary of Defense; the Defense Threat Reduction Agency; and the National Defense University);
- *Center for Strategic Decision Research,* which founded the Workshop series and has presented the Workshops annually for twenty-one years.

BDLI (The German Aerospace Industries Association). In his triple role as President of BDLI, co-CEO of EADS (European Aeronautic Defense and Space Company), and Honorary Chairman of the *Twenty-first International Workshop on Global Security*, Rainer Hertrich presented the Workshop opening address. At BDLI, Mr. Hans-Joachim Gante, Managing Director, together with Mirja Schueller, Dr. Ekkehard Muenzing, Alexandra Friedhoff, and Gaby Haun, were tremendous partners in planning both Workshop and related events. At EADS, we much appreciated the encouragement and support of co-CEO Rainer Hertrich and other senior executives including Thomas Enders, Aloysius Rauen, Wolf-Peter Denker, Joerg Liester, and Stefan Zoller. We would also like to acknowledge all those who worked with us in arranging the post-Workshop visit to the ILA Berlin Air Show, including ILA Marketing and Sales Director Zoltan Ivan.

Northrop Grumman Corporation. After many years as a leading sponsor of the international Workshops, Northrop Grumman became a Principal Sponsor for the first time this year. Under the leadership of David Stafford, as well as K.C. Brown, Michael Landrum, Harry Pearce (who has since retired), and James Moseman, Northrop Grumman encouraged the development of the Workshop in many important ways: It helped broaden and strengthen the Workshop senior military dimension and its emphasis on Alliance transformation, especially for Network-centric operations. We also appreciate the participation of Northrop Grumman Information Technology, including the very active participation of Kent Schneider, Tom Baker, and Vince Roske (who was a Workshop participant and supporter for many years as a senior executive at the U.S. Joint Chiefs of Staff).

Under Secretary of Defense for Acquisition, Technology, and Logistics. In the Office of the Under Secretary of Defense, we are grateful for the advice and support of Under Secretary Michael Wynne (acting), Captain William Porter, Alfred Volkman—who developed and chaired the panels on international cooperation over the last several years, Robert Bruce, Roger Golden, Seth Wilson, Colonel Rodney Schmidt, and Karen Kay. We also appreciated the efficient assistance of Rita Bidlack.

Assistant Secretary of Defense (Networks and Information Integration). Thanks to Acting Assistant Secretary Linton Wells II, Robert Lentz, Sal Manno (now retired), and Tim Bloechl, Network-centric operations have become a key component of the internationals workshops. We also appreciate the helpful administrative support of Lieutenant Colonel Richard Palermo and Cecilia Jones.

Defense Threat Reduction Agency. We appreciate the considerable and very active support of DTRA Director Dr. Stephen Younger (until his return to Los Alamos Laboratories earlier this year), DTRA Acting Director Major General Trudy H. Clark, Mr. Doug Englund, and Lieutenant General Robert Chelberg. At every opportunity, Colonel (ret) Robert Dickey facilitated our efforts on this project.

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National Defense University. At the National Defense University (NDU), we appreciate the encouragement of the NDU Foundation as well as Dr. Hans Binnendijk, Director, Center for Technology and National Security Policy; Mr. C. Stanley Romes, Chief of Staff, Joint Forces Staff College; Frank

Cerjan.

Eversole of the NDU Foundation; and, especially, NDU former President Lieutenant General Paul

Major Workshop Sponsors

Alenia Aeronautica S.p.A. We greatly appreciate Alenia Aeronautica's continued sponsorship support, this year's Workshop address by Chairman and CEO Ing. Dr. Giorgio Zappa, and the long-term interest and encouragement of Riccardo Rovere and Carmelo Cosentino.

Boeing Company. In addition to his contribution to Al Volkman's international cooperation panel, Eugene Cunningham (Regional Director-Europe, International Business Development, Boeing Military Aircraft and Missile Systems) led a strong Boeing delegation comprising Fred Spivey, Kees Blekxtoon, as well as Viktor Kucera of the Boeing Company's Czech partner Aero Vodochody. We also appreciate the administrative support of special assistant Kim King, and the continued interest and encouragement of Senior Vice President Thomas Pickering.

General Dynamics Corporation. From General Dynamics Corporation, Tom Leris, Director of International Marketing for Europe, and General George Joulwan, Member of the General Dynamics Board of Directors and former Supreme Allied Commander Europe, were especially valued contributors. As NATO's Supreme Allied Commander Europe, General Joulwan encouraged the Workshop to advance his vision—now a reality—of opening the Alliance to the countries of Central Europe, the Baltic Region, Ukraine, and Russia. Over the last decade, in fact, General Joulwan has played a vital role of Workshop leadership. We appreciate the continued interest of executives Fred Axelgard and Vice President William Schmieder.

MITRE Corporation. We appreciate MITRE's two decades of support for the international workshops on global security, the contributions over most of this period by John Quilty (now retired) and the enthusiasm of his successor Raymond Haller, Vice President at the Washington C3 Center.

SGI. Again this year, Silicon Graphics, Inc (SGI) demonstrated its visualization supercomputer system. Senior Vice President Steve Coggins, SGI Director for Government Affairs-North America Benn Stratton, Air Vice Marshal (ret) Mike Jackson, and Vasiliy Suvorov of IBS/Luxoft (Moscow) led the planning and presentation of SGI technology.

Iridium Satellite LLC. From Iridium Satellite, a Workshop associate sponsor, Chairman and CEO Carmen Lloyd, as well as Vice President Rear Admiral (ret) Denny Wisely contributed actively to Workshop organization and planning.

Sponsoring Governments. With special thanks this year to the Federal Republic of Germany, we would like to acknowledge the governments which, over two decades, contributed to the workshop series: Czech Republic, Kingdom of Denmark, Federal Republic of Germany, Republic of Greece, Republic of Hungary, Kingdom of the Netherlands, Kingdom of Norway, Republic of Poland, Republic of Portugal, Ministry of Defense of Austria, Ministry of Defense of Italy, and the Canadian Armed Forces.

Workshop Patrons, Advisors, and Participants

Workshop Patrons and Honorary Chairmen. We are grateful for the encouragement and support of the Workshop Honorary Chairman, Mr. Rainer Hertrich, Co-CEO of EADS (European Aeronautic Defense and Space Company) as well as the contributions of past Patrons and Honorary Chairmen:

His Excellency Dr. Werner Fasslabend, Member of the Austrian Parliament and former Minister of Defense;

His Excellency Aleksander Kwasniewski, President of the Republic of Poland;

His Excellency Vaclav Havel, Former President of the Czech Republic;

His Excellency Rudolf Scharping, Former Minister of Defense of Germany; His Excellency Jan Troejborg, Former Minister of Defense of Denmark; His Excellency Arpad Goencz, Former President of Hungary; His Excellency Volker Ruehe, Former Minister of Defense of Germany; General George Joulwan, Former Supreme Allied Commander Europe and Honorary General Chairman; General Jack Merritt, Former Workshop Honorary General Chairman.

Advisory Board. For their many contributions in developing and structuring the agenda, themes, and other dimensions of the Workshop over the years, we would like to warmly thank the Workshop's Advisory Board:

His Excellency Valdas Adamkus, President of Lithuania His Excellency Dr. Valdis Birkavs, Member of the Parliament of Latvia, former Prime Minister Dr. Hans E. Birke, Deutsche Bahn AG Dr. Manfred Bischoff, Member of the Board of Directors, EADS Lieutenant General Paul Cerjan (Ret.), Former President, National Defense University Ambassador Javier Conde de Saro, Ambassador of Spain to Japan Mr. Eugene Cunningham, General Manager, International, Boeing Military Aircraft and Missile Systems His Excellency Mikulas Dzurinda, Prime Minister of Slovakia Dr. Thomas Enders, Executive Vice President, EADS The Honorable Gordon England, Secretary of the U.S. Navy His Excellency Dr. Werner Fasslabend, Member of the Austrian Parliament and former Minister of Defense Mr. Hans-Joachim Gante, President, BDLI (German Aerospace Industries Association) Dr. Robert Hermann. Former U.S. Assistant Secretary of the Air Force Mr. Rainer Hertrich, Co-CEO of EADS (European Aeronautic Defense and Space Company) General George A. Joulwan (Ret.), Former Supreme Allied Commander, Europe Ambassador Karel Kovanda, Czech Permanent Representative on the North Atlantic Council Admiral Jacques Lanxade (Ret.), Former Chief of Defense of France His Excellency Linas Linkevicius, Minister of Defense of Lithuania General Jack N. Merritt (Ret.), President Emeritus, Association of the United States Army General Klaus Naumann, Former Chairman of NATO Military Committee Ambassador Jaromir Novotny, Czech Ambassador to India Dr. Andrey Piontkovskiy, Director, Strategic Studies Center, Moscow Mr. Harry Pearce, Retired Vice President, Northrop-Grumman International Mr. John S. Quilty, Retired Senior Vice President, MITRE Corporation Ambassador Jean de Ruyt, Ambassador of Belgium to Italy General John Shalikashvili (Ret.), Former Chairman of the Joint Chiefs of Staff General of the Armed Forces Jirí Sedivy (Ret.), Former Chief of Defense of the Czech Republic Lieutenant General Joern Soeder, ISAS Institut fur Strategische Analysen Mr. David F. Stafford, Sector Vice President, Business and Strategy Development, Northrop Grumman His Excellency Borys Tarasyuk, Former Foreign Minister of Ukraine Ambassador Ålexandr Vondra, Former Deputy Foreign Minister of the Czech Republic Mr. John Weston, Chairman, Spirent PLC Ing. Dr. Giorgio Zappa, Chairman and CEO, Alenia Aeronautica S.p.A.

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Mr. Axel J. Arendt, Chairman, Rolls-Royce Deutschland;
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Dr. Hans Birke, Head of Political Affairs, Deutsche Bahn AG;
Mr. Kees Blekxtoon, The Boeing Company;

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Dr. Andrei Piontkovskiy, Director, Strategic Studies Center, Moscow; Captain Michael Porter, USN, Office of the Under Secretary of Defense, Acquisition, Technology, and Logistics; Mr. Ahmad Watik Pratiknya, Director, The Habibie Center (Indonesia); Mr. John Quilty, Senior Vice President and Director, MITRE Corporation; Ing. Gen. de l'Armement Robert Ranquet, Deputy Director of Strategic Affairs, French Ministry of Defense; Mr. C. Stanley Romes, Chief of Staff, Joint Forces Staff College, National Defense University; Mr. Vincent Roske, Senior Director, Modeling Simulation and Analysis Division, Northrop Grumman; Brigadier General Peter Schelzig, Assistant Chief of Staff, Concepts and Operations, German Air Force; Mr. Juergen Schnappertz, Deputy Head of the Planning Staff, German Ministry of Defense; Mr. Kent Schneider, President, Defense Enterprise Solutions, Northrop Grumman Information Technology; General of the Armed Forces Jiri Sedivy, Former Chief of the Czech General Staff; Colonel Michael Shepard, Defense Threat Reduction Agency; Colonel General Aleksandr Skvorzov, Deputy Chief of General Staff, Russian Federation Armed Forces; Mr. Fred Spivey, Director, International Business Development, The Boeing International Corporation; Mr. David F. Stafford, Sector Vice President, Business and Strategy Development, Northrop Grumman Integrated Systems; Mr. Benn Stratton, Director, Government Affairs, SGI North America; His Excellency Peter Struck, MdB, Minister of Defense of Germany; Mr. Vasily Suvorov, Chief Technology Officer, IBS/Luxoft (Moscow); His Excellency Nikolai Svinarov, Bulgarian Minister of Defense; Mr. Eric Utembayer, Deputy Director of the Security Council of the Kazakh Republic; Major General Ruud Van Dam, Assistant Chief of Staff for C4I, Supreme Allied Command Transformation; Mr. Alfred Volkman, Director for International Cooperation, Under Secretary of Defense, Acquisition and Technology; Dr. Hans-Heinrich Weise, Deputy Director General of Armaments of Germany; Dr. Roger Weissinger-Baylon, Workshop Chairman and Founder, and Director, Center for Strategic Decision Research; Dr. Linton Wells II, Acting Assistant Secretary of Defense, Networks and Information Integration; Ambassador Dr. Philippe Welti, Director for Security Policy, Swiss Ministry of Defense; Mr. Frank Wiemann, Vice President, European Region, Northrop Grumman International; Mr. Seth Wilson, Office of the Under Secretary of Defense, Acquisition, Technology, and Logistics; Rear Admiral Denny Wisely (Ret.), Iridium Satellite LLC; General Richard Wolsztynski, Chief of Staff of the French Air Force; The Honorable Michael Wynne, U.S. Under Secretary of Defense, Acquisition, Technology, and Logistics (acting); Ing. Dr. Giorgio Zappa, Chairman and Chief Executive Officer, Alenia Aeronautica S.p.A; Mr. Stefan Zoller, EADS Defense and Communications Systems.

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Charlottenburg Palace. We are grateful to Berlin and Brandenburg for permitting the Workshop to present a special dinner in one of their great monuments: The baroque palace of Charlottenburg. During a walking tour of the Royal Apartments, Eichengalerie, Palace Chapel, Great Oak Gallery, and the Porcelain Room, the Taffanel Woodwind Quintet presented a baroque music concert. We warmly thank Dirk Ueberhorst at Schloss Charlottenburg for helping arrange a truly memorable evening for the Workshop.

Hotel Palace Berlin. The Hotel Palace Berlin, chosen for the third time as the Workshop venue, brought impressive facilities to this year's Workshop and a splendid new conference room wing. We received fine support from the entire staff including Kathrin Philipp, Kati Koschig, Marietta Hermann, and especially General Manager Kurt Lehrke.

Workshop International Staff. As Deputy Director of the Center for Strategic Decision Research, Anne Baylon was responsible for developing, planning, and coordinating the Twenty-first Berlin Workshop, as well as editing this volume and preparing it for publication. Mrs. Kerstin Schelhorn-Piontek guided a truly unique program for Workshop spouses. For the past six years, Dr. Lin-Hua Wu has served with excellence as the Workshop director. The Workshop would not be the same without her.. Much of the Workshop's success is the result of the dedication and hard work of the Workshop staff: Eugene Whitlock, Jean Lee (graphics and photography), Britta Schultheis, Jens Domberg, Shishir Verma, Annette Birke, Caroline Baylon, Nicoletta Schaefer, and Carol Whiteley.

Menlo Park, California and Paris, France

October 2004

Overview Perspectives on Global Security

Dr. Roger Weissinger-Baylon

If the assassination of Franz Ferdinand, Archduke of Austria, in Sarajevo in June 1914 was the immediate cause of World War I and the Pearl Harbor attack of 1941 precipitated the entry of the United States into World War II, the terrorist attack at the Twin Towers on the 11th of September 2001 in New York could be considered as the beginning of the Global War against Terrorism. Professor Dr. Ing. Bacharuddin Jusuf Habibie, former President of Indonesia

September 11 Like Sarajevo in 1914? September 11 has had such profound political effects that the attacks on the World Trade Center and Pentagon have been likened to Pearl Harbor. Perhaps the more apt comparison, however, might be Sarajevo in 1914 (Binnendijk). Like Sarajevo, the September 11 attacks have set in motion a chain of unpredictable, powerful forces which have already sparked two wars: Afghanistan and Iraq. Since September 11, serious terrorist attacks have struck Saudi Arabia, Morocco, Russia-Chechnya, India-Pakistan, and Indonesia, while the security situation is deteriorating in the Philippines and other areas. Western Europe is by no means a safe haven, since the Madrid train bombing went "way beyond what European countries have experienced in contemporary times short of total war" (Gen. Kujat, Hertrich). Southern European countries, in particular, feel especially exposed (Adm. Di Paola). If the Iraq War or other conflicts continue to polarize Arab and Islamic societies against the West, the violence could get worse (Fasslabend).

A potential threat to civilization. Compared to the fires sparked by Sarajevo, however, those of September 11 may be spreading in deceptively slow motions, so the danger will continue for many years. We know neither *where* nor *when* terrorists will strike or *if* there will be another attack like September 11 (or a worse one). And compared to 1914, the current danger could be graver: Al-Qaeda is a threat, the menace of a clandestine nuclear attack is "serious and present now" (Klein), and a large-scale terrorist attack, somewhere on the globe, is virtually inevitable (Chandra, George). Given this nuclear risk and other serious dangers, former SACEUR General George Joulwan warns that hyper-terrorism potentially threatens our civilization.

A call for a joint response. Addressing these threats requires a joint response by the U.S., Europe, and the rest of the globe. Yet, developing the vitally needed international support and resources is an ongoing challenge as there is a serious and "growing gap between member-nations' stated political ambitions and their willingness to provide proper resources for the operations" (SACEUR Gen. Jones). President Bush's recent decision to withdraw 70,000 to 100,000 troops from Europe and Asia will serve perhaps as a helpful "wake-up call" and encouragement to these regions to assume greater responsibility for their own security.

NEW KINDS OF GLOBAL STRATEGIC THREATS

Osama Bin-Laden and Al-Qaeda. It would be a grave mistake to forget that the tragic attacks of September 11 were planned and executed by Osama Bin-Laden and Al-Qaeda. The Al-Qaeda menace continues to be a threat. In recent decades, moreover, much of the Islamic society has been awakened by (a) the Iranian revolution (b) oil wealth in Middle East Arab states, c) the success of Islamic fighters including the Taliban in forcing Russia out of Afghanistan, (d) and the perception of grossly unfair behavior toward Palestine. In such an environment, Al-Qaeda's vision "to coordinate, control and command the world Islamic society through a *Global Caliphate* and, maybe later, through the Western-inspired system of nation-states" continues its appeal (President Habibie).

WMDs, religious or ethnic hatred, rogue states, asymmetric threats. Al-Qaeda is by no means the only threat, however. We are facing a very broad range of serious global dangers of a new kind. Of these, the gravest appears to be weapons of mass destruction especially at the hand of terrorists living in environments of religious or ethnic hatred, or their possible use by rogue states (Min. Bezhuashvili, Amb. Burns, Chandra, Adm. Di Paola, George, Gergorin, Gen. Joulwan, Klein, Min. Linkevicius, Min. Struck).

Asymmetric threats are no longer limited to terrorists or rogue states. In the post-September 11 world, asymmetric threats could become the norm. In fact, both the "proliferation of WMDs and the growing capabilities gap between actors are causing a shift toward asymmetric threats" (Gen. Kujat). Since WMDs are so effective a means for small countries to project power and achieve influence, General Kujat argues that "no developing nation will want to compete militarily with developed countries in the traditional way when WMDs are inexpensive force equalizers." The Iraq War, for example, is a striking demonstration of the effectiveness of asymmetric attack (Gen. Wolsztynski). And even areas such as the Black Sea are vulnerable to asymmetric threats with cargo or passenger vessels as possible targets (Amb. Khandogiy).

Broader views of the global threats. German Defense Minister Peter Struck, for his part, describes a far broader menace that may arise "whenever religious hatred, weapons of mass destruction, and terroristrelated fanaticism blend with poverty, ethnic antagonism, and faults in social structures." Other experts and leaders also describe an extremely wide range of threats:

- "smuggling of drugs and weapons; human trafficking; illegal migration" (Min. Bezhuashvili);
- "failed states; small but fanatical terrorist groups; weapons of mass destruction; the huge increase in international crime; narcotics flows; trafficking in human beings; global climate change; AIDS" (Amb. Burns);
- "terrorism and proliferation of weapons of mass destruction fostered by rogue states or failed states; religious fanaticism and organized criminal groups; illegal trafficking of weapons, drugs, and human beings; uncontrolled movements of peoples which, in some cases, become mass migrations; ethnic and religious conflicts; fights for natural resources control" (Adm. Di Paola);
- "terrorism and the proliferation of WMD; ethnic bloodshed; rogue regimes; failing states; religious hatred; frozen conflicts; economic deprivation; water and food shortages; organized crime; corruption of state bureaucracies" (Min. Linkevicius);
- "Global confrontations of religious fundamentalism with the ongoing progress and modernization-processes of the world" (President Habibie).

The broad concerns expressed by these government, diplomatic, and military leaders, emphasize poverty, economic inequality, global warming and other climatic changes, spread of diseases including Avian Flu (Chandra); natural disasters, scarcity of water, food, and natural resources (Gen. Sedivy); organized crime, human and drug trafficking (Gen. Kujat); cyber attacks on infrastructures and other targets (Lentz, Wells); conflict between religious fundamentalism and progress, and the perception of injustice toward Palestine (President Habibie). Some of these dangers such as those arising recently from religious or ethnic conflicts in Kosovo can be exacerbated by shortages of intelligence on the emerging threats (SACEUR Gen. Jones).

RESPONDING TO THE NEW DANGERS

Confronting the global security paradox. Facing these broad and grave dangers leads to the *global security paradox:* An increasingly interdependent world must come together to address a common security threat, when "differences and inequalities between our societies are growing rather than diminishing" (Amb. de Ruyt), and national views on how to address security are actually diverging.

Fortunately, most countries *do* agree on the need for a joint response. In the words of Minister Struck, "joint risks require joint responses" and General Joulwan emphasizes that it is "equally important that we meet today's threats not alone but together." There is also agreement on the need for broad and effective cooperation at all levels, regionally (Gen. Wolsztynski) and with each of the principal international organizations: The UN, NATO, the EU (Min. Linkevicius, Amb. Burns), the OSCE and G-8.

Why the U.S. tends to prefer military force. Since September 11, the U.S., the U.K., and other allies have preferred to fight terrorism with military power (including complementary approaches such as cutting the flow of funds to terrorist groups, or tightening controls on the movements of people and goods). When crises arise on short notice, military force is often the most effective option available or even the only one (Perrin de Brichambaut, Amb. de Ruyt). Moreover, since the "ability to engage in armed conflict is the ultimate instrument of state power" (Gen. Kujat), it should be no surprise that the U.S., as the sole superpower, might have a bias in favor of military force.

Since high-technology is expensive, however, the U.S high-tech forces are less-suitable for long-term stabilization and sustained peacekeeping efforts (Adm. Betermier). In an ideal scenario, U.S. forces would take the lead in high-intensity warfare and allies would back them up with peacekeeping and stabilization forces (Wynne). In order for the U.S. to be fully effective, therefore, it needs Allies to play the necessary complementary roles which may imply long-term peacekeeping commitments in countries such as Afghanistan, Kosovo, and Iraq.

The Marshall Plan or Harmel Report as models—why some countries prefer them. Germany, France, possibly Italy, and some other European nations strongly believe in combating terrorism with a broad combination of political, economic, and military means. They cite the success of this approach by the United States at the end of WWII: As a military response to the Soviet threat, the U.S. worked with its Allies to establish NATO; as a political and economic means of reducing support for Communism in Western Europe, the U.S. established the Marshall Plan (Gergorin). Admiral Di Paola suggests a somewhat similar model, the Harmel Report, which inspired NATO to develop a strong defense against the Soviet bloc while seeking cooperation and dialogue. General Naumann advocates a variant on Harmel: "Conflict prevention through dialogue and cooperations" in order to promote and develop "human rights, civil liberties, and market reforms." European countries, including some of the larger ones, also prefer non-military solutions for the practical reason that their military capabilities are limited (Maulny).

Overview

How countries actually make decisions: An organizational decision-making perspective. According to theoretical views developed by some observers of government decision making (Cohen, March and Olsen¹), leaders facing "conditions of ambiguity" similar to those that arose unexpectedly after Sept 11 will not always search for, develop, and implement a so-called *optimal* strategy. More typically, government decision makers would respond to such a major terrorist threat by matching the new "problem" to a set of already existing "solutions" that were previously developed for unrelated situations but continued to be advocated within the bureaucracy (March and Weissinger-Baylon²). Under such conditions of ambiguity, the decision process is sometimes highly *non-optimal* and matches of "problems and solutions" can be extremely imperfect. Thus, the Iraq War, which was strongly advocated by neo-conservatives for many years, was matched as the "solution" to the hyper-terrorist problem even though there was no obvious connection between September 11 and Saddam Hussein. Once the Iraq War was matched as a "solution" to the September 11 problem, most countries only had the limited choice of either (a) supporting the war or (b) not supporting it.

Given the recent dramatic changes in the international security situation, it is not surprising that decision-making reform, at strategic and tactical levels, is one of the Alliance's challenges. According to SACEUR General James Jones, it may be especially useful "to re-examine the way [the Alliance] makes decisions in light of the NATO Response Force's (NRF) expeditionary capability."

Creating new capabilities: A NATO Stabilization and Reconstruction Force. While the NRF can help to win wars, the conflicts in Afghanistan and Iraq have made clear that new capabilities are needed to "win the peace." Consequently, NATO should establish stabilization and reconstruction units that train together in advance so that they can be prepared to deploy on relatively short notice (Binnendijk).

THE NEAR-TERM: KOSOVO, AFGHANISTAN, AND IRAQ

Since joint approaches will become increasingly vital in responding to the vast range of threats, it is important to learn from the experiences of the U.S. and its allies in the most recent conflicts: Kosovo, Afghanistan, and above all Iraq. After initial efforts to seek political solutions in each of these countries, the U.S. and its allies intervened with force, and achieved quick military successes. Subsequent stabilization and peacekeeping efforts, however, have proven to be a considerable challenge, while adequate funds for rebuilding the countries have been hard to come by.

Kosovo and Afghanistan

Kosovo: The Need to Block Organized Crime. At some considerable cost in lives and suffering (and relations with Russia), military efforts by the U.S. and its NATO Allies successfully blocked Slobodan Milosevic on his violent path, eventually brought him and other war criminals to trial at The Hague, and ended the atrocious ethnic cleansing in the region. Once again, borders in the Balkan region are stable and Serbia no longer threatens its neighbors. Yet recent bloody demonstrations in Kosovo suggest that the situation is still not under control there or in any of the Balkan countries in which NATO or the UN intervened militarily. With the possible exception of Macedonia, all of these countries are experiencing pervasive politi-

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Cohen, Michael D., March, James G., and Olsen, Johan P. "A Garbage Can Model of Organizational Choice." Administrative Science Quarterly 17(1972):1-25.

March, James G. and Weissinger-Baylon, Roger (eds.). Ambiguity and Command: Organizational Perspectives on Military Decision Making Marshfield, Mass.: Pitman, 1986.

To avoid a repeat of the Kosovo demonstrations, SACEUR Gen. Jones has called attention for greatly improved operational intelligence in the country as well as a reduction in national "caveats" that limit the effective employment of NATO forces there. It is vital that his requests be heeded.

Afghanistan: The Need for Stabilization and Assistance in Rebuilding. In Afghanistan, the initial operations by the U.S. and its allies in response to September 11 quickly defeated the Taliban as a significant military force and enjoyed broad international support. Al-Qaeda training camps no longer export terrorism with impunity. These initial successes were impressive. A considerable challenge remains, however, since armed resistance continues outside of Kabul, and large parts of the country lie in the hands of warlords. The country needs to be made safer so that NGOs can operate there (Doctors Without Borders was recently forced to leave). And international assistance for rebuilding Afghanistan must be increased.

Operations by the U.S. and NATO. In this difficult context, U.S. operation Enduring Freedom continues high-intensity fighting in the country, while searching for Osama Bin Laden and other Al-Qaeda and Taliban leaders. For NATO's ISAF, a major challenge is to help expand the "authority of the Afghan Central Government beyond the environs of Kabul alone, without which it is difficult to see how they will govern" (CINC Allied Forces North Gen. Back). Initially, ISAF plans to move north and, at some point might wish to fuse with Operation Enduring Freedom. (Min. Linkevicius and others have praised efforts to combine security operations with reconstruction, but many NGOs strongly object to the concept which increases their risks by blending the difference between security and reconstruction.) In the near-term, a major task is to support the democratic process leading up to the October elections, which Gen. Kujat has called strategically vital.

One telling example: Afghanistan's increasing opium production. The dangerous conditions in Afghanistan and the insufficient international support for rebuilding are leading to unfortunate side effects. For example, farmers are returning to opium poppy production, which is reaching record levels and is the source of nearly all U.K. heroin. Afghanistan's poppy cultivation provides financial support to both warlords and terrorist-like groups, contributing to a vicious cycle whereby it becomes still harder to make the country safe or bring in more international aid. According to General Kujat (and others as well), moreover, this drug smuggling is a major security threat in its own right.

Iraq: Learning from the War

A crisis of confidence for the Alliance. Unlike the Afghanistan war against the Taliban and Al-Qaeda, the Iraq war was not a direct response to the September 11 attacks on the World Trade Center and the Pentagon. In fact, the war "plunged the Alliance into a crisis of confidence and disunity" (Amb. Burns) and the U.S. found it hard to assemble a sufficiently broad international coalition for the Iraq invasion. Disputes over the Iraq War could even be a deciding factor in the U.S. Presidential election.

An impressive tactical success. The initial phase of the Iraq war seems to have been a brilliant tactical success, since the U.S.-led coalition defeated Iraqi forces quickly and decisively with relatively limited casualties among its own soldiers. As the first network-centric war (Stafford), moreover, the Iraq conflict confirmed the potential of Global Hawk and other new Command and Control technologies. There were also useful lessons: The war showed that forces that have not yet been modernized and transformed also need connectivity and situational awareness (Gen. Joulwan, Asst. Sec. Wells).

Some strategic implications. From a *strategic* point of view, the war cost the U.S. and its allies enormous international good will. The Iraq War may even have increased the danger of global terrorism by facilitating recruiting by Al-Qaeda and other international terrorist groups (Gen. Mehta, Gergorin). Since April

2004, reports of mistreatment of Iraqi war prisoners have added to the ill-will against the coalition. According to Dr. Werner Fasslabend, the international reaction to the mistreatment is so strong that the U.S. could eventually lose its global dominance if it does not address these issues effectively.

Learning from the war. In Iraq, the coalition lost priceless opportunities for good will by being too slow in providing the much-promised democracy, restoring public services, re-establishing a functioning economy, and offering sufficient security to permit ordinary Iraqis to go about their daily lives without fear. Some of these opportunities were lost through *overconfidence*: The U.S.-led coalition expected an enthusiastic welcome by an Iraqi population overjoyed to see the end of Saddam Hussein's brutal dictatorship. The coalition also anticipated and planned on quick victory with a small, highly-equipped and well-trained force, but which was not large enough to provide stability and peacekeeping following Saddam Hussein's defeat.

Opportunities for better relations with the Iraqi people. While some opportunities have been lost irretrievably (it is too late to guard already-plundered museums or protect weapons dumps), there are still many opportunities for improved relations with the Iraqi people:

- Coalition political and military leaders must show understanding and concern for the Iraqi people, language, culture, and religion as well as their lives, property, self-respect, and well-being.
- Iraq should be treated as a respected member (or future member) of the international community and not as a "semi-occupied" country. As Minister Struck notes, it would be hard "for a quasi-occupant to bring peace to the country and to conduct nation building successfully."
- Iraq should receive adequate and timely financial support for rebuilding (as of June 2004, most contracts were awarded from Iraq's own petroleum income, often to U.S. firms and at much higher costs than those typically charged by Iraqi companies.)
- Precious mosques, museums, historic sites, artifacts, and documents must be protected;
- The rebuilding of the Iraqi army must continue. (Its earlier disbanding led to the unemployment of large numbers of militarily-trained young men with access to weapons.)
- Former Baath party members should have access to positions of influence since their professional skills may be helpful (or even vital).
- The UN, NGOs, and key international organizations need a secure environment so they can safely return to Iraq.

Overstretched forces: Reducing the risks. The Iraq War has led to requirements for more troops. In the U.S., for example, a large fraction of ground forces is either committed to Iraq already, deployed to other areas of crisis or potential crisis, or in the process of recovering from or training for deployment. Since few European countries, or other allies, are both willing and able to send large numbers of troops to Iraq, resourceful solutions are being proposed:

- *Withdrawal of U.S. troops from Europe and Asia.* President Bush has announced that troops will be withdrawn from Europe and Asia. These withdrawals would potentially permit the U.S. to reposition forces in Bulgaria, Romania, in the Caucasus region, or perhaps in Iraq.
- *Proposed NATO mission in Iraq.* The U.S. has proposed "turning the Polish-led division in Iraq into a NATO operation" (Amb. Burns).
- Using the Response Force outside the NATO structure. The NATO Response Force could be sent as a non-NATO mission, outside the NATO structure, and under the command of a British general with a British brigade in reinforcement. (However, SACEUR General James Jones has noted that the NATO force should only be used for relatively short missions.)

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• *European training of Iraqi troops.* France, Germany, and other European countries may be able to train Iraqi troops even if they are unwilling to commit combat forces.

Such measures would help the U.S. and its Allies retain the necessary military capabilities to respond if an important friend, such as Saudi Arabia, were to call for assistance or if Iran were to race forward toward developing a nuclear weapon.

THE LONGER TERM: THE MIDDLE EAST, RUSSIA, THE BLACK SEA AND CAUCASUS REGION, UKRAINE, AND CHINA

In the future, security issues will become increasingly important in the Middle East, Russia, the Black Sea and Caucasus, Ukraine, and especially China. Given the high cost of recent conflicts in the Balkans, Afghanistan, and Iraq, the development of successful relations with such regions is vital, because the stakes are even higher.

The Middle East: The Need to Resolve the Israel-Palestine Conflict

The Israel-Palestine conflict as the central issue. The Israel-Palestine conflict is the central problem in the Middle East (Adm. Di Paola) with wide effects throughout the entire Muslim world. In the assessment of German Defense Minister Peter Struck, "it is an illusion to think that genuine progress is possible anywhere in the region without solving this core problem." In Iraq, the Middle East, or anywhere else in the Muslim world, the U.S. and its various partners can only succeed if the Israel-Palestine conflict is resolved. A measure of gravity of the Israel-Palestine conflict is the growth in suicide-bombing which, according to President B. J. Habibie, "should not be considered as an Islamic act of confrontation or war but more as a reaction to the injustice in solving the Palestine problem."

Why the U.S. is not trusted to broker a solution. A solution to the Israel-Palestine conflict will require a road map, two states, and land for peace. But while the U.S. alone has the necessary superpower status to impose a solution on the Israelis and Palestinians, the U.S. is not currently perceived as an "honest broker" in negotiating peace between the two parties because it is locked into a position of support for the policies of Israeli Prime Minister Ariel Sharon (Gen. Naumann, George, Fasslabend). In order to move forward, the U.S. needs to demonstrate that it can be a neutral mediator between both sides.

Russia: Putting Past Rivalries Behind

The need for a closer relationship. Relations with Russia are key to European security. With its vast political, geographic, and historical influence, Russia has important contributions to make (Min. Struck) and no longer represents a danger to the West (George). As Ambassador Burns proposes, we should "set our sights on a closer relationship that will put our past rivalry behind us forever."

Prospects for cooperation with the U.S., EU and NATO. In order to modernize Russia, President Putin wants to develop cooperation with the U.S. and the EU. The events of September 11 gave him an opportunity to do so by joining the global war on terrorism (Meckel). In accepting the enlargement of the EU and NATO, President Putin is showing impressive pragmatism, especially since the country's military leaders continue to see NATO as directed against Russia. Russia and NATO are making progress through a large and successful program of joint exercises (Stafford) and on planning for TMD cooperation (Gen. Kujat). NATO needs to help Russia deal with its outdated strategic concept, based on the Cold War (Meckel), and "the deployment of huge armies and massive military hardware" (Amb. Cede). Minister Linkevicius offers additional proposals: A Russian peacekeeping brigade under NATO, or a NATO/Russia training program in Kaliningrad. *Chechnya.* As a result of the harsh methods employed by the Russian armed forces, most of Chechnya has turned against Russia just as many Iraqis have turned against the coalition troops. Terrorism is typically a means to "pressure political leaders toward a specific political end" (President Habibie, Piontkovskiy). In Chechnya, however, the goals of terrorists seem to have evolved from the goals of autonomy or independence to destroying Russia itself. Russia must end the abuses by its armed forces and negotiate with any responsible leaders within Chechnya provided that they are willing to forgo terrorism (Piontkovskiy).

The Black Sea Region and the Caucasus Strategic Corridor

Strategic importance of the Black Sea. The Black Sea region, which includes such strategically important countries as Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine, is vital as a transit corridor for oil and gas from the Caspian Sea. For most countries in the region (Russia and Turkey are the only exceptions), the Black Sea offers the only maritime access to the Mediterranean.

BLACKSEAFOR, the Black Sea Economic Forum, the EU, and NATO. To achieve security and prosperity, the states of the Black Sea Region are pooling their efforts leading to the BLACKSEAFOR and the Black Sea Economic Cooperation organization (BSEC). Based on the success of BLACKSEAFOR, Ukraine has proposed giving it a permanent command center. As to Bulgaria, it has recently hosted a first tactical confidence building annual naval exercise, GALATHEA 2004 (Khandogiy). Bilateral and other multinational forms of cooperation are necessary, too. In fact, Black Sea countries are NATO members or partners (Minister Gonul). With the membership of Bulgaria and Romania in NATO, the Black Sea has become a new frontier for the Alliance. Moreover, Georgia (and certainly other countries in the region) aspire to EU and NATO integration (Minister Bezhuashvili). GUAAM also has an important role to play in the area (Amb. Khandogiy).

In Russia's view, the BLACKSEAFOR, which can operate under UN Security Council or OSCE mandate, is one example of successful regional cooperation. Russia calls for respect of the 1936 *Montreux Convention on the Regime of the Straits* which limits the presence of warships of non-Black Sea countries. The Russian navy is keen not to become "second fiddle" to the U.S. in this vital region (Col. Gen. Skvortsov).

Ukraine. The NATO Alliance has an important partnership with Ukraine, but domestic reforms are needed (Amb. Burns).

China's Key Role in Future Security

A resurgent China will play a key role in future security (George). Given China's rapidly growing importance, NATO has recognized the necessity of enhancing its strategic relationships beyond those with its traditional partners (Gen. Kujat). In the future, Taiwan is an especially likely crisis point, since it lies within the intersection of the interests of two of the greatest future powers: China and the United States. In the future, Eastern Siberia is likely to become a trouble spot, since a weak border separates a relatively small Russian population from China's growing masses and its vast energy needs (Fasslabend).

THE WAY AHEAD—A FEW SUGGESTIONS

"Joint risks require joint responses" (Min. Struck). Given the breadth and gravity of the present dangers, we must "meet today's threats not alone but together" (Gen. Joulwan). This will require broad cooperation among countries at all international levels (regional organizations, the EU, NATO, G-8, and the UN (Amb. Burns, Gen. Wolsztynski, Min. Linkevicius). To be effective, countries must communicate more openly and agree on the equitable sharing of risks and rewards. This should make it possible for countries to work together in "addressing the new challenges of global security...using a broad array of instru-

ments including...military power as a last resort, but involving as well social, economic, and political reforms in the countries of concern" (Amb.Cede).

New scenarios require new ways of thinking (Adm. Di Paola). Since the implications of September 11 are playing out slowly, there is still time to develop more effective response strategies that will actually *lower* the terrorist threat. In the Middle-East, the *ore* problem is the Israel-Palestine conflict: It must be resolved in order to permit progress anywhere else in the region (Minister Struck, George, Gen. Naumann, Fasslabend). Decision makers must plan for future threats that may be very different from those that are costing lives today. Instead threats may arise in unexpected ways from shortages of water or other resources, from global warming or other climatic changes, or from the spread of AIDS, Avian Flu, or other diseases.

Repair trans-Atlantic relations. We must continue to strengthen vital U.S.-Europe ties, which were severely damaged by the Iraq War, for the "European Allies need the U.S. and the United States also needs Europe "(Amb. Burns). In case there was ever a doubt, recent events have demonstrated that neither the U.S. nor Europe has the resources to fight global terrorism on its own. By the same token, the U.K.'s plan to reduce its combat forces in Iraq by one-third—even though it may eventually increase its Afghanistan presence—underscores the danger for the U.S. of depending too much on just one or two allies in a given theater.

Armaments cooperation will strengthen ties. "Armaments cooperation is not only desirable, but...imperative." Programs such as "the Joint Strike Fighter...NATO Alliance Ground Surveillance, Eurohawk" (Wynne) are strengthening international ties, while also contributing to economies of scale (Volkman). More such joint projects are needed: EADS suggests a new heavy transport helicopter as a venture with Boeing or Sikorsky (Hertrich). While export controls may be needed, armaments cooperation also requires trust between allies for arms exports. Today, it is not really the case between the United States and European countries except for the WMD ban (Maulny). In fact, the proposed "Buy American Act" act would actually harm U.S. interests, since the U.S. must allow imports if it wishes to export (George).

More responsibility for European Countries. Countries must reduce the gap between "ambitions and their willingness to provide resources" (SACEUR Gen. Jones). Some countries are already acquiring heavy transport and aerial refueling aircraft, precision guided munitions, and communications capabilities for network-centric operations. Especially after the planned withdrawal of U.S. forces, Europe must assume more leadership for its own defense.

A stronger role for the European Union. Secretary General Javier Solana's new strategy is a key contribution (Gen. Perruche), together with the European Defense Agency, Joint European Battle Groups, and a European Gendarmerie (Min. Alliot-Marie). While Europe's new Defense Agency is a necessary first step in armaments cooperation (Ing. Gen. Ranquet), it needs to become a full-fledged procurement agency (Hertrich).

Transformation of the NATO Alliance. NATO forces must transform from "static to being expeditionary, from having a regional outlook to being global, from...warfare based on masses to warfare based on precision, from a force based on quantity to one on quality" (SACEUR Gen. Jones). So that more than just 3% of forces can be deployed where they are needed, member countries must acquire more heavy transport aircraft, aerial refuelers, network-centric command and control, and other capabilities. The Alliance must better define military requirements—which would permit smaller countries to develop "essential niche capabilities such as command and control; communications; combat service support; chemical, biological, radiological, and nuclear defense; CIMIC; and special forces." Member nations most also close the gap between their "stated political ambitions—as defined by operations currently underway or poised to commence—and their willingness to provide proper resources for these operations." Countries must avoid national caveats—"a cancer that eats away at our operational capability"—since they limit the effectiveness of NATO operations. "Tooth-to-tail" ratios must be increased by introducing modern logistics: up to 40% of deployed forces are unavailable to the tactical commander because they are acting as national support elements (SACEUR Gen Jones). NATO forces in Kosovo and elsewhere need vastly improved operational intelligence and, according to General Kujat, NATO nations need to get better at sharing intelligence with each other and with NATO. Another future step in NATO transformation may be the creation of specialized "Stabilization and Reconstruction Forces" to help "win the peace" (Binnendijk). General Jones recommends that "nations maintain a floor for defense spending of no less than 2% of GDP."

Leverage technology through network-centric operations. Network-centric concepts have proven their importance in operations (Minister Struck, Gen. Kujat, Gen. Jones, Under Secretary Wynne, Wells, Stafford, Maj Gen van Dam). These capabilities leverage powerful commercial information and communication technologies to support combat and post-combat stabilization. During stabilization operations, planning should start in the pre-war period and implementation should begin within weeks after the end of combat. Such networks must be as broad as possible (including, for example, law enforcement or intelligence agencies), and should share information widely, which will require rules to encourage sharing and to assure security. Effective network-centric operations require changing business practices, not just technology (Maj Gen van Dam). They also require close co-operation between the U.S. and its Allies on spectrum use and other areas (Wells).

Set aside past rivalries with Russia and China. If we do not manage the relations with Russia and China successfully, the consequences could be much graver than September 11. Ambassador Burns's suggestion that we "set our sights...on a closer relationship that will put our past rivalry behind us forever" should apply to both Russia and China.

Address the threat of hyper-terrorism. With two-thirds of Al-Qaeda's infrastructure supposedly destroyed by military actions, many believe that terrorism is "on the ropes." Instead, the Iraq War may have played into the hands of terrorists by increasing resentment against the United States and its partners. Al-Qaeda-related groups continue not only to attack but to innovate as shown by the use of cell phones to detonate the Madrid bombs (Cunningham).

The gravest danger—WMDs in the hands of terrorists. We must address the menace of a clandestine nuclear (or other WMD) attack which is "serious and present now" (Klein). Such attacks truly represent a potential danger to our civilization (Gen. Joulwan).

FACING THE FUTURE TOGETHER

It is time to rise to the challenges by facing the future together —which means working with the Alliance (and strengthening its trans-Atlantic dimension) and other international organizations such as the EU, G-8, and UN. Our political leaders must seek new ways of thinking and decision making if we are to understand and resolve the underlying causes of global terrorism and other security threats.

Certainly, such efforts will require not only imagination but vastly greater resources. As one illustration of the scale of such requirements, consider that the political leaders of several countries have called for a \$50 billion annual "poverty tax" on wealthy countries to assist developing nations. While many will recoil at the prospect of such large investments and others will prefer different approaches, the proposed multi-billion dollar poverty tax suggests the necessary scale of responses to the current challenges. It would therefore be wise to heed the warnings of German Defense Minister Peter Struck: "If we fail to invest today in development and stability outside NATO and the European Union, in the Near and Middle East, the Caspian Region, Southern Asia, and parts of Africa, it will bounce back on us as a security problem in Europe and the U.S."

Part One

Chapter 1

Keynote Address

His Excellency Dr. Peter Struck, MdB¹

INTRODUCTION

he topic of this year's workshop, "A Broader Concept of Security for the Twenty-first Century," could not have been more aptly chosen. No matter in which direction we look, be it at the Balkans, the Greater Middle East, or crisis-stricken Africa, one thing is for certain: Security and stability at the beginning of the twenty-first century require more than deterrence, defense, and securing national borders. We can no longer define twenty-first century security in the traditional categories of the twentieth century.

THE NEW WORLD ORDER

Contrary to what many of us expected, the political world that followed the end of confrontation between the major blocs is now going through a phase of disorder, risks, crises, and new dangers. The terrorist attacks in Madrid underscored a new societal vulnerability previously unheard of in Europe. And while no one questions that sweeping changes and substantial increases in security have been achieved in the European stability area through the enlargement of NATO and the European Union, nevertheless terrorism is part of the new security situation that is characterized by increasing risk in the closer and farther proximities of Europe—in the Caucasus, the Middle East, and North Africa.

At a global level, the situation is marked by further flashpoints and new types of threats. These range from the professionalization of international terrorism and asymmetric warfare to the proliferation of weapons of mass destruction to regional crises and the consequences of states decaying or failing. It is particularly non-governmental actors who are playing important parts in current conflicts.

Whenever religious hatred, weapons of mass destruction, and terrorist-related fanaticism blend with poverty, ethnic antagonisms and faults in social structures, we are faced with a new kind of strategic threat. As a result of these developments and threat options, security and defense have been stretched both in their geographic applicability and their content.

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A NEW APPROACH TO SECURITY

A modern approach to security must not be limited to powerful military forces. It must also have political, social, economic, ecological, and cultural dimensions that must be conceptually and practically combined. A more complex security environment requires these responses to counter the various, frequently non-military causes for violence and instability. Furthermore, it requires effective responses to match the new spectrum of risks and to help ward off imminent dangers and defuse threats to our security on a long-term basis.

In this context it seems obvious to me that:

- This will never be achieved unless we are aware of global connections, international developments, and structures of regional conflicts.
- As long as there is no appreciation of foreign cultures and religions, the effects of one's security commitment will at best be limited.
- As long as human rights, democratic values, and social participation are not globalized, it will be impossible to prevent totalitarian excesses such as those of Jihad terrorism.

Security based on cooperation and integration and on progress and participation will be as important in the twenty-first century as security based on deterrence, defense, and powerful military forces. Peace and stability are prerequisites for development and prosperity. Conversely, the fight against poverty and for a lasting improvement in living conditions constitutes a substantial contribution toward avoiding violence, conflicts, and wars.

Such understanding has an impact on how we shape our security policy. We must recognize the profound reasons and outward forms of crises and conflicts and employ a comprehensive spectrum of instruments to counter them. Enabling as many as possible to participate in political and social activities, social reforms, and economic prosperity is key to depriving instability and violence of their breeding ground.

While Al-Qaeda masterminds may come from the affluent upper class of society, large-scale Islamic extremism and intricate terrorist networks would be unthinkable were it not for the susceptibility of the poor classes, deprived of their rights in the Muslim and Arab world, to the totalitarian Jihad ideology. Therefore we must avoid terrorist activities and, even better, counter the recruitment of new terrorists.

But controlling the threat can only be achieved through a comprehensive approach. The Western world will not be able to control this threat by going it alone. Serious cooperation will be needed among the states and societies in the affected regions, and we will need to accept some certainties:

- There are no islands of stability in today's world.
- Security can be ensured less than ever before through the sole nation-state approach.
- Security and stability are a common challenge; joint risks require joint responses.

We therefore need alliances, partners, and effective international cooperation, particularly between European and American democracies. And I have no doubt that because of the global dimension of security and the complexity of our challenges, transatlantic partners will remain mutually dependent in their wish to achieve a stable international environment.

The great security tasks facing this world will be easier to solve if Europe and America stand together. But international cooperation will have to reach farther than that. The events in world crisis regions show us every day that, from both a military and a political point of view, it takes the contribution of many states to make progress towards stabilization. Well over 30 nations have made a commitment in Southeast Europe, and just as many have made a commitment in Afghanistan; approximately 30 are in Iraq as well.

Establishing a safe and secure environment and engaging in nation building call for varied civil-military activities as well as political and material sustainability, which may substantially overstretch the potential of individual states. Joint action must be built on a politically legitimate foundation. Therefore we need more than strong operational democracies; we also need the solid multilateral framework of the United Nations to enforce and maintain peace and security based on international law. While the UN may still be hamstrung in its ability to take action, as a resource of global legitimacy it remains indispensable. This situation is visible in Iraq, where the reconstruction process, which is supported by the population, seems increasingly jeopardized without the UN taking a leading role.

Prevention must be the focus of our peacekeeping policy. Our task must be to tackle violence at its roots and to counter crises and risks where they originate—in the Hindukush and elsewhere—before they develop a momentum of their own and threaten our citizens even from afar. Prevention must include avoiding crises on the ground through coherent, coordinated actions by all governmental and non-governmental players involved. One example of a successful preventive policy is our work in Macedonia, where the bundling of efforts of all international players thwarted an armed conflict. And while crisis-prevention measures ought to be mainly of a civilian nature, our experiences in Bosnia, East Timor, Afghanistan, and Macedonia have taught us that military means are indispensable tools that have gained enormous importance as part of an overall political approach.

REQUIRED SECURITY-RELATED ACTION

I would now like to address three fields of action within a comprehensive security outline. While they are by no means a complete catalogue of what needs to be done, they seem particularly important to me.

1. Stability and Democracy Must Be Supported to Give Peace In Crisis-stricken Regions a Lasting Chance

Enhancing regional stability and defusing and managing regional crises and conflicts constitute a first-class strategic challenge. The rise of the Taliban and the generation of globally active terrorists from a disintegrating state such as Afghanistan are perfect examples of how things are not supposed to be. If we fail to invest today in development and stability outside NATO and the European Union, in the Near and Middle East, the Caspian region, southern Asia, and parts of Africa, it will bounce back on us as a security problem in Europe and the U.S. That is why we must do whatever is necessary to help resolve political conflicts, establish cooperative structures, and support politically legitimate governments, social reforms, and economic prosperity. These are the core elements of any long-term strategy designed to weaken the terrorist recruitment base and bring stability to regions in crisis.

This approach is not new; with the developments in the Middle East and the stalemate in the peace process, however, it has gained fresh political momentum, and justifiably so. Many of the elements I just mentioned have already been successfully employed by the international community in the Balkans and in Afghanistan:

- Pursuing an overall political concept
- · Providing support along the rocky road to democracy and social equilibrium
- Furnishing a large-scale international security presence
- Providing well-trained police forces to oversee the establishment of a national police service

- Helping to organize a functioning administration
- · Helping to develop perspectives for economic reconstruction and improve the individual's situation

The success story is unquestionable even though in Southeast Europe the commitment of more than 30 nations over a stretch of eight years makes it abundantly clear that stamina is a must. Today, the Balkans are on the road to Europe again, and NATO can at least partially reduce its military presence. Even in the new Afghanistan the comprehensive approach of stabilization and democratization is bearing fruit. The adoption of the constitution has paved the way for presidential elections and the first free and general elections in September of 2004. Extending the ISAF mission by taking over existing Provincial Reconstruction Teams (PRTs) and establishing additional PRTs is now essential for enhancing the influence of the central government and how elections are conducted. The civil-military approach pursued by the German contingent in Kunduz has proved to be a particularly expedient move. In April 2004 the Berlin Conference initiated the political process of establishing sovereignty for Afghanistan.

The situation in the Middle East is somewhat less encouraging; the so-called peace process has practically ground to a halt. One-sided steps may be helpful at times but they can by no means replace sound agreements between parties to the conflict. The Israeli-Palestinian conflict can be solved only by a settlement between the two states. On the way there, however, the road map must be implemented. It is a model for joint Euro-American efforts to solve this complicated conflict, and there is no promising alternative.

The unresolved Middle East conflict is hampering any attempt to bring stability to the region. It is an illusion to think that genuine progress is possible anywhere in the region without solving this core problem. In Iraq it seems very difficult for a quasi-occupant to bring peace to the country and to conduct nation building successfully.

With the deteriorating situation, a fresh, comprehensive approach is inevitable. It is in no one's interest for the post-war process in Iraq to fail, or for radical elements to gain strength, or for the difficult nation-building process to be increasingly undermined. But whether or not the situation will improve in Iraq depends on the uninterrupted political transfer of sovereignty and a prominent role for the UN in the reconstruction process and the security environment. UN envoy Brahimi's suggestions point in the right direction.

Strengthening the role of NATO does not seem imperative to me. What could NATO do better than the coalition forces are doing? But is there a foreseeable time when a democratically legitimized Iraqi government, supported by the United Nations, will submit a request to that effect to NATO?

Both the unsatisfactory situation in Iraq and the stalemate in the Middle East peace process should be enough reason to seriously consider fundamentally new avenues for the Greater Middle East region, i.e., the area from northern Africa to the Middle East to Afghanistan. Our actions ought to be based on the fact that stabilization, modernization, and democratization of that region are the keys to global security in the twenty-first century. Because there are many causes for crises—decades of political conflict, risks of weapons proliferation, anti-Western resentment, terrorism, organized crime, and drug trafficking—the need for stability in this part of the world is a strategic imperative.

Forcing Western models upon other states is not what is needed. It just won't work. It is right, however, to think about a long-term transformation process during the course of which America, Europe, and the relevant Greater Middle East states develop new perspectives for enhanced cooperation and close partnership in security-related, political, economic, and cultural matters.

It goes without saying that such a political approach can be realized only step by step. One step could be the NATO cooperative initiative for the region that was discussed at the Istanbul Summit. With its Mediterranean Dialogue and the Partnership for Peace concept, NATO has already developed excellent instruments and gained experience likely to stand it in good stead in this respect. The Alliance can make an essential contribution.

Russia has a role to play, too. Its political resources, geographic position, and historic ties with numerous states make the new Russia an important partner for the European community of states in consolidating global stability.

2. The Risks of Global security Require New Efforts to Contain the Proliferation of Weapons of Mass Destruction.

In view of the security situation that is in place at the beginning of the twenty-first century, we definitely must use an international cooperative approach to try to prevent, or at least limit, the proliferation of WMDs and their components. Regarding nuclear risks I would like to emphasize two points:

First, there is a persistent risk of additional states developing or acquiring nuclear weapons. An increase in the number of states owning nuclear weapons will have a destabilizing effect and will not help international security. I am positive that the states in question will also harm themselves since their stance only causes distrust, encourages arms activities among their neighbors, and thus weakens their own security.

Second, it has become easier in the twenty-first century to acquire nuclear, biological, and chemical weapons components, much of which is due to the irresponsible and criminal behavior of people like the father of the Pakistani nuclear program, Abdul Qadeer Khan, whose activities were detected by the American and British secret services. Over several years Khan obviously spent a lot of criminal energy building up a global network for the sale of nuclear technology to states such as Iran, Libya, and North Korea. Khan's example provides an inkling of how criminal or ideological motivation can make WMDs available not only to states but to terrorist elements, which of course constitutes a whole new quality of threat.

In consideration of this very danger, existing instruments must be strengthened and new avenues followed to counter proliferation. And while there are no magic formulas, we have seen encouraging beginnings. It remains essential that NATO and the EU attribute special significance to the fight against proliferation. In this context the prime choice is not so much the use of military means, though the EU's proliferation strategy, as of December 2003, relies on enforcement action as a last resort under Chapter VII of the UN Charter.

The U.S. and Europe will have to find a common line and put it into practice together, both for assessing the threat potential and for dealing with states such as Iran. Ultimately, success will be achievable only by using a comprehensive approach comprised of political and security-specific measures as well as economic sanctions and incentives, individually imposed upon the nation concerned.

One crucial way to fight proliferation is to remove the deficits of existing instruments. There is great need for action in connection with the Nuclear Non-Proliferation Treaty (NPT), which is and will continue to be the international community's first choice for preventing the proliferation of nuclear weapons. But the treaty needs adapting. President Bush's remarkable speech to the National Defense University on February 11, 2004, contained some important points.

I would now like to touch upon some crucial aspects of this topic:

• Export control regulations for nuclear technology and material must become more stringent, and the entire export control system needs to be standardized. Many countries have not yet been included and gaps need to be closed.

- Inspectors from the International Atomic Energy Organization (IAEO) must be granted far more powerful inspection rights. To date only 20 percent of the 191 UN members have signed a supplementary protocol with the organization to that effect.
- It is essential that we amend the Non-Proliferation Treaty in a way that prevents states that are suspected of illegal activities from simply withdrawing from the treaty. Any such withdrawal ought to trigger scrutiny by the UN Security Council, since any cancellation would undoubtedly constitute a risk to peace and security in the world.
- Everyone intent on fighting the proliferation of nuclear weapons must do whatever they can to put into effect the Nuclear Test Ban Treaty. They must also work to reach a universal ban on the production of fissionable material for weaponization, which the Geneva Conference on Disarmament has tried in vain to do for eight years. I fail to see how the development of new nuclear weapons on the part of nuclear weapons states could possibly dampen the desire of critical states to acquire them.
- New avenues must be found that go beyond the reach of agreements and treaties. One example of such means is the U.S. Proliferation Security Initiative (PSI), which Germany has subscribed to. This initiative deserves to be supported because preventing the shipping of WMDs and components for their production is a vital addition to existing export controls.

3. Our Security Institutions Need to Be Further Adapted to Match The Different Types of Challenges

The changed security environment and the new demands on how we will handle it politically in the twenty-first century are the stimulants for optimizing the multilateral instruments of security-related efforts.

First and foremost, this third point concerns NATO. Its firm global orientation is correct, reflecting the new, changed conditions. The Alliance must be able to defend its 26 members' security interests wherever they are endangered. The Euro-Atlantic states have recognized that today's central security challenges— fighting international terrorism, making extensive military contributions to stabilizing crisis areas such as Afghanistan, and providing protection from weapons of mass destruction—can be tackled only by consolidated transatlantic cooperation and by the Alliance playing a pivotal role.

This orientation is not a question of nostalgia, but of what the NATO Secretary General recently called the "reversion to NATO." This reversion, however, has started a far-reaching transformation process, ensuring that, in the future, NATO's capability to act and its multilateralism will not rule each other out.

Devising relevant military capabilities for out-of-area missions must also be a priority. The number of rapidly deployable forces will have to rise. Therefore, the transformation of the Alliance regarding its planning, decision-making, command and control structures, and military capacities must be pushed further ahead.

In this context, the realization of the NATO Response Force (NRF) concept will be both the core element and the catalyst for this transformation of allied forces, a step that will be needed to prevent the number of demands and the reality of the Alliance from damaging the organization. This is one of the reasons we are currently aligning the Bundeswehr and its tasks and capabilities exactly to twenty-first century requirements. From my point of view, this includes universal conscription, which I believe in, as does the head of my policy planning and advisory staff, in contrast to the badly distorted press reports on the subject. I can affirm that it was this very staff and the man in charge of it who encouraged me to con-

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tinue my campaign for conscription. The transformation of the Alliance and that of the Bundeswehr will go hand in hand.

I would like to emphasize again that to me it is only logical to give the Alliance's military transformation, which is already in progress, an even stronger political framework. Boosting the efficiency of the armed forces is one thing, but agreeing on where, for what, and under what circumstances to use the military is quite another. If NATO is to shoulder more responsibility for our security on a global scale—and I advocate this idea—the allies ought to provide a more accurate, basic understanding of strategic tasks and the objectives of joint NATO action in the twenty-first century.

With its new European Security Strategy, the European Union has already set a politico-strategic landmark for providing a European security commitment framework. The EU is standing up to its responsibility both in Europe and throughout the world. In shaping and realizing its security and defense policy, it is helping itself to a unique range of military as well as civilian tools that, as a rule, must be employed in complex crisis management operations.

EU missions in Bosnia, Macedonia, and the Congo are illustrating its new self-image as well as its changed awareness—the organization realizes that it must use whatever security instruments are available to help resolve conflicts in Europe, along its periphery and anywhere they impact Europe. That is why the EU's security-related capabilities need to be enhanced even further—not to duplicate NATO's capacities but in order for the organization to make its own contribution if so required. With its political clout, resources, and interests, Europe can no longer confine its status to that of a "civilian power."

However, Europe is not yet a political player in matters of worldwide security, though it still ought to increasingly consider itself one, both in its own interests and in view of the fact that the U.S., despite its unparalleled position of power, cannot shoulder the burden of global security tasks alone. To do so, the European Force Goal (the Headline Goal 2010) should be further developed. It should take into account actual crisis management requirements, expediently shape the "Battlegroup Concept" to attain quick reaction capability, and establish the European Agency for Armaments, Research, and Military Capabilities. In this way, the EU will gradually become a genuine strategic partner for the U.S. and NATO and help to consolidate global security.

Cooperative agreements between the EU and NATO have already proved successful in the Balkans, where, at the end of 2004, the EU will start a follow-on operation to the NATO-led SFOR mission. In addition, the UN will undoubtedly continue to play its pivotal role in reinforcing security on a global scale. The ISAF's experiences in Afghanistan and developments in Iraq show that the UN's legitimate base and the Security Council's monopoly of power are indispensable for a peacable and security-oriented world order.

Both NATO and the EU must therefore continue to cooperate closely with the UN, work to strengthen the latter's position, and be prepared to employ their forces under a UN mandate as well as on their own behalf—key goals of the previously mentioned German-Franco-British Battlegroup Concept. For its own part, the UN must also be prepared to carry out whatever reforms are necessary and to pursue new avenues that will enable it to perform the changed tasks inherent in the new global security policy. This would include giving the UN Security Council a more representative character, making UN structures involved in peacekeeping operations more efficient, strengthening UN crisis prevention capacities, and improving UN support for regional peacekeeping approaches (as in Africa, for example).

CONCLUDING REMARKS

Time and again we hear that this world is a world in transition, still waiting for a new world order to follow the end of the East-West confrontation. I am afraid that this new world order—whatever each of us expects it to be—is keeping us waiting. It may therefore be necessary to direct our security policy toward opposing lines of development.

The accession of seven more states to NATO and 10 new states to the European Union are good examples of the opportunities for integration and cooperation that have developed within the new security system of the twenty-first century. Such opportunities also manifest themselves, though in a somewhat different context, in the entirely new kind of global cooperation we have seen in the fight against international terrorism. However, there remains a multitude of destabilizing tendencies and risks that call for extensive and sometimes totally new security responses. This workshop should make a contribution toward answering that call.

Chapter 2

The New NATO and Global Security

Ambassador Nicholas Burns¹

OPENING REMARKS

he list of distinguished guests at this workshop is long and impressive, but I would like to acknowledge Defense Minister Ioan Mircea Pascu of Romania, Minister Nikolai Svinarov of Bulgaria, Minister Gela Bezhuashvili of Georgia, Minister Vecdi Gonul of Turkey, and Colonel General Aleksandr Skvorzov, Deputy Chief of the Russian General Staff, as well as Acting U.S. Undersecretary of Defense Mike Wynne and former Supreme Allied Commander General George Joulwan.

It is an honor to be with you and to be again among friends of NATO. Germany is an important and valued NATO ally. With some 7,600 troops deployed abroad, Germany contributes significantly to NATO's current peacekeeping operations in Bosnia and Kosovo, to Active Endeavor, NATO's counterterrorism operation in the Mediterranean, and to NATO's top priority mission in Afghanistan. There, under NATO's International Security Assistance Force, Germany has taken a key leadership role with its deployment of a provincial reconstruction team in the northern Afghan city of Konduz. The U.S. welcomes Germany's contributions. As the second largest country in the Alliance, Germany's active participation and leadership and its strong voice in NATO will remain vital to the health of the Alliance as it undergoes an exciting transformation.

THE CONTINUING NEED FOR NATO

Since I arrived at NATO in August 2001, the Alliance has weathered two significant historical events that are having—and will continue to have—a profound and lasting impact on transatlantic relations. The first was, of course, the September 11 attack on the U.S., which brought the Alliance together under Article 5 for the first time in our history. NATO allies reacted by launching the most revolutionary reforms in our history, creating a new organization ready to stand on the front lines of the war on terrorism. The second event was the Iraq War, which plunged the Alliance into a crisis of confidence and disunity in 2003. That crisis has subsided and NATO has emerged strengthened in 2004 for its new peacekeeping roles.

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The United States, Germany, and all of our allies can be proud of our 55-year alliance in NATO. Times have changed, but NATO's mission is the same today as it was in 1949: To defend the peace and the territories and citizens of all allied countries. However, NATO's task for this year is twofold: To advance the political and military reforms that September 11 triggered within the Alliance, and to restore the transatlantic unity so badly strained by the Iraq War but so essential to NATO's success as we seek to build a peaceful world and confront the new security challenges of our era.

Today NATO faces a new challenge far different than any we have confronted before. It is not a confrontation between states, as it was during the Cold War, but a threat from failed states and, especially, small but fanatical terrorist groups. The violence that Al-Qaeda, Islamic Jihad, and other terrorist groups are inflicting upon innocent people in every corner of the world is truly appalling and truly dangerous for all of us. We see terrorism as an existential threat to all who prize freedom and security. We must confront it, not just by military means but through soft power, through a broad international effort to cooperate in intelligence and law enforcement, and through diplomatic and economic means to protect our peoples and to promote a more peaceful future.

The surest path to success in this new campaign is to make full use of the major institutions upon which international stability is based: The United Nations, the G-8, the European Union, and NATO.

NATO'S TRANSFORMATION

From 2002 until the present time, NATO has accomplished its most fundamental re-tooling since its creation in 1949. Now the Alliance is active, strong, and fully modernized for the challenges ahead. We are creating a new NATO, one that is different in mission, membership, and capabilities from the Cold War NATO or even the NATO of the 1990s. NATO allies answered the September 11 wake-up call, agreeing on the blueprint for change at the Prague Summit in 2002. The results of our transformation efforts should be evident at NATO's Istanbul Summit.

NATO's most profound change has been its transformation from a defensive and static military alliance, which massed a huge, heavy army to deter the Soviet threat to Germany and Western Europe, to a more flexible, modern, and agile force focused on responding to threats from well beyond the European continent and focused on a new vocation—peacekeeping and stabilization efforts. Simply put, NATO's past was focused inward, on Cold War threats directed at the heart of Europe. NATO's future is looking outward, to expanding security in the Greater Middle East, that arc of countries from south and central Asia to the Middle East and North Africa, where the new challenges to global peace are rooted.

This transition is happening as we speak. While the majority of deployed NATO forces are today in Bosnia and Kosovo, the majority could well be in Afghanistan and Iraq one year from now. History has given NATO a new challenge and we are responding to it with a new strategic vision. The changes are most evident, most comprehensive, and most impressive in our military capability. The result is that NATO remains today the strongest military alliance of our time.

Military-Related Changes

Consider the military changes that have occurred during the last two years:

1. NATO allies agreed to acquire the new military capabilities necessary for expeditionary missions far from Europe—modern airlifting and refueling, precision-guided munitions, combat service support—redefining the way we plan and think about our national and collective defense.

2. Our priorities in 2004 are to acquire capabilities to give NATO's political decision makers and military planners additional technological tools, such as Alliance Ground Surveillance, an integrated Air Command and Control System, and missile defense, to defend against new global threats and enable decisive action when we need it. Mindful of export controls and technology transfer issues, the Alliance is already taking important steps to acquire such new systems.

3. NATO adopted a leaner and more flexible twenty-first century military command structure and created a new Alliance Transformation Command in Norfolk, Virginia.

4. NATO created a new Chemical, Biological, and Nuclear Defense Battalion, spearheaded by the Czech Republic along with 12 other allies, to protect our civilian populations in the event of an attack using weapons of mass destruction.

5. In our most important and decisive shift, we are building a NATO Response Force to give us a powerful capability to deploy our troops within days to perform any mission—whether hostage rescue, humanitarian relief, or response to a terrorist attack—in another part of the globe.

Politically Based Changes

These revolutionary changes on the military side of NATO have been complemented by equally creative political changes within the Alliance:

1. Seven Central European countries joined NATO on March 29, 2004, completing the Alliance's greatest enlargement since our founding in 1949 and strengthening us with more countries to jointly promote peace and freedom in the Balkans, Afghanistan, and Iraq. NATO enlargement extends our sphere of security eastward, virtually across two continents, and helps to consolidate the democratic revolution in the former Warsaw Pact countries. Forty percent of NATO's members were formerly communist countries. The new members add real value, both militarily and politically, to our collective strength.

2. NATO has changed in one other important respect. We know that our greatest strategic aim is to help create, in President Bush's words, "a Europe whole, free, united, and at peace"—everything Europe was not during the tumultuous twentieth century. NATO launched the Partnership for Peace in 1994, and the emerging democratic peace in Europe is a major, historic achievement for which NATO deserves much credit. But a united Europe will be sustained only if we build partnerships with those countries that are outside NATO and the EU but are nonetheless critical for Europe's future.

3. To that end, NATO has begun important partnerships with Russia, Ukraine, central Asia, and the Caucasus. The new NATO-Russia Council is redefining our relations with Moscow, promoting closer relations between our militaries. In addition, in NATO's partnership with Ukraine, we are seeking stronger and sustained initiatives for domestic and military reform. In central Asia and the Caucasus, the U.S. has called for new strategic outreach and engagement, including expanded political and military activities with that vital region.

CONTINUING BROAD-BASED TRANSATLANTIC COOPERATION

These substantial changes in our military capabilities, membership, and partnerships have positioned NATO for an ambitious future. But we would be well advised to learn from the lessons of the Iraq crisis that engulfed NATO in 2003 as we promote a future of broader transatlantic defense cooperation. We would be wise not to overreact to U.S. and European differences on Iraq for several important reasons.

First, this is not the only disagreement we have had with some European countries in NATO in the last half-century. NATO survived arguments over the Suez, Vietnam, Pershing missiles—even differences over strategy in Bosnia in the early '90s—by learning about, adapting, and compromising with each other. And we emerged strengthened and changed each time. Ours is a strong but flexible alliance, durable enough to sustain different points of view. NATO is, after all, a democratic alliance that does not require the ideological uniformity of the Warsaw Pact to remain successful and united.

Second, the great majority of Europeans and Americans understand a central fact—our security is indivisible. Terrorist attacks in New York, Washington, and more recently in Istanbul and Madrid have proven that. We need each other's support in one alliance to meet the security challenges of the modern world.

NATO will stay strong because our mutual interests demand it. European allies need the U.S. and continue to rely on the U.S. for the nuclear and conventional defense of the continent. Of the many issues Europeans are debating for their new constitution, for example, what is missing is the call for an overarching European security umbrella to maintain peace on the continent. No such initiative is needed because NATO and the U.S. provide that now, as we will in the future.

The United States also needs Europe. We Americans cannot confront the global transnational threats that go under, over, and through our borders and that are the greatest challenges of our time without Europe. Weapons of mass destruction and terrorism, the huge increase in international crime, narcotics flows, trafficking in human beings, global climate change, AIDS—there are no unilateral solutions to these challenges. Instead, we can hope to succeed only through multilateral cooperation, including with Europe. There is a saying in the U.S., "We all live downstream." In an era of globalized threats, no matter where we are in the world, we live downstream from them. What happens in one region of the world affects all others.

Therefore, when all is said and done, the U.S., Germany, and other European nations are natural allies. We are the most like-minded peoples on the planet, sharing a common history, common democratic values, and an interconnected economy. NATO will stay together because we need each other.

NATO GOALS

As we look toward the Istanbul Summit, here are the top goals for all of us in NATO:

Reinforcing NATO's Peacekeeping Role

Our first goal is to reinforce NATO's long-term peacekeeping role in Afghanistan. I returned from Kabul and Kandahar recently and I was impressed by the positive difference we are making in that great but impoverished country. Currently there are nearly 2,000 German troops deployed in Afghanistan under NATO's UN-mandated International Security Assistance Force. In NATO's effort to expand the ISAF mission beyond Kabul, Germany has taken a lead role with its Provincial Reconstruction Team (PRT) in Konduz. NATO now aims to establish five more PRTs before the Istanbul Summit to bring stability to important provincial cities. As ISAF expands, the U.S. hopes conditions will allow for NATO to take command of all PRTs in its new area of responsibility.

There is no international goal more important than helping the Afghan people to rebuild their shattered country. To be successful, NATO will need to commit even more troops and military resources in perhaps the most difficult mission we have ever undertaken. We must help the Afghan government to extend its authority outside Kabul and to prepare for nationwide elections. To do that, the U.S. calls on other European nations to contribute more troops and resources to join the 15,000 American troops already there, in order to construct a more vigorous and effective NATO presence in the country.

Collective Military Role in Iraq

Our second aim for 2004 is to examine how NATO might take on a collective military role in Iraq, as President Bush has suggested. No matter our differences on the war itself, Europeans and Americans

now share a common interest in fighting terrorism and seeing democracy take root in Iraq. We know that the coalition must continue its efforts in Iraq lest chaos and even greater violence ensue.

NATO is currently providing support for the Polish-led multinational division in Iraq, where 17 NATO allies are contributing forces to maintain security. President Bush recently said—along with Secretary Powell, Secretary Rumsfeld, and a number of NATO foreign and defense ministers—that we should explore a more formal role for NATO in Iraq, such as turning the Polish-led division into a NATO operation and giving NATO functional responsibilities. Defining such a mission, after the passage of a new UN Security Council resolution, will be a leading issue for NATO at the Istanbul Summit.

Expanding Our Engagement in the Greater Middle East

Third, NATO must expand its engagement with the Muslim world and Israel to help those countries find their way toward a more peaceful future in the Greater Middle East. Germany's foreign minister and other German leaders have spoken out on the need for Western democracies to engage with the Muslim world, and the U.S. wants NATO to be one of the building blocks for our long-term engagement in this vast region. Since 1994, NATO has developed relations with seven countries in the Mediterranean Dialogue—Algeria, Egypt, Jordan, Israel, Mauritania, Morocco, and Tunisia—and the U.S. continues to support this effort today. However, while we believe this is a valuable framework for cooperation, we also believe that there are opportunities for even more fruitful cooperation with Arab countries in a wider, more energetic initiative.

When NATO's heads of state and government gather in Istanbul, the United States hopes that NATO will do its part to support the broad effort to reach out to the Greater Middle East by announcing an Istanbul Cooperation Initiative. This initiative should complement the other elements of support for indigenous reform in the Greater Middle East by engaging interested countries in the region in fostering security and stability.

At NATO, we have identified a number of security goals that Europe and North America share with many countries across the Greater Middle East: Fighting terrorism, stemming the flow of weapons of mass destruction, improving border security, and stopping illegal trafficking of all kinds. Our focus should be on practical cooperation with those countries that wish to have a closer relationship with NATO. Modernization in these countries is not Westernization, and they will evolve according to their own traditions and history. But the Greater Middle East, Europe, and North America must chart a common path to defeat terrorism, create peace, and promote democracy for the future.

Long-term change in the Middle East will help to attack the foundations of the terrorism crisis and give democracy and justice a chance to take root and grow. It is a challenge that none of us, neither Europeans nor Americans, can avoid, and that all of us must embrace as one of the critical foreign policy tests of our time.

Improving NATO-EU Relations

Our fourth goal is to improve relations between the two great institutions responsible for Europe's future—NATO and the EU, especially to consolidate peace in the Balkans. The EU's enlargement on May 1 was a great day for Europe. We in America applaud the EU, wish you well, and support a strong and vibrant EU on the world stage. The twin enlargements of the EU and NATO advance our common goal of a Europe whole, free, and at peace, and integrate Europe East and West for the very first time in Europe's long history.

NATO is now ready to consider our peacekeeping mission in Bosnia a success and conclude it in December 2004. We have done an outstanding job there, having stopped the war and kept the peace for

nearly eight and a half years. Our leaders will consider supporting a new EU mission under the Berlin Plus framework for military cooperation agreed to by the two organizations. And in Bosnia, NATO should maintain a military headquarters in Sarajevo to help authorities bring Radovan Karadic and Ratko Mladic, two indicted war criminals, to justice, and to advise Bosnia on defense reforms. However, the U.S. wants NATO to maintain an effective presence in Kosovo to prevent any repetition of the violence we saw in March of 2004. Together, we must continue to support the transition to stable, market-oriented democracies in Kosovo, Bosnia, and Macedonia so that the Balkan States can take their rightful place in an integrated Europe.

NATO and the EU sometimes differed in 2003 in theological disputes over Berlin Plus and EU defense plans. We can improve relations between the two organizations by avoiding rivalry in the defense sphere, improving defense trade cooperation, and cooperating to stem the proliferation of weapons of mass destruction. NATO, of course, should remain the core of Europe's defense; the United States will always defend NATO's centrality. The choice is not, however, as some in Europe would suggest, between a Europe under the U.S. yoke and a Europe completely detached from the U.S. We can instead choose a future of cooperation between NATO and the EU.

Improving Relations with Russia

Finally, our fifth aim is to elevate NATO's relations with Russia. Constructive engagement with Russia, through the NATO-Russia Council, has helped make our citizenry safer and more secure today than at any time in the last 50 years. There is so much NATO can do with Russia, from search-and-rescue at sea to theater-missile defense to greater cooperation in the Black Sea to joint peacekeeping. Our NATO-Russia Council is a good forum, but we can set our sights higher on a closer relationship that will put our past rivalry behind us forever

These are our top five goals at NATO for 2004. It is an ambitious and vital agenda and one that we must fulfill in this time of great challenge for all of us. NATO's prospects for achieving such an ambitious 2004 agenda will depend on how successful we are in removing the current major obstacles to good U.S.-European relations.

ROADBLOCKS TO STRONG U.S.-EUROPEAN RELATIONSHIPS

A significant obstacle to good relations is the persistent gap in military capabilities between the U.S. and the rest of its allies. If NATO is to field long-term missions in Iraq and Afghanistan and remain in Kosovo, our European allies will need to spend more—and more wisely—on defense, as well as produce more effective militaries. The capabilities gap between the U.S. and all its allies is huge and growing. The U.S. will spend \$400 billion on defense in 2004; the 25 other allies combined will spend less than half of that. The problem is not just the spending gap but the fact that the U.S., by devoting more to research and development, is yielding far more from its defense investments than our allies, who still devote a considerable portion of their budgets to territorial defenses and high personnel costs.

In addition to the technology gap between us, there is an even more critical "usability gap." Of Europe's 2.4 million men and women in uniform, only roughly three percent can now be deployed on our priority missions in the Balkans, Afghanistan, and Iraq. Declining budgets, poor training and standards, and a continued reliance on conscription account for a Europe that cannot put a sufficient percentage of its troops into difficult missions against twenty-first century threats.

Defense Minister Struck has announced an ambitious plan to transform the Bundeswehr to enable German troops to deploy more quickly. If those reforms are successfully implemented—and if appro-

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priate resources are forthcoming—Germany can become a leading player in NATO's military transformation and a key contributor to the new NATO response force.

However, with Germany's defense budget frozen, it is uncertain whether the necessary resources will be provided to successfully transform the military forces and acquire modern military capabilities. Ultimately, this is a political decision for Germany as well as for several other countries in the Alliance.

Finally, there are two other barriers to a healthy transatlantic relationship that all of us must overcome in 2004 and beyond. A few leaders on the Continent have called for Europe and the European Union to become a counterweight to the U.S. This suggests that our future should be one of strategic rivalry and competition—the very antithesis of the transatlantic community we have built together since the end of the Second World War. Such a reversal would amount to a colossal strategic error. It would repudiate the primary factor that has produced two generations of peace and unparalleled security and unity in Europe—the presence of the United States military on this continent and the existence of NATO. I do not believe that the vast majority of Europeans would support such a future or that it will occur. But Europe's responsibility to preserve healthy transatlantic ties, it seems to me, is to reject this competitive view of our common future and to avoid the gratuitous anti-Americanism that was all too evident in European public discourse during the past year.

Americans have an equal obligation to reject unilateralism and to work instead to preserve the great multilateral institutions such as NATO that are so important for our common future. For the U.S., President Bush and Secretary Powell have emphasized repeatedly our commitment to "effective multilateralism." The U.S. commitment to working within NATO has never been clearer than in the past year. Nonetheless, many European critics have accused the United States of losing interest in NATO since September 11, 2001, and using it as a toolbox.

Ironically for these critics, it is the United States that has proposed nearly all of the initiatives that have reformed NATO's structure and mission in the last two years. And it is the United States that now calls for ambitious NATO deployments in Afghanistan and Iraq, and outreach to the Greater Middle East. The United States has demonstrated its genuine desire to see the new NATO act collectively. We hope now that our European allies will agree to use NATO as dynamically as we wish to do in 2004 and for years to come.

CONCLUDING REMARKS

It is true that acting in alliances is not as efficient as acting alone. Alliances do not move as fast, and they may complicate decision-making and even the tactics used in the field. But alliances are very effective in producing sustained, long-term commitment in the most difficult crises, as we have seen NATO do so successfully in the Balkans.

When the new Secretary General of NATO, Jaap de Hoop Scheffer, made his first official visit to Washington, President Bush assured him of NATO's centrality in the U.S. national security strategy. The United States will continue to voice America's abiding commitment to multilateralism and to NATO. NATO's numbers tell the story: We are a forum with 46 countries in the Euro-Atlantic Partnership Council, a partnership with 41 countries in the Partnership for Peace program, a dialogue with seven Mediterranean states, and an alliance with 26 members. Where else but in NATO could any of us replicate this vital web of multilateral relationships?

NATO remains today the world's most powerful and important alliance, dedicated to preserving peace and freedom for all of our peoples. While it took 55 years for Europeans and North Americans to build this alliance, it continues to serves as our bridge across the Atlantic, our principal forum for working together and for our mutual protection in a dangerous world. In President Kennedy's words, NATO

allies will continue to be the "watchmen on the walls of world freedom." We have many challenges before us, but the U.S. remains dedicated to working with our allies and partners alike to keep NATO at the center of the great effort to build a democratic, peaceful, and secure world in the years ahead.

Chapter 3

The North Atlantic Alliance: A Vector of Peace, Stability, and Security

General Harald Kujat¹

OPENING REMARKS

am very happy to be part of this year's International Workshop and to have it take place in my country's capital. I am also happy to speak as a representative of the 26 members of the Alliance and to offer my views as the chairman of the NATO Military Committee. The theme of this year's Workshop—"Global Security: A Broader Concept for the twenty-first century"—particularly appeals to me because it is at the heart of what we do at NATO, not only in Brussels but throughout the command structure, from Norfolk to Kabul, from Stavenger, Norway, to the Straits of Gibralter. So I would like to share my thoughts on this topic, particularly on three important points:

- The transformation of NATO's military capabilities—what we've been doing for the last few years, where we're going, and, most importantly, the purpose of the transformation
- The United States and the transatlantic link
- Expanding peace and security beyond Europe as a primary means to achieve security in Europe

SETTING THE SCENE

It is important to realize that there is no single risk that is the most dangerous to our societies; what is most dangerous is a combination of risks, both those linked within a short time frame and those that have a common purpose though they are posed by different actors. With this understanding, I believe that the ability to engage in armed conflict will remain the ultimate instrument of state power. Though interstate conflict is likely to become less frequent, it will be more risky and more dangerous when it does occur. It will also have increased consequences for international security. For example, very recently we saw a degradation of the overall security situation in the Philippines.

General Harald Kujat is Chairman of the NATO Military Committee.

By virtue of their fusion with the societies that harbor them, terrorist groups claiming an affiliation with Islam continue to elude eradication and remain able to acquire weapons and ammunition. Because information and technology continue to flow across borders at an accelerated pace, and because technological advances make manufacturing processes more efficient than ever before, many countries and many non-state actors with limited resources have access to the material and expertise necessary to develop weapons of mass destruction.

This trend will continue to accelerate over time, because no developing nation will want to compete militarily with developed countries in the traditional way when WMDs are inexpensive force equalizers and can mitigate the relative huge technological edge potential adversaries have. Simply put, possessing WMDs allows nations to project greater national power than they could in any other way.

However, while the proliferation of WMDs and the growing capabilities gap between actors are causing a shift toward asymmetric threats, such threats are not caused only by WMDs. Some traditional threats are also asymmetric and also facilitated by advances in technology. Actually, asymmetry relates more to a method of action than to use of unconventional weapons. The September 2001 attacks on New York and Washington, D.C., which had devastating effects on American lives and the economy, were the first successful large-scale international terrorist strikes against the continental United States. The series of deadly explosions in commuter trains that rocked Madrid in March 2004, leaving scores of dead, was also way beyond what European countries have experienced in contemporary times short of total war.

To meet the increasing threat posed by terrorist organizations using asymmetric methods, all levels of intelligence and security agencies must share information as well as have unity of thought and unity of action. Operations will become increasingly complex and no action will be exclusively military or civilian.

TRANSFORMING NATO'S MILITARY CAPABILITIES

Whatever the threats and challenges, we must keep insecurity from being imported into our societies. At NATO, we believe that the only way to predict the future is to have the power to shape the future, and it is in that spirit that we tackle all our challenges.

NATO has been and continues to be a defensive alliance, an expression of transatlantic cooperation and of the common values of freedom, democracy, and free enterprise. At the Washington Summit of 1999, the Alliance adopted a new Strategic Concept in order to adapt to the new challenges of the post–Cold War period, but in doing so confirmed its enduring ability to adopt a transformational attitude in order to remain the security organization of choice for dealing with out-of-area challenges.

To support the new Strategic Concept, to position ourselves for success in the 21st century, and to give real force to the need to transform our capabilities, we created, on June 19, 2003, the Allied Command for Transformation. The mission of this command and its Supreme Commander is to be NATO's force for change. The Supreme Commander has been tasked to find innovative and more effective ways to conduct operations and to create a culture that continually seeks better ways of working. His most important task, however, is to find strategies for adapting NATO's military culture and for the way we think operationally and strategically.

The Supreme Commander's mission is being accomplished. Since its inauguration, the Allied Command for Transformation has worked diligently analyzing lessons learned from both NATO and non-NATO operations and drawing conclusions for force planning and force structures. These lessons and conclusions are being applied in turn to planning future operations.

The command has also sponsored numerous seminars and exercises at the highest military and political levels, one of which was held in January 2004 in Norfolk, Virginia; 93 operational commanders from the NATO Response Force met for three days of war games centering on the deployment of an NRF in a crisis-response operation.

The establishment of the NRF, which resulted from discussions held by NATO chiefs of defense in September 2002 in Berlin, was one of the key decisions of the Prague Summit. This high-technology combined force is rapidly deployable and will integrate air, land, and maritime components, and is being trained, equipped, and certified to meet common NATO standards.

But the NRF is more than that. It is a catalyst for transformation. Because contributing to the NRF is a source of pride among the nations, they are encouraged to subscribe more fully to meeting expeditionary capabilities. And through the NRF, which includes U.S. forces, non-U.S. NATO members will be able to deploy more rapidly and fight more effectively, a very important requirement if we are to continue fulfilling our mission to provide collective defense.

However, the NRF is not a mere toolbox from which you can extract specific capabilities. It is an entity that will be tailored to a specific mission but will always be engaged as the NRF, which needs collective capabilities to do its job properly. This collective approach to capabilities is the only reasonable one for an intergovernmental organization to take for several reasons:

- Because it makes it easier for nations to call upon them when needed. There are no national flags attached to collective capabilities, minimizing political considerations and enabling every nation, big or small, to benefit.
- Because collective capabilities are easier for nations to contribute to financially.
- Because it is easier to maintain a technological edge than when separate nations provide capabilities or a few nations provide them multilaterally.

THE ALLIANCE IN AFGHANISTAN

NATO's engagement in Afghanistan is the most important operation it is involved in. It is the first engagement the Alliance has undertaken out of its area, and, as such, the eyes of the international community are fixed on it, with expectations running very high. Therefore we must match our political ambitions with the military capabilities required to do the job. Currently there are 6,500 NATO troops deployed in ISAF, which is less than a third of what is deployed in Kosovo, a country five times smaller.

While we can never afford to fail in any crisis-response operation, this is especially true in Afghanistan, particularly as the country prepares for fair and free elections. But stability is not a given in Afghanistan. The risk of failure there is very real if the international community does not more proactively support the electoral process, the single most important strategic event of 2004 in that country. We must seize the opportunity.

THE SECURITY IMPLICATIONS OF DRUG TRAFFICKING

A major security risk that is now painfully visible on our streets—in New York, Paris, and Berlin—is one that has sprung from failed states such as Afghanistan: The proliferation of hard drugs. Our countries pay a huge price for drug trafficking that emanates from countries where there is little or no rule of law. First, our economic output declines when our young become addicted. Second, our societies must spend large sums to develop treatment and repression programs. And third, we pay to deploy troops in these failed states when the situation requires it. Drug trafficking is a very expensive business that has a very negative impact on our security environment.

NATO ENLARGEMENT

On April 2, 2004, seven new flags were raised at NATO headquarters. And as soon as accession was effective, four Belgian F-16s were deployed in Lithuania to patrol Baltic skies, under the control of NATO air traffic controllers. This is what NATO is all about: Solidarity, interoperability, and effective-ness, and these are the characteristics that will come in handy when our heads of state and governments discuss the Alliance's place in the current security environment and our role in future missions.

STRENGTHENING THE TRANSATLANTIC LINK

The works we have discussed so far will require new weapons, more and new forms of intelligence gathering, and increases in Special Forces. Longstanding as well as new allies of the United States will need to make similar changes to become more agile, more lethal, and more expeditionary.

Since the collapse of the Soviet threat, the Alliance has become a victim of its own success, but it has not fallen into the trap of trying to reinvent itself. Rather, it has adapted in order to continue to serve its mission—the indivisible security of its member-states.

Alliances are means for serving ends; they are not ends in themselves. That is why we are transforming, in order to keep the transatlantic link alive. European allies will continue to depend on NATO as well as the United States' commitment to guard against strategic threats to Europe. The United States, for her part, will continue to rely on the benefits of belonging to NATO: Legitimacy, multilateralism, and a powerful economy. Complementarity, therefore, must be viewed as an asset, not as a liability.

NATO-EU RELATIONS

The question here is whether European Union NATO members will put their money in NATO or in the EU. Choosing the latter will be fine as long as members engage in cooperation rather than competition with NATO. The Berlin Plus arrangements, in which access to NATO planning capabilities is guaranteed, should answer this question.

THE U.S.-EUROPE TECHNOLOGY GAP

I believe we will never be in a position to close the U.S.-Europe technology gap. However, we must prevent its further widening and preferably reverse the trend before it leads to a gap in how we conduct warfare, which would be much more damaging. In the end, if we have to send our young men and women into harm's way, we must give them every advantage for coming out alive as well as being successful, and that means investing in technology. But rationalizing our defense industries can be done only by strengthening our multilateral government institutions. We must find ways to save money and energy by combining efforts, including planning and cooperatively procuring armaments.

Within NATO we can already see that multinational efforts are the right answer—we see it in such initiatives as the strategic airlift and the Alliance Ground Surveillance system. I am very pleased with the progress thus far on a NATO-owned and -operated AGS core, based on the TIPS mixed solution; while 2008 was my personal wish for the year of initial operating capability, I hope there will be no further delays beyond 2010. There has been much transatlantic cooperation in this area.

NATO nations also recently held discussions at the ambassadorial level to address this issue. Four proposals are now being discussed at NATO headquarters:

The first of these proposal concerns the ongoing U.S. interagency review of defense trade export policy and national security. The U.S. has offered to keep NATO appraised of progress through regular briefings to the council, and it might also be helpful if European nations shared information on their defense trade export policies, either within the framework of the Alliance or within the European Union's, in order to include their experience with the United States'.

The second proposal relates to export licensing problems that are affecting NATO agencies. The United States must understand the needs of the NATO agencies and they, in turn, must understand the requirements of U.S. legislation. Meetings on this issue have been held with officials of the American administration and dialogue is ongoing. European nations may also wish to review their export-related dealings with NATO agencies and NATO should assume a coordinating role when working with Allied governments regarding export-licensing problems that affect NATO.

The third proposal has to do with establishing a high-level forum for addressing transatlantic export-control and technology-transfer problems. Dr. Solana first put this idea forward in 1997 when he was NATO Secretary General, but no consensus was reached and the initiative never took off. However, it is surprising that no real forum is yet in existence for collective international discussions on key issues such as defense export licensing and technology transfer. But given the fusion of security and economic interests involved in these processes, I believe they are uniquely suited to NATO–EU cooperation. NATO plans to carry forward conferences on industrial cooperation on an annual basis. Perhaps these conferences should be a co-sponsored NATO-EU venture.

The fourth and final proposal deals with releasing a high-level political declaration in which NATO agrees that enhanced transatlantic defense-industrial cooperation is one of the Alliance's critical strategic security objectives.

With these proposals in mind, I have asked Admiral Giambastiani, the Supreme Allied Commander for Transformation, to organize a European Industry Day, which will be held in Berlin in mid-September. The intent of the day is to demonstrate how industry can best fit in with the Alliance's transformation efforts. I encourage everyone linked with the industry to mark your calendars and make every effort to attend—it will be well worth your time.

As far as the European Union is concerned, I believe a European way of thinking and carrying out transformation must be developed to fit European technology and resource levels. The recent creation of the European Armaments Agency is an excellent example of how we can meet this need. The EAA will be able to evaluate capabilities, coordinate research and development, harmonize military requirements, achieve multinational solutions where needed, make procurement much more efficient, and strengthen a Europe-wide internationally competitive defense industrial and technological base.

EXPANDING PEACE AND STABILITY BEYOND EUROPE

The transatlantic relationship cannot be isolated from the larger international system of which it is a part. At the Prague Summit, Alliance heads of state and government placed significant emphasis on outreach activities, recognizing that security is largely dependent on stability in the regions bordering Alliance territory, be it in the Mediterranean basin or in the Caucasus. We anticipate that demand for NATO is likely to increase, not diminish. The Alliance will continue to be called upon on the international stage as peacemaker, peacekeeper, and provider of security and stability. At the moment, these are roles that no other organization can undertake as successfully. The speech by UN Secretary General Annan inviting NATO to play a more active role in Africa, and UN interests in closer cooperation with NATO, are acknowledgements of this fact.

THE EAPC

Regarding the Euro-Atlantic Partnership Council, which provides a framework for discussion for 46 countries, Allies have increased the involvement of partners in the planning, operation, and oversight of

political and military activities that contribute to security. The Council adds value to the Alliance, providing a superior institutionalized forum for progress.

On the military side, Allies' forces contribute to promoting stability throughout the Euro-Atlantic area by regularly participating in military-to-military contacts and in other cooperative activities and exercises under the Partnership for Peace program as well as those that deepen NATO's relationships with Russia, Ukraine, and the Mediterranean Dialogue countries. These partner countries also participate in NATO-led operations, notably in Afghanistan and the Balkans, showing again that our outreach program provides a strong framework for interoperability and integration.

NATO will always need to act in close cooperation with other organizations that have key political and economic responsibilities, starting with the United Nations. The UN has already inquired if NATO is in a position to provide it with military planning and a reserve force for UN missions. But to do our work we need contributions from partners and non-NATO countries. We are currently looking at ways to improve the arrangements and mechanisms for encouraging even more effective contributions to NATO-led operations.

THE PFP

In order to continue to strengthen PFP, it is important for Allies to develop relationships with partners in the Caucasus and Central Asia, because these partners hold the key for providing a stable security environment around conflict areas such as Afghanistan, where terrorism was born and flourished. Since the Prague Summit, partners have been invited to participate in training opportunities and exercises related to terrorism, and we will continue to share with them the lessons learned from fighting against this plague.

THE MEDITERRANEAN DIALOGUE

The Mediterranean Dialogue is also a very important pillar of the Alliance strategy for expanding peace and stability. At their December 2003 meeting in Brussels, NATO foreign ministers looked for additional progress in expanding the dialogue beyond what was achieved at the Prague Summit. We are now considering ways to further enhance NATO's relationship with all Mediterranean partners before the Istanbul Summit by generating, in consultation with them, options for developing a more ambitious and an expanded Mediterranean Dialogue framework.

Different types of relationships have been established with nations that have no affiliation with the Alliance, either through EAPC or the Mediterranean Dialogue; stronger links have been forged with countries that have contributed troops to NATO-led operations, including Argentina, Australia, Chile, and New Zealand. Significant relationships are also being developed with Bosnia and Herzegovina, Serbia and Montenegro, Japan, and, more recently, China. All of this has been done to improve cooperation throughout a number of areas, including defense reform and interoperability, and to open more Partnership activities to Mediterranean Dialogue countries on a case-by-case basis. Interoperability is a key word here. NATO has a good deal of experience integrating forces from various countries, including Islamic ones, into a coherent military structure, and we will continue to do so.

RUSSIA AND UKRAINE

Discussions concerning the expansion of peace and stability cannot take place without discussing relations with Russia and Ukraine. The NATO-Russia Council, or NRC, was established by the Rome Declaration of May 22, 2002, and given the task of exploring new areas for cooperation. From this beginning, the NRC Work Program was agreed to on June 10, 2002, which included the establishment of the

NRC Theater Missile Defense Ad Hoc Working Group. Theater missile defense, or TMD, is one of several areas identified by NATO and the Russian Federation as highly promising for rapidly developing cooperative efforts based on the outcomes of the Rome conference. As part of the development of a joint TMD concept, a plan for an interoperability study, and future training and exercise events, we are working to complete an operational concept for providing strategic military guidance for future combined NATO-Russia TMD operations.

NATO and Ukraine have also had considerable success participating in practical cooperative efforts in support of common political goals. Ukraine has been active in Partnership for Peace since 1994, and the NATO-Ukraine Charter that was signed in 1997 gives Ukraine a privileged position in relation to NATO. To date Ukraine has participated in 200 exercises and hosts the Partnership for Peace Training Center.

CONCLUDING REMARKS

I would like to end by underlining that the security risks we now face and will continue to face will be multidimensional and so we cannot construct our security operation to fight a single threat. NATO is a multifaceted organization, the premier forum for transatlantic political consultations on security issues. But it is also a collective-defense organization. With a fluid strategic situation, we must, in order to defend ourselves, look to territorial defense, but also be prepared to go wherever the threats are.

As NATO matures in the new security environment, it will remain the intergovernmental security organization of choice. It is the organization most able to harmonize and integrate multinational capabilities (including those of Islamic states) into a coherent and effective structure. Coalitions of the willing cannot do that. But while much has been achieved since Prague as far as transforming our capabilities and structure, much more remains to be done, especially in the development of collective capabilities.

General Harald Kujat

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Chapter 4

Prague to Istanbul: Ambition versus Reality

SACEUR General James L. Jones¹

STEPS TOWARD TRANSFORMATION

y goal here is not to repeat what General Kujat said—although we agree completely on these matters—but to outline what I see as the operational challenges the Alliance must confront as it continues its transformation.

The impetus for transforming the Alliance emerged with the groundbreaking guidance provided by the Prague Summit in November 2002. With this guidance—the clearest political guidance I have seen in my career—the Alliance set the stage for its success. I used to tell people that NATO stood at a cross-roads and faced a choice about which path it might take. Today, I can say without hesitation that the Alliance has moved beyond that crossroads and has made tremendous progress on the path toward the end-state of transformation. We have begun streamlining the NATO command structure by establishing the Allied Command for Transformation and the Allied Command for Operations as well as deactivating 12 subregional headquarters—a process that will be completed later in 2004. NATO also made tremendous progress in creating and developing the NATO Response Force (NRF), the concept that will, more than anything else, be a path for transforming the Alliance's force structure. I am pleased to say that the Alliance has moved the NRF from concept to reality in less than a year, activating it in October 2003 at Joint Force Command Brunssum.

While taking these steps, NATO has been simultaneously engaged in three major operations: In the Balkans, with SFOR in Bosnia and KFOR in Kosovo; in the Mediterranean, with Operation Active Endeavor; and in Afghanistan, with the International Security Assistance Force. Just as important, NATO is also validating its strong military relationship with the European Union. In December 2003, the EU completed Operation Concordia in Macedonia, its first mission with recourse to NATO assets and capabilities. Initial planning also began in January 2004 for the possible handover of the SFOR mission in Bosnia to the EU, which would come under the auspices of the Berlin Plus Framework.

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THE FOUR PILLARS OF TRANSFORMATION

While 2003 marked an impressive start to transformation, we must recognize that additional challenges must be confronted if NATO is to achieve the full promise of the Prague Summit's vision. Transformation is not simply making changes in the Alliance's military forces. In my view, one must look at transformation more holistically across what I call the "four pillars of transformation."

The first pillar is the one people most readily recognize—technology. Improvements in capability through technology are allowing today's infantry battalions to have the same capability as yesterday's infantry regiments while at the same time placing fewer people at risk on the battlefield.

But you cannot take full advantage of technological gains unless you tie them to the second pillar—new operational concepts, such as the NRF, that allow you to maximize the gains in technology.

The third pillar of transformation is adopting institutional reforms. One challenge confronting the Alliance today is its strategic decision-making process, a point that was brought to the forefront at the informal Defense Ministerial in Colorado Springs in October 2003. It is logical, for example, that the Alliance might want to re-examine the way it makes decisions in light of the NRF's expeditionary capability.

The last pillar of transformation is the adoption of better business practices. We need to do a better job of managing the resources we have and the process through which we acquire capabilities. Until we can honestly say that we have been good stewards of the resources we have been given, it will be difficult to go back to the nations and ask for more.

CHALLENGES TO THE TRANSFORMATION PROCESS

In light of this holistic view of transformation, it has become clear to me that in the time I have had the privilege to serve at Mons, six challenges have threatened to ultimately derail our common efforts at transformation.

The Capability-Usability Gap

The first challenge is the disparity between capability and usability that exists in NATO. While NATO members in theory have an enormous military capability available for use by the Alliance, we have problems converting this capability into usable forces. This is in some ways representative of the challenge we face using a twentieth-century force in the twenty-first-century security environment. We must change from being static to being expeditionary, from having a regional outlook to being global, from engaging in warfare based on the principle of "mass" to a new warfare based on precision, from a force based on quantity to one based on quality.

One way the Alliance can help member-nations is to better define NATO's military requirements: What is NATO's minimum military requirement for the twenty-first century? Such a statement of requirements would assist nations in defining their own national requirements, and give the smaller nations the opportunity to develop the small but essential niche capabilities such as command and control; communications; combat service support; chemical, biological, radiological, and nuclear defense; CIMIC; and special forces. Former Secretary General Lord Robertson used to say that only 3% of the Alliance's military is actually deployable. Our goal is to improve that number and to improve it significantly, generating greater usability from the forces we currently possess.

Lack of Military Resources

A second challenge facing the Alliance is the growing gap between member-nations' stated political ambition—as defined by operations currently underway or poised to commence—and their willingness

Prague to Istanbul: Ambition versus Reality

to provide proper resources for these operations. We must find a way to fix this gap. Currently, not one NATO operation is fully resourced to the militarily-necessary minimum levels. Usually we receive contributions in the 70% to 80% range, but we consistently experience shortfalls in the strategic enablers so vital to ensuring mission success. The force-generation process is in urgent need of reform.

One solution might be to present the nations with the military requirements needed for an operation before they decide to execute it. Another solution could be the development of a sustainable rotation scheme based on the Defense Planning Questionnaire and equity. With the implementation of such a concept, nations would no longer be concerned that a commitment of troops might become open ended if a replacement unit was not deployed in a timely manner. Bridging the resource gap is not an issue of capacity—these forces exist and have been declared to NATO—but one of usability.

National Caveats

After forces have been deployed to an operation, a third challenge often ensues that further limits their usability. This problem is known as "national caveats," a cancer that eats away at our operational capability and our ability to accomplish our missions.

A national caveat is generally a formal written restriction that most nations place on the use of their forces. There are also unofficial "unwritten" caveats imposed by military superiors at home. NATO tactical commanders usually know nothing of these unwritten caveats until they ask a deployed subordinate commander to take an action and the commander says, "I cannot do this." Collectively, these restrictions limit the tactical commanders' operational flexibility. However, I am pleased to report that several nations have made progress in modifying and eliminating written caveats, but we must do much more if we are to succeed.

Tooth-to-Tail Ratios

The issue of usability is also a problem in the "tooth-to-tail ratios" facing all of our operations, the fourth challenge. While NATO is striving to create a twenty-first-century military force, we are still deploying logistics in a twentieth-century manner. The tactical commander cannot employ 30% to 40% of all the forces deployed to his operation because they belong to "national support elements" that are in fact not "transferred" to NATO command. What is particularly frustrating is that in some cases capabilities actually exist within national support elements that would fill some of the critical shortfalls in NATO's military requirements. While nations are generous in offering these capabilities to NATO on a case-by-case basis, unless these units are under the NATO commander's operational control they cannot always be available for use when we need them.

By simply transferring these capabilities to NATO authority, nations could in some instances fill shortfalls in critical capabilities. In the future, we must build and begin to use a multinational logistics concept; if we provide logistical support more efficiently, tactical commanders will be able to use a greater percentage of the overall deployed force to accomplish their primary military objectives.

I would like to illustrate the insidious nature of caveats and our low tooth-to-tail ratios by examining our military mission in Kosovo, where approximately 19,000 troops are currently deployed. While this may appear to be a large force, national caveats restrict almost half of these troops in some way, either from conducting crowd/riot control tasks or conducting inter-sector movement within the KFOR area of operations or protecting property. When we also consider the troops deployed to Kosovo within national support elements who are not transferred to NATO authority, we see that the KFOR commander in reality has only between 5,000 and 6,000 soldiers fully available to him to conduct his mission.

Lack of Intelligence

A fifth challenge is in the area of intelligence. Quite frankly, NATO intelligence is at the mercy of national intelligence—whatever information nations decide to share with the Alliance is what we get. Part of the challenge we face in Kosovo is that we do not have sufficient intelligence, either provided directly by the nations or transferred to the NATO commander in theater to allow him to collect, assess, and process it. SHAPE will soon be presenting a proposal to the nations for the establishment of a NATO Analysis Center, which would function similarly to the United States European Command's Joint Analysis Center. A NATO Analysis Center would be responsible for analyzing and producing both strategic and regional intelligence that would then be available for use by the Alliance.

Inefficient Use of Resources

The sixth and last challenge is a more general one that confronts all nations: Using resources more efficiently. In recognition of the reality that most if not all member-nations will not be able to raise defense spending, I have been recommending that nations maintain a floor for defense spending of no less than 2% of GDP. Such a floor would give nations the opportunity to make cuts in their force structure, eliminate outdated weapons from their arsenals, close unneeded bases, and reinvest resulting savings into remaining forces, thereby increasing overall capability and deployability. If nations make these painful cuts and do not reinvest the savings, a smaller, less capable force will result. True transformation means becoming more efficient with the resources we have.

CONCLUDING REMARKS

The six challenges I have outlined threaten to impede NATO's efforts at transformation. While these challenges may not have been apparent even a year ago, it has become clear that they must be confronted and fixed if transformation is to be fully realized. Failing to do so will only delay the Alliance from completing its transformation. I believe it is better to be 80% correct and make things happen today than to be 100% correct tomorrow after the opportunity has passed.

NATO's goals are ambitious and exciting and I remain optimistic that we will find the right path. The Alliance has had a glorious and successful history and I remain convinced that its best days still lie ahead.

Security Challenges of Southern Europe And the Mediterranean

Admiral Giampaolo Di Paola¹

t is a distinct pleasure to have the opportunity to attend this workshop and to address such a distinguished audience concerning how the Italian armed forces look at the security challenges of Southern Europe and the Mediterranean, a very critical arena for global security. Because security is now a global issue, global responses are needed, including:

- Elaborating new ways to effectively cope with security's unpredictable scenarios;
- Analyzing its trends;

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• Developing long-term, commonly shared strategies as well as day-to-day focused responses to the challenges.

CHANGES IN THE SECURITY ENVIRONMENT

The disruption of what an Italian strategist called "the elegant simplicities of the Cold War" has resulted in profound changes in the security environment, presenting an even more complex situation because of the new actors and the emerging challenges. In addition, today's security risks and threats involve ordinary people throughout the world, making global security a dramatically relevant political issue.

The security challenges of Southern Europe and the Mediterranean stretch well beyond their geographic boundaries; their geopolitical dimensions encompass the Atlantic approaches to Gibraltar, the Middle East, the Persian Gulf, the Caucasus, and even Central Asia. From a Western point of view, this results in a "wider Mediterranean" arena; from an Eastern point of view there is a "greater Middle East." However, both outlooks follow the historical perspective of "bridges and crossroads" among cultures.

The growth of civilizations as well as the expansion of the greatest empires have been crucial factors in developing the "common space" of the region. Today's "wider Mediterranean common space" incor-

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porates hundreds of millions of people from many different cultures who are now living in tens of different states, some of which originated very recently and are subject to strong external pressure. The region has remarkable dissymmetry in demographic trends as well as in its economic and political development. It also has an astonishing concentration of natural resources, vital for the development of the planet.

Since the Cold War's politico-military watershed, the area has been regaining its historical bridging ability. This offers greater opportunities, but it also presents new and old security challenges. From a political standpoint we are witnessing the two opposite phenomena of integration and fragmentation. While fragmentation often implies instability, integration is a more difficult process to handle, and we therefore consider the European Union project a success story that continues to gain momentum. Europe is now expanding both east and south, creating a strong, unified political area that projects stability, paralleling the expansion of NATO, another deeply engaged, reliable source of stability.

CONTINUING INSTABILITY

Despite these steps forward, instability and insecurity continue to dominate the wider Mediterranean region. Instability has resulted from a variety of threats, above all terrorism and the proliferation of weapons of mass destruction—which are fostered both by rogue states and those "black holes" of the planet we call "failed states"—and from religious fanaticism and organized criminal groups. The area is also a breeding ground for illegal trafficking of weapons, drugs, and human beings, and for the uncontrolled movements of people, including mass migrations. In addition there are ethnic and religious conflicts; fights for vital resource control; and political, social, and economic underdevelopment that deeply affects everyday life in society. Instability and uncertainty dominate the Southern Region.

At the present time, the Middle East is fundamentally unstable. The Israeli-Palestinian question remains the central problem, and the war in Iraq continues to present great uncertainty. Further to the east, Afghanistan's transition to a stable democratic state is still far off, and most of the newly emerged states in the Caucasus and Central Asia continue to engage in disputes with their neighbors or have ethnic-minority problems that impede building a stable society. In addition the control of natural resources has assumed great importance as has the offensive actions of fundamentalist and terrorist groups. The dramatic events of September 11, 2001, and the continuing and escalating terrorist threats illustrate the determination of terrorist organizations to pose a strategic challenge to our security.

SIMILARITIES AND DIFFERENCES WITH THE COLD WAR ENVIRONMENT

Just what are the main features of this challenge to our security? Many observers have rightly argued that the current security scenario is dramatically different from that of the Cold War period. But I wonder, and I would like to raise the question, what has really changed compared to the past? What are the analogies? What are the differences?

The current challenge has several things in common with the old challenge. For example, there are still two main strategic actors: Western culture, based on democratic values, and a "global competitor," terrorism. However, confrontation between the two does not run along a geographic axis: It is rooted in diverging cultural visions. These visions, unlike those of the Cold War confrontation, do not stem from homogeneous cultural values, which adds another element of complexity to the confrontation.

As in the Cold War, Europe may become the "watershed" arena of confrontation, since it is directly on the line of attrition—a line that our open societies, with their open culture and open economy, have great

difficulty protecting. The recent terrorist attacks in Madrid remind us that the southern European countries are particularly exposed.

On the basis of these analogies and facts, it clearly appears that the U.S. and Europe are facing, once again, a global threat from an actor that is capable of implementing global strategies, including the recent attempts to decouple the U.S. from Europe.

Such are the similarities. But what are the differences?

First of all, there is the great difficulty in identifying our antagonist: He is not a state, nor an alliance, nor a territory, but is very often among us, and lives close by. Our enemy does not have an army that we are accustomed to, and we cannot put a number on its divisions and its arsenals. Our enemy also does not wage war in the traditional sense, but spreads terror and uncertainty all over the world, weakening the will and the fabric of our societies and our determination to stand up to the threat.

Many years ago, a well-known document, the Harmel Report, which served for a long time as a major source of inspiration for NATO policy, recommended a strong defense policy but also dialogue and constructive cooperation with the Eastern Bloc, our competitor at that time. This strategy, in the long run, was very successful, and I wonder now if it is possible to use the guidelines of the Harmel Report to design future effective strategies to cope with the new global threat. However, the nature of our present competitor demands different approaches for implementing those principles.

A NEW APPROACH TO THE NEW CHALLENGES

As far as cooperation is concerned, we must adopt an indirect approach; our enemy is not a state, but he can use a territory as a safe heaven or, as in the previous situation in Afghanistan, rule a state. Our strategy should be to establish strong, reliable, concrete cooperation with countries in which the threat can breed. Since military deterrence does not work against terrorism, and since we are not facing a regular army, when the situation demands it we must directly and resolutely apply military power to neutralize its effect.

In light of the above, it appears even more evident that Europe must reaffirm and strengthen its security links with the U.S., building on the transatlantic partnership that has been forged over 45 years. This is the most appropriate response to the new security challenges. Confidence-building initiatives will play a crucial role in bridging the confidence gap and prevent the reemergence of new dividing lines while fostering partnership and co-operation.

THE NEED FOR INTERNATIONAL COOPERATION

A global approach to security can be developed only with the strong commitment of the international community and through the integrated use of a wide array of tools—political, economic, diplomatic, and, when necessary, military. A multidisciplinary, fully integrated approach will lead to a wide spectrum of coherent preventive strategies, including intelligence, civil and military cooperation, diplomatic and economic leverage, humanitarian aid, education, police mentoring, and, last but not least, a robust and phased public information campaign.

To this end, NATO and the EU will both play significant roles, with initiatives such as NATO's Mediterranean Dialogue and EU's Euro-Mediterranean Partnership aimed at fostering confidence. Italy recognizes the great importance of both of these organizations and is deeply engaged in the process of improving their effectiveness, strengthening their political dimensions, fostering their complementarity, and helping to realize their related initiatives.

At the Prague Summit, Alliance leaders agreed on a package of measures to upgrade the Mediterranean Dialogue; the package is aimed at strengthening and deepening relations with Mediterranean Dialogue partners that have the potential to fundamentally change the nature of the relationship between NATO members and Partners in the wider Mediterranean region.

Concurrently, the EU is advancing and deepening the Euro-Mediterranean Partnership in order to increase its effectiveness and is working to bring about a strategic partnership with the Mediterranean and the Middle East.

The U.S. is also promoting an important Mediterranean-region process known as the Greater Middle East Initiative. This proposal aims to bring about a comprehensive, long-term commitment to the region and has been working toward that goal during the last two years through key policy speeches by President Bush and other senior administration figures and by focusing on democratization, economic reform, and education. The proposal has generated strong debate and promise and the next EU-U.S., G8, and NATO summits will add to the synergy of this and other related initiatives.

Similar discussion and debate is underway with Gulf Cooperation Council countries and with other Middle Eastern countries interested in cooperation with both NATO and the EU. For example, at the Atlantic Council meeting in March 2004, the Italian Minister of Foreign Affairs submitted a vision paper called "Toward the Istanbul Summit." This document proposes several cooperation initiatives, including a national forum for consultation on security and defense, a multilateral networked and expandable architecture, and linking up with the forthcoming European educational network. Italy also favors a new cooperation initiative aimed at all greater Middle East region governments interested in forming a security partnership against the common threat of fundamentalism. In addition, Italy is strongly promoting synergy between NATO's and the EU's Mediterranean initiatives through national activities.

THE MILITARY DIMENSION

Besides taking part in many bilateral and multilateral military activities, including training, exercises, and operations, with southern Mediterranean countries, since 1996 Italy has also been organizing a biannual Sea-power Regional Symposium for the navies of the Mediterranean and the Black Sea. Because security sometimes requires a military dimension, such activities are necessary, and the international community's growing commitment to peace and stability and fighting terrorism must be backed by the availability of the military component. Crises and interventions are currently multiplying, however, stretching thin the resources that can be counted on, and making it more difficult to have an adequate reserve capacity at the ready.

The multinational dimension of military efforts is therefore a necessity as well as a political opportunity, provided it is developed without a duplication of efforts. Security organizations such as NATO and the EU are now coordinating their efforts in order to develop military capabilities to deal with new risks and threats. Key to this work is effective interoperability, and since NATO has a record of success in this field, in my opinion it must continue to maintain the leading role. While the EU is also strongly committed to developing interoperability, it cannot be achieved without using NATO as a reference.

As far as new capabilities are concerned, High Readiness Force Headquarters, the NATO Response Force, and the EU Battle Group are all transforming the operational field. The Italian armed forces are strongly committed to these initiatives, and I would like to state that both Italian NATO HRF HQs—land and navy—are already fully operational.

But an important part of fostering multinationalism is avoiding duplication of effort. To this end I believe that EUROFOR and EUROMARFOR, created in the ESDI perspective, should be rapidly integrated into the wider EU ESDP context.

However, multinational initiatives are not limited to the NATO and EU frameworks. The Proliferation Security Initiative (PSI), for instance, a "coalition of the willing" arrangement aimed at coping more effectively with WMD illegal traffic, is a successful example. Recently Italy hosted two exercises, one air and one maritime, that underlined the need for the military to deepen its cooperation with all pertinent civil agencies.

Countering global terrorism requires a number of essential military capabilities: Advanced C4I capabilities, the ability to rapidly project forces, jointness and multinationality—and therefore interoperability—effectiveness, high quality, civil military cooperation (CIMIC) units and special forces. These capabilities are part of the goal of the Network Centric Warfare concept. But to reach this goal there needs to be a very strong collective commitment from NATO and EU members as well as a commitment to prevent the U.S.–Europe operational gap from getting so large that joint operations would no longer be possible. The Italian armed forces, while playing a major role in the multinational effort to build peace and stability and foster military cooperation with the military partners of NATO and the EU, are strongly committed to this vital objective.

New military capabilities, and the way they are created, affect not only the possibility for NATO and EU forces to effectively deal with the emerging threats, but also, on a wider level, their ability to play the role of military facilitators, fostering multinational efforts, interoperability, and cooperation among nations. Neither NATO nor the EU can afford to fail to meet these challenges.

CONCLUDING REMARKS

The wider Southern Region, including the Mediterranean and the greater Middle East, is home to a great many twenty-first-century security challenges. This is the new security frontier for NATO and Europe. To meet these challenges, we must craft a comprehensive strategy based on five critical points:

- Strengthening the political dimension of the Mediterranean Dialogue based on a sense of joint ownership of the initiative; and also tackling security issues of common interest to all participants (terrorism, proliferation, organized crime, drugs and human trafficking, the Israeli-Palestinian crisis).
- Enhancing concrete cooperation (a maritime initiative is an easy first step).
- Seeking full complementarity between NATO's Mediterranean Initiative and the EU's Euro-Mediterranean Partnership.
- Broadening the southern horizon toward the greater Middle East by welding together the Mediterranean Security Initiative and the proposed Greater Middle East Security Initiative.
- Transforming our armed forces to enable greater operation readiness, availability, and deployability in order to make them more able to support our political strategy in the Southern Region and to defeat terrorism.

It is an ambitious goal, but with NATO, Europe, and the moderate and willing countries of the region working together, we can reach it.

Italian Chief of Defense Admiral Giampaolo Di Paola

Enhancing the Efficiency of Peace Operations

Vice Admiral Tarmo Kouts¹

would like to start my remarks by briefly describing, from the perspective of a task force commander, the environment in which an expeditionary operation is likely to be conducted. Then I will move to the strategic level and address the same issues from a different angle. All of my observations are based on experience, through Estonia's participation in peacekeeping missions in the Balkans since 1994, in Afghanistan since 2003, and in the ongoing Iraq operations, as well as from numerous observer missions over the last decade. In sum, my observations are based on Estonia's experiences contributing to peace and stability worldwide.

THE LIKELY EXPEDITIONARY ENVIRONMENT

The most probable operation will be conducted by a multinational task force operating under an unclear or a questionable mandate. This task force will likely be deployed into a failed state or a state on the brink of fragmentation. Opposing forces are likely to be technologically inferior, probably lacking a centralized command, but they will use asymmetric warfare. The mission of the intervening stabilization task force could be anything from securing disaster relief to forcible entry to stop a massacre, as we did in the Balkans.

Regardless of which auspices the operation is conducted under—the UN, NATO, or a coalition of the willing—there are some key aspects to bear in mind.

First and foremost, the operation should be focused on restoring the local political process and economic life. We, the military, can stop violence, but we cannot prevent criminal activities from intertwining with people's daily life. That is what happened in Kosovo, where organized crime is taking control of the country and the people—family by family.

Without the local political process in place, the military will be forced to stay in the area for a considerably longer period, perhaps 20 years, during which time a generation will grow up without a positive vision of its future, because the people were deprived of the right and obligation to take care of their

Vice Admiral Tarmo Kouts is Commander of the Estonian Defense Forces.

country. This generation will learn not to play, but to fear, to hate, and to fight —which is what happened in Afghanistan, a country that has been fighting since 1980. More than one generation has grown up in Afghanistan without any peacetime skills, without any positive idea about the future. What, then, will they pass on to their children?

Without a prudent economy in place, a surrogate shadow economy will bloom. This economy will be based on cultivating and trading drugs within countries and families; and trading drugs across the very same borders that we, the military, are to guard. States can operate only with a viable economy, because otherwise there will be no means of sustaining statehood. Only drugs and terror emerge from a disappointed, warlike environment.

In order to rebuild a state, therefore, one must first take nearly airtight control of its borders, as we did in Estonia in 1989, and develop the essentials of a state apparatus as well as deal with the primary concerns of the people—public safety and social security. Legitimate power must be credible and useful, or the people will not accept their leaders' right to govern them. We see the manifestation of this problem in today's Iraq, Kosovo, and Afghanistan.

ISSUES TO BE ADDRESSED

I would now like to discuss several lessons learned from numerous failures and some successful peace operations during the last 50 years.

- First, the legitimacy of intervention, both in legal and moral terms. The ability of the on-scene force commander is seriously hampered when he and his men have doubts about the legality and justification of their actions. We must continue working on developing a solid political and legal framework to address the issue of humanitarian intervention, because there is difficulty in reconciling respect for sovereignty, the cornerstone of the modern international system, and the moral obligation of democratic states to protect human rights.
- Second, the appropriateness of the military instrument. There is a saying in English: "If the hammer is your only tool, every problem looks like a nail." For all too long the military has been considered the handiest instrument to do everything. While I don't question the policies of military intervention, I do have to ask how far we can go tasking the military with nation building. Which capabilities can reasonably be developed within the military and which should be handled by another entity?
- This leads to my third point, namely, the clearness of mission. The very nature of military planning implies that a clear objective or a clearly defined end state must be set, because it is from that end state that mission-capability requirements are derived and an appropriate force package is compiled. Ambiguity of mission will as a rule be reflected in all sorts of caveats, which nations taking part in the mission must put on their forces. As time for planning dwindles, now and even more in the future, we will see the need for close and coordinated cooperation between political decision-makers and military leaders to provide expertise. Toward that end, the NATO Military Committee is currently working to streamline decision-making processes and to make sure that political and military planning are conducted in parallel, not subsequently, as they have been so far.

POSSIBLE SOLUTIONS

Now let me turn to a couple of suggestions. The idea of establishing a NATO stabilization and reconstruction force was raised by Dr. Binnendijk. I would like to elaborate a bit on this. Earlier I said that the most probable operation would deal with asymmetries and low-intensity, soft-end security risks, such as those we see now in Iraq and Afghanistan. But the response to these risks can not be more high-tech gizmos within the existing paradigm—we need to radically change our thinking and develop a unified conceptual basis for all security-providing agencies that are involved in the very complex process of nation-building. That concept should depart from the capabilities-based approach across the whole spectrum of actors, from, say, paramedics to law enforcement to the military, thus enabling us from the initial planning stage to pull together a task force best suited to address the problem at hand. This approach would also enable us to reconfigure the task force whenever necessary to respond quickly to changes on the ground, thereby avoiding the worst nightmare of any military commander—mission creep, which is what happened in Somalia and Srebrenica.

Last but not least, there has been a lot of talk about capabilities during the last several years. I am afraid that not all politicians, diplomats, and military personnel always understand the word's meaning in the same way. From a purely military perspective, I would say that capability can not be separated from the structure that is carrying it.

Judging from the past, divisions will not always be deployed, but rather battalion-size battle groups with organic support elements far bigger than those for in-line battalions, in order to compensate for a missing brigade or division. Therefore, considering the increasing need for force flexibility, we may need to rethink the traditional way of looking at the force structure: Not seeing battalions as pre-structured line units, but rather as an administrative framework for producing and maintaining pockets of competence. If the same approach is applied across all actors involved, we may actually reach the level of flexibility and responsiveness needed to deal with rapidly changing situations on the ground.

Vice Admiral Tarmo Kouts

Strategic Concepts for the Iraq War, Conflict in the Middle East, & the Global Struggle Against Terrorism

General Gerhard Back1

THE CONTRIBUTIONS OF ISAF

In the time allotted to me, I hope to provide you with a better appreciation of the contribution we are making in Afghanistan. But as you know, the global war on terrorism is a many-headed hydra, and my topic today, the International Stabilization Force, or ISAF, in only one critical part. Operation Enduring Freedom concentrates on hunting down terrorists in high-intensity war-fighting arenas, while ISAF tends towards the peace support, stabilization, and reconstruction end of the spectrum. Both of these initiatives, however, seek the same result for Afghanistan— namely, nationhood and democracy. As Commander-in-Chief of the NATO Regional Headquarters Allied Forces North, I have operational command of the NATO-led operation in Afghanistan. It is my great pleasure to clarify the role of the NATO force in Afghanistan.

Let me begin by reminding you that, though NATO took over the command of ISF in August of 2003, the International Stabilization Force in Afghanistan was established following the December 2001 Bonn Summit on Afghanistan, which resulted from the U.S.-led coalition engaging in Operation Enduring Freedom in the wake of September 11. It is important to remember that the international community came to be in Afghanistan because of the global struggle against terrorism. The coalition was formed to attack and destroy international terrorism in its adopted heartland and subsequently agreed to address the wider issues of Afghan stability and development, governance and security, and democratization. Its intent was to deal with these issues in a way that terrorist or terrorist-linked movements could no longer find refuge or a base in that country.

Therefore, although ISAF's mission is distinctly different from Operation Enduring Freedom's, it is closely linked and seeks to realize its ambitions for Afghanistan. Its Mission Statement includes "Assisting the Afghan Transitional Authority (ATA) in the maintenance of security in Kabul and its surrounding areas so that the ATA as well as United Nations Mission personnel can operate." If you keep this Mission

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Statement in mind, you will see that ISAF enables the effective operation of the ATA and the UN in Afghanistan, a markedly different role from, say, that of KFOR in Kosovo.

Since December 2001, ISAF has been mandated by the UN Security Council to deploy to the Kabul area; more recently it has also been mandated to deploy to Konduz, north of the Hindu Kush. In the near future, the ISAF's reach will extend to the north, and in the long term may operate countrywide. Indeed one can envisage ISAF fusing with Operation Enduring Freedom throughout Afghanistan, though such an occurrence is still some time off. Such expansion is necessary in order to support the authority of the Afghan Central Government beyond the environs of Kabul; without such support it will be difficult for the government to operate.

Provincial Reconstruction Teams (PRTs)

Expansion will take place through the so-called Provincial Reconstruction Teams, or PRTs. Ideally these are conducted by one nation—a lead nation—with others in support, and their principal task is to provide a credible security presence. Such work is achieved through combined military/civilian teams of between 50 and 200 people who operate in a number of key locations across the country. Gradual expansion will permit the ISAF to create a framework of PRTs in an increasingly wider area of Afghanistan. This area, approximately the distance between Warsaw and Paris, currently has no supporting infrastructure and does have significantly challenging topography. The PRTs will bring in additional troops and support, including forward operating bases and forward support bases housing medical facilities. Though we are encountering difficulties in the generation of these forces and equipment, I will not go into the specific problems. The Supreme Allied Commander has addressed that issue, in the full gaze of the international community and the media. In fact, SACEUR and the Secretary General of NATO are currently busy convincing nations of the critical need to provide the tools necessary to do the job, and, importantly, to provide them in a timely fashion. His predicament rather reminds me of the difficulties that Harry S. Truman faced, which prompted his famous quote: "…I sit here all day trying to persuade people to do the things they ought to have sense enough to do without my persuading them…"

Supporting Voter Registration and the Election Process

Once we have created the PRT framework, ISAF will be in a position to take on another important task: Supporting the scheduled election process. Organizing the elections is in the hands of the United Nations Mission, UNAMA, as is the voter registration process and organizing subsequent elections. President Karzai requested that NATO/ISAF support the elections process, and we will do so within our means and capabilities. However, preserving a secure environment in which free and fair elections can take place lies with the Afghan security forces.

Success of both the voter registration and the election process depends not only on a climate of calm in the country but also on the existence of conditions in which voters can cast their vote freely and fairly. Ultimately this depends on careful and detailed planning and organization, but NATO alone cannot ensure security. Indeed, neither NATO nor ISAF can absolutely ensure security, not because of unwillingness or a lack of capability but because of the constraints inherent in the UNSC mandate. The role envisaged for ISAF is the only role it can play. So through its general military presence in certain key locations—carried out through random patrols, aerial surveillance, intelligence gathering, and political engagement—ISAF will assist in generating the most secure environment possible.

Both the Afghan security forces and the UNAMA election officials face a daunting task: To protect and manage approximately 4,300 polling stations in Afghanistan. We will do all that is possible to support this vital activity within the scope of our mandate.

Post-Iraq War Challenges: An Operational Perspective

General Richard Wolsztynski¹

would like to focus on defining the main post-Iraq war challenges the international community is now facing from a military standpoint. First, a wider range of threats has refocused our attention on the potential for new forms of attack. The need is even greater than it has been for a global guarantee of security and for the defense of our citizens' interests. The current threats are unpredictable, even during military operations, and are perpetrated on a worldwide scale. The latest events in Iraq demonstrate the efficiency of the asymmetrical attack, and it is clear we face a complex environment.Second, the end of the war in Iraq enhanced the need for strong cooperation in order to restore peace and stability within a regional organizational framework.

MEETING THE CHALLENGES

The challenges to restoring peace and stability following military operations are multifaceted and complex. But we need to involve the regional actors as early as possible to provide stability. Events in Iraq have reminded us that there is no longer a clear distinction between security and defense, and that a global response is needed. But a military response is only one part of the crisis—we must worry about the Alliance's interests and take full advantage of regional cooperation at the military, economic, cultural, and political levels by establishing new partnerships with former adversaries and by using modern technologies, including intelligence gathering and analysis.

In order to prepare for the unexpected, we also need to coordinate closely with allies in the field of homeland security. Regional coordination is practically mandatory to promote true operational efficiency. In addition, we must remember that responsiveness has always been a key factor before and during a crisis. If we need to focus on mobility, interoperability, and innovative technology, we need to provide real-time management to allow forces to make very quick transitions from one phase to another.

The European states are now coordinating their efforts because they know that, if they want to meet the asymmetrical dangers of the future, they must practice trust and maintain partnerships. They must

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also, as they have in the past, share knowledge within regional organizations (EURAC is a good example of this).

In order to reach these goals, we need to develop better, more integrated intelligence capabilities so that we can provide timely, accurate information concerning threats, wherever they may emerge. We must be able to cover the entire spectrum of military tasks so that we have true operational consistency.

In addition, we must improve the way civilian and political multinational organizations work together, and employ well-trained people who are knowledgeable about complex military tools.

All of us need to address these issues—we need to understand what is within NATO and what is within Europe. This understanding will enhance multinational and regional cooperation and help us to face future challenges. As for the air force, one of our main tasks will be to foresee the nature of future air operations and the way these operations will be conducted in joint and multinational contexts.

THE NEED FOR INTERNATIONAL COOPERATION

All of these thoughts lead to several questions:

- How can we coordinate our efforts to better involve regional actors in future crises?
- What assets do we need to guarantee the responsiveness and readiness that are expected of us?
- How can we improve regional exercises to harmonize military requirements and standards?
- How do we maintain and, in some cases, reinforce the level of interoperability among our forces?

All of us need to address these questions in order to identify and face the challenges of tomorrow. If we want to successfully confront a wider range of unpredictable threats, we need to share knowledge with and increase trust in a wide range of regional organizations. We also need to determine what future military operations might be and how they will be conducted in joint, multinational, and interagency contexts.

To answer these questions, and to face all the challenges, all air forces must remain strongly committed to international cooperation.

Confronting the EU's New Threats: The Global Approach to Crises

Lieutenant General Jean-Paul Perruche¹

OPENING REMARKS

he subject of my presentation was inspired by the European security strategy that was proposed by Dr. Javier Solana and approved by the European Council in December of 2003. But I would like to begin by highlighting what in my view is the most important statement in this document: "As the union of 25 states with over 450 million people producing a quarter of the world's gross national product, the European Union is inevitably a global player. It should be ready to share in the responsibility for global security and in building a better world."

The document this statement is part of identifies the potential key threats to global security: Terrorism, the proliferation of weapons of mass destruction, regional conflicts, state failure, and organized crime. These threats are more diverse and more complex if dematerialized, and they take advantage of the increasing vulnerability of our developing societies.

THE NATURE OF GLOBAL THREATS

Terrorism is difficult to define. Its definition has become blurred as its roots and actions have diversified. Except for the fact that it always destroys, terrorism in Kosovo is different from terrorism in Chechnya, which is different from terrorism in Iraq. The definition of terrorism depends on perspective, and this can be an advantage to terrorists. It also is indistinct because it rests on diverse peoples, localities, modes of action, and objectives.

There is similar uncertainly regarding the proliferation of weapons of mass destruction. While some monitoring of the development of nuclear weapons is being carried out, not as much is being done on the development of chemical and biological weapons.

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As far as failed states and regional conflicts are concerned, they are a very destabilizing phenomenon for world security, and pave the way for organized crime and terrorism. The link between criminal mafia activity and weak or failed states is now clear. To confront these new security challenges, the structured, well-equipped armed forces in our developed societies are being reinforced. We need them to properly protect and defend both our citizens at home and our nationals abroad, as well as to handle underhanded and unexpected attacks against our people and our armed forces that may take place anywhere in the world.

STRENGTHENING THE EU

Our security challenges are worrisome to the EU. Our organization is being confronted with these risks at a time when its common foreign and security policy is still developing. So we must maintain and enhance our solidarity as we enlarge with new member-states and continue to clarify our political vision. In addition, because instability can have a direct impact on the European Union in the areas of migration, proliferation of harmful networks, and the spread of terrorist organizations in developing areas, we must use all the capabilities at our disposal and adopt a global approach.

The adaptation of our military personnel has already begun: We have adjusted our training operations and increased the ability of our military forces to work with other cultures. Our personnel now have many civilian partners—diplomats, analysts, police officers, technicians, financiers, academics, humanitarians, and others—with whom they work daily. Moreover, as part of expert teams, our military personnel often help bridge the gap between very different cultures.

In specific terms, the Union's military staff is preparing in 2004 to incorporate a civil-military planning unit that will enable all personnel, who have different backgrounds and have been trained differently, to work within the same structure and share their respective experience as early in the planning process as possible. In the future this unit should be able to generate an EU operational center, which we are currently working on, to plan and conduct an autonomous operation if other options with NATO or national operation headquarters do not materialize.

Thus a true civil-military synergy at the operational level is coming into being. But the same synergy is also needed to deal with threat assessment, analysis, understanding of world events, and coordination of EU external actions. We expect this to come from the future constitution for Europe. Under such an authority, a European action service could be developed, including a council general and staff, civilian and military members, and national diplomatic corps. Such an operation could help to significantly improve the way we work together to prevent a crisis and enable us to acquire the capability to deal appropriately with information as well as make appropriate decisions in relation to the complex and multifaceted threats facing us today.

The Union is currently studying the formation of integrated Rapid Reaction Force groups to complement this global approach and to take account of the new nature of threats. Such forces would have their own means of naval or air deployment that could be activated in a few days for an operation without recourse to NATO, and would complement NATO intervention. Discussions are currently underway regarding the range of possible missions, in particular under the United Nations mandate, the involvement of the various member-states, training and certification of forces, and the possible relationship with NATO response forces, which would draw on the same reservoir of rapidly deployable national forces. The military forces made available to the Union by the member-states would be mobile, agile, and rapidly deployable in accordance with interoperability and sustainability standards. The practical Rapid Reaction Force endeavor is part of a wider program of improving and making adjustments to European capabilities. As part of that program, the EU is envisaging introducing quality criteria to its operations.

With regard to the fight against terrorism, following the events of March 11, we appointed a coordinator, Mr. Gijsde Vries, to improve EU efficiency in that area and to take advantage of all available tools, including ESDP and its military capabilities. The effort toward improving military capabilities is part of a continuing process of adjusting and developing defense capabilities, including research techniques, acquisition and purchasing procedures, and armaments. A team that includes EU military staff is currently working on organizational and operational details.

CONCLUDING REMARKS

With a better understanding of the new threats and with the institutional means to respond to them, which we continue to adapt, we must now build our capability for military action if we are to be a credible European security and defense means and strengthen our transatlantic relationship. Our new structure and assets, which are being developed relatively fast, should give us the ability to face new threats and to be a reliable partner of organizations such as NATO, the UN, and even the United States.

Lieutenant General Jean-Paul Perruche

Part Two

Today's Nuclear Concerns: Dirty Bombs, Improvised Low-Yield Nuclear Devices, and Modern Weapons: Why the World Needs to Come Together

The Honorable Dale Klein¹

OPENING REMARKS

s the U.S. Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, it is my responsibility to understand a particularly frightening threat facing the United States and the world– a clandestine nuclear attack, which can be defined as any attack involving a nuclear weapon, improvised nuclear device (IND), or radiological dispersal device (RDD) delivered by unconventional means, not by military missile or aircraft.

My message regarding that threat is simple but sobering: The possibility that a clandestine nuclear attack will occur somewhere in the world is real, serious, and present. At issue is whether we, as a global community, believe that the threat is real enough, serious enough, and present enough to warrant our coming together to combat its danger. Also at issue is the question of whether we believe there is anything we can do about the danger of such an attack even if we work cooperatively and take collaborative action.

My response to each of those questions is an emphatic yes—the threat is real enough, serious enough, and present enough to demand immediate action, and, yes, if the global community can come together to fight those who would perpetrate such violence against us, I believe that our efforts can make a real difference.

Before I discuss this threat in more detail, I would like to point out some positive action that has already been taken. It is my opinion that the NATO nuclear umbrella agreement has prevented more countries from developing nuclear weapons than all the treaties we have developed. Many, if not all, of the original NATO countries had the technical and financial ability to design and build a nuclear weapon.

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However, by participating in the NATO agreement, the need to do so, both perceived and real, was reduced.

There are no similar agreements in the Middle East and other regions. Therefore, we have seen the desire of several countries, including Iran, Iraq, Libya, Pakistan, India, and North Korea, to develop nuclear weapons. In fact, since the end of the Cold War the number of countries that possess the knowledge, materials, and technical capability to produce nuclear weapons has nearly doubled.

THE THREAT IS REAL

First, let's consider the demand side of the nuclear proliferation problem. I think we can safely say that demand is up—states are seeking to develop and acquire nuclear weapons for many reasons, including military, political, and economic. The director of the U.S. Central Intelligence Agency recently commented that, "The desire for nuclear weapons is on the upsurge. Additional countries may decide to seek nuclear weapons as it becomes clear their neighbors and regional rivals are already doing so. The domino theory of the twenty-first century may well be nuclear." (George Tenet, Feb. 11, 2004) In addition, rogue states and substate groups seem to be motivated by the destructive potential of these weapons or devices as well as the desire to achieve the psychological impact an attack by such means would engender.

It seems likely that the demand for nuclear weapons is not going to decline in the coming years. So let us now take a look at the supply side of the problem.

The knowledge, technology, and materials required to implement a successful clandestine nuclear attack are spreading at an accelerated rate to both state and nonstate actors. The most difficult obstacle now facing a terrorist is acquiring fissile material to use in a weapon or an improvised nuclear device. While states have traditionally sought to produce plutonium or highly enriched uranium themselves, there is a dangerous potential for procuring it on the black market as well as stealing it from poorly secured areas. Because the Cold War ended, surplus nuclear assets exist, including people, technology, facilities, and materials.

The former Soviet Union's transition from a secret military infrastructure to a commercial enterprise raises issues today related to safety, security, and the prevention of the proliferation of weapons of mass destruction. Several countries are currently providing financial and technical assistance to Russia to help secure its nuclear weapons and usable weapon material. Previous methods of controlling proliferation, designed to limit trade where necessary and prevent the diversion of civilian material, will not work, either in Russia or in Iran, where this issue is also a concern, because of the co-mingling of defense and civilian infrastructures and materials. The global community must instead find better ways to prevent diversion, ensure transparency, and assure the irreversibility of this dual-use process.

Similar issues have also arisen concerning other nations that are part of the burgeoning nuclear suppliers network. Over the last 20 years, several developed and underdeveloped countries have slowly weaned themselves from any need for foreign support, goods, and services and have emerged as a nascent suppliers group that will be able to provide competitive cradle-to-grave nuclear energy services throughout the world for the next 10 to 20 years. These are the suppliers that will provide nuclear goods and services to support third-world industrialization and the global energy demand. And as this emergent suppliers club expands its membership, so too will the number of targets for ambitious proliferators increase.

By 1996, 15 countries had developed complete and indigenous nuclear-fuel-cycle capabilities. Some of these countries, including Japan, China, South Korea, Argentina, India, and Brazil, now stand poised to become very competitive nuclear suppliers to the next growth area. Some have already established an independent multilateral cooperative network.

Today's Nuclear Concerns

Weapons-grade material, moreover, is not necessary to produce a radiological dispersal device, which is designed to disperse radioactive material and thereby cause destruction, contamination, and injury—a "dirty bomb." However, acquiring such material through theft or illegal commerce is less difficult than obtaining material for a nuclear weapon or improvised nuclear device.

Abdul Qadeer Khan, the father of Pakistan's nuclear program, has already demonstrated a large and potentially enormous appetite for nuclear materials, technologies, and expertise. Because of his public role, he was well positioned to succeed in his other, more covert role: As a prominent black marketer of nuclear materials and knowledge to state regimes and, perhaps more indirectly, to sub-state terrorist groups determined to acquire a nuclear capability to further their horrific schemes.

But in addition to Khan's work selling instruments of terror and destruction, he also helped to create menacing networks that persist though his occupation as an arms dealer has ended. Khan became quite wealthy selling Pakistan's nuclear technology, but his significant and frightening success resulted from a simple economic formula: Demand creates supply. It is going to take great effort to reduce the demand as well as eliminate, or at least reduce, the supply.

THE THREAT IS SERIOUS

The consequences of a clandestine nuclear attack would be enormous.

While there are a number of unconventional weapons that fall under the category of weapons of mass destruction, only nuclear weapons truly fit that bill. Only nuclear weapons have the destructive potential to threaten both the physical integrity and the physical existence of states.

But what about "weapons of mass disruption?" RDDs—dirty bombs—would not achieve mass destruction, certainly. But an RDD has the potential to cause significant damage and injury if set off in a heavily populated area. The same holds true for an IND. And make no mistake, a terrorist capable of obtaining the materials for such a device would most certainly use it. As demonstrated on September 11, 2001, and more recently in Spain, terrorists do not differentiate between those in uniform and innocent civilians. They have demonstrated a clear disregard for human life.

But should the consequences of a clandestine nuclear attack be measured only in terms of lives lost and economic cost? Or should we also consider the consequences associated with the regional, national, and potentially global trauma that would follow such an event? A clandestine nuclear attack would have repercussions that could profoundly impact the world politically, economically, and even culturally in a variety of ways.

Any clandestine nuclear attack—whether it results in tremendous physical damage and heavy fatalities or a relatively small amount of physical destruction—will be transforming in ways on which we can only speculate. But let us speculate for a moment. An entire global generation of men, women, and children might be permanently scarred by such a life-altering event. Time itself would be measured in terms of before and after, similar to the way the phrase "after 9-11" has permeated the American idiom. No one alive at the time of such an attack—anywhere in the world—might ever feel safe and secure in the same way that they had before; many might never feel truly safe again. An enormous number of people could become intimately familiar with fear and possibly motivated by fear. Thus the threat is serious.

THE THREAT IS PRESENT

Do we really believe the threat exists today? And is it high? Or can we afford to delay acting? To answer these questions we must look at the issue of secondary supply, which has emerged as a growing concern in recent years.

As their domestic nuclear capabilities have improved, nations that traditionally have been recipients of nuclear-related technology and materials are themselves becoming suppliers of those same technologies and materials. Pakistan is a prime example of this phenomenon, although Iran and North Korea are also cause for concern. In fact, North Korea has resumed its production of plutonium, and information provided by Abdul Quadeer Khan confirms the country's efforts to develop highly enriched uranium. Coupled with its withdrawal from the Nuclear Proliferation Treaty and its nuclear weapons capabilities, there is justified concern that North Korea could sell plutonium or other nuclear weapons–related material and technology to other sub-state groups.

So how much longer can we, the global community, wait to take action against the increasing proliferation of nuclear weapons? It would appear that the time for action is upon us. The threat is present.

ACTION THAT COULD BE TAKEN

If we accept that the problem is real, serious, and present, we must next ask a difficult and controversial question: Is there a solution? The answer to that question is yes. Can we eliminate the threat? That answer is no. But can we mitigate the threat? A definite yes.

There are three actions we can take to reduce the danger associated with the threat of a clandestine nuclear attack:

- Clearly our top priority must be the establishment of treaties and agreements that provide for real
 consequences in cases of noncompliance; harsh words by the IAEA when North Korea kicked
 them out or when Iran stalls on meeting the additional protocol requirements have little real impact.
 Simply put, without the support of real action in the face of national defiance, global treaties carry
 little weight. Agencies such as the IAEA become subject to the whims of dictators who clearly recognize their lack of authority. If treaties and agreements are to be effective, then they must be supported by UN resolutions that are enforced—not crippled by indecision and inaction or more resolutions. The wrong message is consistently being sent and the result continues to be the capability to
 proliferate weapons of mass destruction.
- Develop a better accounting system for all nuclear material.
- Develop a global monitoring system to track the movement of nuclear material.

Such detection and neutralization efforts will help to create uncertainty in the minds of those who want to do us harm, and increased uncertainty will result in a decreased likelihood of attack. We must exploit our adversaries' fear of failure.

The best way for us to prevent a clandestine nuclear attack is to come together, work together, and succeed together. We must help each other in order to help ourselves. To do this we must take a multilayered approach to the problem, including efforts to:

- Prevent proliferation
- Deter the use of nuclear or radiological weapons and devices
- Defend against such use
- · Defeat those who would employ such means

CONCLUDING REMARKS

The threat of a clandestine nuclear attack—using nuclear weapons, improvised nuclear devices, or RDDs– is real. Therefore we must all work together to build the relationships that will allow us to cooper-

ate and collaborate to meet this challenge, and realize that an attack on any one of us is an attack on all of us. The September 11 terrorist attack in the U.S. was felt by citizens of all nations. Similarly, few in the world could claim to be immune from the fear generated by the deadly sarin gas attack in Japan in 1995, or the discovery of the lethal agent ricin in London in 2003, or the anthrax attacks in the United States in 2001. While we tend to become less concerned about such events as time passes, I believe a clandestine nuclear attack would have a negative impact over a much longer period of time.

Presently we have a new-but perishable-opportunity to share management of past, present, and future nuclear stresses through visionary leadership. But we need international cooperation and collaboration on a scale never before achieved—which is, I believe, possible. We all have a common enemy, terrorism, and a common goal, peace and prosperity. So together, I believe we can develop an imaginative new world blueprint for preventing the further proliferation of nuclear materials and technologies, deter potential adversaries from even attempting to attack using clandestine nuclear weapons and devices, defend ourselves against such attacks, and defeat decisively those who would effect such atrocities. With enough cooperation, we may even be able to eradicate the underlying seeds of terrorism and provide the basis for a millennium of world peace and prosperity.

The Honorable Dale Klein

Muslim Society, Radical Islam, and Terrorism

Dr.-Ing. Bacharuddin Jusuf Habibie¹

iving a presentation on Muslim society, radical Islam, and terrorism today is a challenge; there are many questions. Are radicalism and terrorism typical Islamic or Muslim behaviors? Does only Islam make radical and terrorist acts possible? Are radicalism and terrorism only religious affairs? What is fundamentalism? What is meant by radicalism? What is terrorism? What is the relation between fundamentalism, radicalism, and terrorism?

THE HISTORY OF FUNDAMENTALISM

Thomas Meyer, a German political science scholar in the 1980s, defined fundamentalism as follows: "Fundamentalism is an arbitrary concluding movement, against any kind of modernization processes, in politics, philosophies and religions." Representatives of certain political convictions who make radical demands and are not willing to compromise or to exercise tolerance are also called fundamentalists. In addition, people's movements that have philosophical thoughts and analysis consistent with "basic principles" and "basic understanding" are also called fundamentalist.

Allow me now to present some analyses of religious fundamentalism, especially the monotheistic religion that has its roots in Abraham and that uses the holy book as its basic fundament and reference.

Religions that accept "messages from God" as written in their holy book (Torah, Bible, or Al Qur`an) are facing similar problems in the messages' interpretation and their implementation in daily life. The language, culture, and even grammar that were in place when these holy books were written play a very decisive role in their interpretation. So studying and understanding the impact such traditions and behaviors have had might be helpful.

The Torah (Talmud, Babbly) has been interpreted for 5,764 years, the Bible (Syllabus, Tradition) 2,004 years, and the Al Qur´an (Sunna, Hadith) 1,425 years. But while the Jewish religion is more than two times older than Christianity and about four times older than Islam, only 0.3% of the world's population is Jewish compared with 33.2% Christians and 19.9% Muslims— a combined 53.4% of the world's population. In addition, while all three have the same roots in Abraham and share common ethic and moral

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values, the Jewish religion is for Jewish people only while the other two religions are open to anyone, independent of culture, race, or ethnic background.

Interpreting the holy books in a multicultural and multitraditional society can create complex problems because of their incompatibility with modern life and progress. Some who believe that the Bible cannot be reconciled with the view of the origin of life put forward by Charles Darwin oppose the teaching of evolution. Biblical criticism also gained momentum in the 1920s and antievolution crusaders lobbied for legislation to prevent the teaching of evolution in the public schools. John T. Scopes, a science teacher in the small town of Dayton, Ohio, served as defendant against the charge of having taught evolution. Religious fundamentalism came into its own in opposition to modernist tendencies in American religious and secular life. In the late twentieth century, the movement was represented by numerous church bodies, educational institutions, and special-interest organizations.

In a global economy, where information technologies are developing very fast, making information available in almost every corner of private life, in any place and at any time, could trigger a confrontation of progress and culture. If this happened, global radicalism and global terrorism might be impossible to control.

DEFINITIONS OF TERMS

What is meant by radicalism? This is change of the most fundamental type, transforming not only the structure of government but all of polity. Such change is not limited to political life but also transforms social order, morality, and social values. The consequences of such change are felt not only where they occur but in many other political systems in which fundamental revolution occurred. These major revolutions result in a basic change in how all people in all political systems view the nature of politics and the purpose of political life. For example, the independence movements in colonial empires following World War II were fueled by principles of individual liberty and representative government that were once the slogans of eighteenth-century American and French revolutionaries.

Marxist revolutionary concepts emphasizing economic progress and radical social change have shaped the development of many new nations. The continuing impact of such ideas is an example of another way in which fundamental political change occurs. However, political systems may be transformed not only suddenly or violently in the course of revolution but by the gradual, corrosive influence of ideas and by the accumulating impact of different political philosophies.

What is terrorism? Definitions of terrorism are usually complex and controversial, and, because of the inherent ferocity and violence of terrorism, an intense stigma has become attached to the term. But though terrorism implies an act of violence by a state against its domestic enemies, since the twentieth century the term has been applied most frequently to violence aimed, either directly or indirectly, against governments in order to influence policy or topple the existing regime.

In order to attract and maintain the publicity necessary to generate widespread fear, terrorists must engage in increasingly dramatic, violent, and high-profile attacks. These have included hijackings, hostage takings, kidnappings, car bombings, and, frequently, suicide bombings. Although apparently random, terrorist attacks are often carefully aimed at their victims and locations in order to achieve the greatest shock value. The goal of terrorism generally is to destroy the public's sense of security in the places most familiar to them. Schools, shopping centers, bus and train stations, restaurants, and nightclubs have been targeted both because they attract large crowds and because they are places with which civilians are familiar and in which they feel at ease. Targets can also include buildings or other locations that are important economic or political symbols, such as embassies or military installations. The hope of the terrorist is that the sense of terror his acts engender will induce the population to pressure political leaders toward a specific political end.

The standard definition used by the Federal Bureau of Investigation (FBI) of the United States describes terrorism as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives."

Since the twentieth century, ideology and political opportunism have led a number of countries to engage in transnational terrorism, often under the guise of supporting movements of national liberation. Hence, there is a common saying that "One man's terrorist is another man's freedom fighter."

However, the distinction between terrorism and other forms of political violence became especially blurred when guerrilla groups began to employ terrorist tactics and issues of jurisdiction and legality became similarly obscured. These problems have led some social scientists to adopt a definition of terrorism based not on criminality but on the fact that the victims of terrorist violence are most often innocent civilians.

Even this definition is flexible, however, and on occasion it has been expanded to include various other factors, such as that terrorist acts are clandestine or surreptitious, that terrorists choose their victims randomly, and that terrorist acts are intended to create an overwhelming sense of fear.

It is vital to bear in mind, however, that there are many kinds of terrorist movements, and no single theory can cover them all. Not only are the aims, members, beliefs, and resources of groups engaged in terrorism extremely diverse, but so are the political contexts of their campaigns.

One popular typology identifies three broad classes of terrorism: Revolutionary terrorism; Sub-revolutionary terrorism; and Establishment terrorism. Although this typology has been criticized as not exhaustive, it provides a useful framework for understanding and evaluating terrorist activities.

Revolutionary terrorism is arguably the most common form. Practitioners of this type of terrorism seek the complete abolition of a political system and its replacement with new structures.

Sub-revolutionary terrorism is rather less common. It is used not to overthrow an existing regime but to modify the existing sociopolitical structure. Since this modification is often accomplished through the threat of deposing the existing regime, sub-revolutionary groups are somewhat more difficult to identify.

Establishment terrorism, often called state or state-sponsored terrorism, is employed by governments—or more often by factions within governments—against that government's citizens, against factions within the government, or against foreign governments or groups. This type of terrorism is very common but difficult to identify, mainly because the state's support is always clandestine.

A martyr is someone who voluntarily suffers death rather than deny his religion or ideology or conviction by words or deeds. The French Revolution added ideological, social, and national principles to religious conviction as reasons for terrorist/martyr action. A martyr's action is afforded special, institutional recognition that greatly influences the terrorist to sacrifice his life or something of great value for the sake of principle.

Persecution throughout its history has engendered in Judaism an explicit ideal of martyrdom. It began with Abraham, who according to legend was cast into a lime kiln and saved from the fire by divine grace. The tradition was continued by Isaac, who consented to be sacrificed by his father, and by Daniel, whose example compelled the popular imagination.

The first Christian martyrs were St. Stephen and St. James. Of the apostles the most important martyrs were St. Peter and St. Paul, who were both put to death in Rome. Since the most striking witness that Christians could bear to their faith was to die rather than to deny it, the word martyr soon began to be used in reference to one who was not only a witness but specifically a witness unto death. The Islamic designation shahid (Arabic: "Witness") is equivalent to and in a sense derivative of the Judaeo-Christian concept of a martyr. The full sense of "witness unto death" does not appear in the Qur'an but receives explicit treatment in the subsequent Hadith literature, in which it is stated that martyrs, among the hosts of heaven, stand nearest the throne of God. While details of the status accorded by martyrdom (e.g., whether or not a martyr is exempt from certain rituals of burial) have been debated among dogmatists, it is generally agreed that the rank of shahid comprises two groups of the faithful:

- · Those killed in a jihad, or holy war
- Those killed unjustly

The term is used informally to venerate anyone who dies in a pitiable manner (e.g., in childbirth; in a strange land). Among the Shiite branch, the martyr par excellence is Husayn ibn Ali (c. 629–680), whose death at the hands of the rival Sunni faction under Yazid is commemorated every year during the first 10 days of the month of Muharram.

While distinctly lacking a history of persecution or of violent conflict with other faiths, Buddhism does recognize among its adherents a venerable class of martyrs. The Jataka (q.v.) commentary on the former lives of the Buddha is in a sense a "martyrology" of the bodhisattva ("Buddha-to-be"), recounting their continual self-sacrifice and repeated deaths. In Mahayana (Greater Vehicle) Buddhism, the decision by one destined to become a Buddha in this or another life to postpone his own enlightenment to alleviate the suffering of others is regarded as martyrdom (see bodhisattva).

THE HISTORY OF TERRORISM

Let us now look at the history of terrorism. The earliest authenticated mention of "*Thugs*" took place about 1356 (though there was a report of the use of Thugs in the seventh century). Thugs were members of a well-organized confederacy of professional assassins who traveled in gangs throughout India for several hundred years. They insinuated themselves into the confidence of wayfarers and, when a favorable opportunity presented itself, they would strangle the people with a handkerchief or a noose. Hindus appear to have been associated with Thugs at an early period. In the last three hundred years of Thugs' existence, they killed around one million people, considered to be the largest number of people ever killed by a purely religious fundamentalist terrorist organization.

From the eleventh to the thirteenth centuries, a religious-political Islamic Shiite sect was known for murdering its enemies as a religious duty. These people were called *Assassins*, from the Arabic word "assas," meaning guard and hashish smoker (this referred to the Assassins' alleged practice of taking hashish to induce ecstatic visions of paradise before setting out to face martyrdom). The Assassins might be the first terrorist organization using religious martyrdom for political purposes to fight against a militarily stronger enemy.

In 1090, the Assassin Hasan and his allies captured the hill fortress of Alamut near Kazvin, Iran. From this fortress, Hasan, as grand master or leader of the sect, commanded a chain of strongholds all over Iran and Iraq as well as a network of propagandists, a corps of devoted terrorists, and an unknown number of agents in enemy camps and cities. In the early twelfth century the Assassins extended their activities to Syria, where the expansion of the Seljuk rule had created a favorable climate for terrorist activities by extremist elements among the local Shiite minority.

Assassin power came to an end as the Mongols under Hulegu captured Assassin castles in Iran. In 1256 Alamut itself fell. The term Assassin then moved on from Syria to Europe, where the Crusaders took it, and acquired its present meaning of one who murders a politically important person either by hire or from fanatical motives.

In modern history the Japanese Army, during World War I, used martyrs for political and ideological interests. They introduced the so-called *Kamikaze Weapon System*, which consisted of Japanese pilots, mostly between 20 and 25 years old, who deliberately crashed into enemy targets (around 4,500 times) and committed suicide. The word kamikaze means "divine wind," referring to a typhoon that fortuitously dispersed a Mongol invasion fleet that threatened Japan from the west in 1281. Most of the kamikaze planes were ordinary fighters or light bombers, usually loaded with bombs and extra gasoline tanks before being flown into their targets. Kamikaze flights were most prevalent from the Battle of Leyte Gulf, in October of 1944, to the end of the war. The attacks sank 34 ships and damaged hundreds of others. At Okinawa they inflicted the greatest losses ever suffered by the U.S. Navy in a single battle, killing almost 5,000 men.

TERRORIST PHILOSOPHIES

Nihilism (from the Latin nihil, meaning "nothing") is a philosophy of skepticism that originated in nineteenth-century Russia during the early years of the reign of Alexander II. A well-known conservative Russian journalist, Mikhail N. Katkov, was mainly responsible for interpreting nihilism as synonymous with revolution, and presented nihilism as a social menace because of its negation of all moral principles. The philosophy then became associated erroneously with political terror employed by people active in clandestine organizations against absolutism.

If, to the conservative elements, nihilists were the curse of the time, to the liberals they represented a mere transitory factor in the development of national thought, a stage in the struggle for individual freedom, and the true spirit of the rebellious young generation. They defined nihilism as a symbol of the struggle against all forms of tyranny, hypocrisy, and artificiality.

Fundamentally, nihilism represented a philosophy of negation of all forms of aestheticism; it advocated utilitarianism and scientific rationalism and rejected the social sciences and classical philosophical systems entirely. Nihilism represented a crude form of positivism and materialism, a revolt against the established social order, and negated all authority exercised by the state, the church, and the family. It was based on belief in nothing but scientific truth; science was the cure-all for social problems, which nihilists believed derived from ignorance.

Since nihilists denied the duality of man as a combination of body and soul, of spiritual and material substance, they came into violent conflict with ecclesiastical authorities. And since they questioned the doctrine of divine right, they came into similar conflict with secular authorities. In addition, because they scorned all social bonds and family authority, conflict between fathers and sons became immanent.

The term "*anarchy*" is derived from the Greek root anarchos, meaning "without authority." The words anarchism, anarchist, and anarchy are used to express both approval and disapproval. They encompass laws that are not carried into effect, authorities without force and despised, crime unpunished, property attacked, violation of the safety of the individual, corrupted morality, lack of a constitution, lack of government, and lack of justice. These words could serve as a model for the denunciations delivered by all opponents of anarchism.

Anarchists deny man-made laws, regard property as a means of tyranny, and believe that crime is merely the product of property and authority. But they would argue that their denial of constitutions and governments leads to the "real justice" inherent in the free development of man's natural inclination, when unfettered by laws, to live according to the principles and practice of mutual aid.

All of the conflict-based sources of nihilistic and anarchistic thoughts became the roots of non-religious fundamental terrorist acts. One can only wonder what would happen if religious and non-religious fundamental terrorists were to cooperate and use martyrdom against targets to achieve common political interests.

TERRORIST ACTS AND ACTORS

September 11, 2001, was the day when Islamic extremists and the terrorist group Al-Qaeda struck targets in the United States. The attacks caused extensive death and destruction and triggered an enormous U.S. effort to combat terrorism. Some 2,800 victims were killed in New York, 184 at the Pentagon, and 40 in Pennsylvania; all 19 terrorists died. The emotional distress caused by the attacks, particularly the collapse of the Twin Towers, New York City's most visible landmark, was overwhelming.

The hijackers, 15 Saudis and 4 others of Middle Eastern origin, were young single males from middle-class families who had established themselves in the United States prior to the attacks. All were recruited in Europe by religious organizations connected with Al-Qaeda when most were enrolled in a secular higher education curriculum. No personality defects were evident before the attack, and none were discovered afterward despite intense scrutiny.

Recent research indicates that suicide terrorists from the Middle East have no appreciable psychopathology and are as educated and economically well-off as surrounding populations. Newer studies also confirm earlier reports showing that suicide terrorists and their supporters are not impoverished, uneducated, spiteful, or socially disfavored.

If the assassination of Franz Ferdinand Erzherzog Von Österreich-este in Sarajevo in June of 1914 was the immediate cause of World War I and the Pearl Harbor attack of 1941 precipitated the entry of the United States into World War II, the terrorist attacks on the Twin Towers on 11 September, 2001, could be considered the beginning of the "Global War" against terrorism. However, while the World Wars were international conflicts that embroiled most of the nations of Europe, North America, Asia, the Middle East, and other regions, the Global War is an international conflict against an invisible global terror network without an identified citizenship, nationality, race, ethnic heritage, religion, headquarters location, or army. The threat this network poses is completely different from any the human race has ever faced before, and needs an appropriately sophisticated strategy and paradigm that all nations and organizations of the world must develop. And there must be no negotiations and no compromise, but a better understanding of the principles of terrorism in order to counter and end terrorist acts.

In an analysis model based on incentive, if terrorists are considered criminals as well as rational individuals acting on self-interest, they will choose illegal activity if the rewards exceed the probability of detection, incarceration, and loss of income from legal activity ("opportunity costs"). Insofar as criminals lack skill and education, as in much blue-collar crime, opportunity costs may be minimal, so crime will pay. (Such rational-choice theories based on economic opportunities do not reliably account for some types of violent crimes, including domestic homicide and hate killings). However, these calculations make even less sense for suicide terrorism, since suicide terrorists generally are not lacking in legitimate life opportunities relative to their general population.

If martyrs had nothing to lose, sacrifice would be senseless: "He or she who commits suicide kills himself or herself for his or her own benefit, he or she who commits martyrdom sacrifices himself or herself for the sake of his or her religion and his or her nation." Although humiliation and despair may help account for susceptibility to martyrdom in some situations, this is neither a complete explanation nor one applicable to other circumstances.

Suicide terrorists apparently span their population's normal distribution in terms of education, socioeconomic status, and personality type (introvert vs. extrovert). The mean age for bombers is the early twenties. Almost all are unmarried and expressed religious belief before recruitment (but no more than did the general population). Except for being young unattached males, suicide bombers differ from members of violent racist organizations with whom they are often compared.

Overall, suicide terrorists exhibit no socially dysfunctional attributes (fatherless, friendless, or jobless) or suicidal symptoms. They do not vent a fear of enemies or express hopelessness or a sense of nothing to lose for lack of life alternatives that would be consistent with economic rationality. When they join terrorist groups, charismatic trainers intensely cultivate their mutual commitment to die within small cells of three to six members. In a final step before they martyr themselves, they engage in a formal social contract, usually a video testament.

From 1996 to 1999 Nasra Hassan, a Pakistani relief worker, interviewed nearly 250 Palestinian recruiters and trainers, failed suicide bombers, and relatives of deceased bombers. Bombers were men aged 18 to 38: "None were uneducated, desperately poor, simple-minded, or depressed...They all seemed to be entirely normal members of their families." Yet "all were deeply religious," believing their actions "sanctioned by the divinely revealed religion of Islam." Leaders of sponsoring organizations complained, "Our biggest problem is the hordes of young men who beat on our doors."

Previously, recruiters scouted mosques, schools, and refugee camps for candidates deemed susceptible to intense religious indoctrination and logistical training. Despite these changes, there is little to indicate overall change in bomber profiles (mostly unmarried, average socioeconomic status, moderately religious). Motivation and commitment are evident in the willingness to sacrifice material and emotional comforts (families, jobs, physical security) and to pay their own way from their homes to travel long distances. Thus, a critical factor in determining suicidal terrorist behavior is arguably loyalty to intimate cohorts of peers, which recruiting organizations often promote through religious communion. Such sentiments characterize institutional manipulation of emotionally driven commitments that may have emerged under natural selection's influence to refine or override short-term rational calculations that would otherwise preclude achieving goals against long odds.

Most typically, such emotionally driven commitments serve as survival mechanisms to inspire action in otherwise paralyzing circumstances, as when a weaker person convincingly menaces a stronger person into thinking twice before acting. In religiously inspired suicide terrorism, however, these emotions are purposely manipulated by organizational leaders, recruiters, and trainers to benefit the organization rather than the individual.

And, increasingly, many view martyr acts as most meaningful. During the summer of 2002, 70% to 80% of Palestinians endorsed martyr operations. The frequency and violence of suicide attacks are escalating (there have been more bombings since February 2002 than from 1993 to 2000); planning is less painstaking.

Detainees evince little history of personal grievance, but frequently cite older relatives and respected community members who participated in earlier Jihads as influencing decisions to join the fight. Many told interrogators that if released from detention they would return to jihad.

However, little tangible benefit (in terms of rational choice theories) accrues to the suicide bomber, certainly not enough to result in maximized "expected utility." Heightened social recognition occurs only after death, obviating personal material benefit. But for leaders who almost never consider killing themselves (despite declarations of readiness to die), material benefits more likely outweigh losses in martyrdom operations.

COUNTERING TERRORISM

For the sponsoring organization, suicide bombers are expendable assets whose losses generate more assets by expanding public support and pools of potential recruits. Money flows from those willing to let

others die, easily offsetting operational costs (training, supporting personnel, safe houses, explosives and other arms, transportation, and communication). Massive retaliation further increases people's sense of victimization and readiness to behave according to organizational doctrines and policies structured to take advantage of such feelings.

A middle line of defense, penetrating and destroying recruiting organizations and isolating their leaders, may be successful in the near term, but even more resistant organizations could emerge instead. The first line of defense is to drastically reduce receptivity of potential recruits to recruiting organizations—but how can this be done?

Raising literacy rates may have no effect and could be counterproductive should greater literacy translate into greater exposure to terrorist propaganda. Lessening poverty may also have no effect, and could be counterproductive if poverty reduction for the entire population amounted to a downward redistribution of wealth that left those initially better off with fewer opportunities than before. Ethnic profiling, isolation, and preemptive attacks on potential supporters of terrorism probably will not help either. Ending occupation or reducing perceived humiliation may help, but not if the population believes this to be a victory inspired by terror.

If suicide bombing is crucially (though not exclusively) an institution-level phenomenon, it may require finding the right mix of pressure and inducements to get the communities themselves to abandon support for institutions that recruit suicide attackers. One way is to so damage the community's social and political fabric that any support by the local population or authorities for sponsors of suicide attacks collapses. However, other research suggests that most people have more moderate views than what they consider their group norm to be. Inciting and empowering moderates from within to confront inadequacies and inconsistencies in their own knowledge (of others as evil), values (respect for life), and behavior (support for killing), and that of other members of their group, can produce emotional dissatisfaction leading to lasting change and influence on the part of these individuals. Funding for civic education and debate may also help interfaith confidence building through intercommunity initiatives.

Another strategy is for the United States and its allies to change their behavior by directly addressing and lessening sentiments of grievance and humiliation, especially in Palestine, where images of daily violence have made it the global focus of Moslem attention. No evidence (historical or otherwise) indicates that support for suicide terrorism will evaporate without complicity in achieving at least some fundamental goals that suicide bombers and supporting communities share.

Of course, this does not mean negotiating overall goals, such as Al-Qaeda's quest to replace the Western-inspired system of nation-states with a global caliphate, first in Moslem lands and then everywhere. Throughout mankind's history, all efforts to achieve global control through an economic, political, and/or military system have always failed. Perhaps instead we need research to understand which configurations of psychological and cultural relationships are luring and binding thousands, possibly millions, of mostly ordinary people into terrorist organizations' martyr-making web.

Study is needed to see how terrorist institutions form and to uncover similarities and differences across organizational structures, recruiting practices, and recruited populations. Are there reliable differences between religious and secular groups, or between ideologically driven and grievance-driven terrorism? We also need to investigate any significant causal relations between modern democratic society's policies and actions and those of terrorist organizations and supporters. We may find that the global economic, political, and cultural agenda of a modern democratic civil society has a catalyzing role in moves to retreat from our worldview (the Taliban) or to create a global counterweight (Al-Qaeda).

Funding such research may be difficult. As with the somewhat tendentious and self-serving use of terror as a policy concept to reduce dissonance, governments and the media may wish to ignore these relations as legitimate topics for inquiry into what terrorism is all about and why it exists. A call for research may demand more patience than any administration could politically tolerate during times of crisis. In the long run, however, a society can ill afford to ignore either the consequences of its own actions or the causes behind the actions of others.

RESEARCH INTO SUICIDE BOMBERS

Two important documents crucial to the war on terrorism were recently released in the United States. On May 23, 2003, the U.S. General Accounting Office delivered its final report to Congress on "Combating Terrorism." On June 3, 2003, the Pew Research Center published the latest installment of a multi-year survey on global attitudes to political policies and social values. Social psychologists have long documented what they call "the fundamental attribution error," an interpretation bias that seems to be especially prevalent in individualistic cultures such as those of the United States and Western Europe. In contrast, many cultures in Africa and Asia in which a collectivist ethic is more prevalent show less susceptibility to such judgments.

What leads a normal person to suicide terrorism? The primacy of situational over personality factors suggests the futility of attempts to psychologically profile the suicide terrorist. There seems to be a general agreement among psychologists that there is no particular psychological attribute that can be used to describe the terrorist or any personality that is distinctive of terrorists. People who have joined terrorist groups have come from a wide variety of cultures, nationalities, and ideological causes, all strata of society, and diverse populations. Their personalities and characteristics are as diverse as those of people in the general population.

Months, sometimes years, of intense indoctrination can lead to "blind obedience" no matter who the individual is, as indicated in research on people who become torturers for their governments. However, despite numerous studies of individual behavior in group contexts that show situation to be a much better predictor than personality, the Pew survey found that Americans overwhelmingly believe that personal decision, success, and failure depend upon individual choice, responsibility, and personality. But most of the world disagrees. This is plausibly one reason why Americans tend to think of terrorists as homicidal maniacs whereas the rest of the world tends not to. Whether because of a fundamental attribution error or willful blindness to avoid dissonance with one's own world view, Americans also mostly view attempts to understand what motivates terrorism at best as a waste of time, at worst pandering to terrorism.

What terrorists dislike about America is not the country's internal liberties or culture, but its external actions and foreign policy. Historical data show a strong correlation between U.S. involvement in international situations and an increase in terrorist attacks against the United States. There seems to be a direct correlation between U.S. military and counterinsurgency aid, human-rights abuses by the governments being aided, and a rise in terrorism.

Amnesty International and Human Rights Watch regularly document horrific and massive humans-rights abuses occurring in countries that receive the most U.S. aid in absolute terms. A recent National Research Council report, "Discouraging Terrorism," finds that: "With respect to political context, terrorism and its supporting audiences appear to be fostered by policies of extreme political repression and discouraged by policies of incorporating both dissident and moderate groups responsibly into civil society and the political process." The situation may be critical in central Asia, an area of intensified U.S. intervention where anti-American and pro-radical Islamic sentiment is rapidly rising and Al-Qaeda appears to be relocating.

PARTNERSHIP INITIATIVES IN THE WAR AGAINST TERROR

The goal of reducing support for terrorism by strengthening the partnership initiative and winning the war of ideas involves counterterrorism aid, including law enforcement training and military assistance to promote national security interests by contributing to global and regional stability. It also involves strengthening military support for democratically elected governments and fostering democratic values, including respect for internationally recognized civil and human rights in order to kindle the hopes and aspirations of freedom. The "new partners in the war on terrorism" have been condemned by Amnesty International and Human Rights watch for increasing human rights abuses.

As for winning the war of ideas about democracy and personal freedoms, the Pew survey strongly suggests that Muslim opinion in favor of these values means that the war has already been won. This raises suspicion that the call to battle against haters of democracy and freedom, such as the alarms raised about Iraq's imminent use of weapons of mass destruction and its ties to Al-Qaeda, are cynically designed to rally the home front for a strategic push into south and central Asia. The Pew survey intimates that, except for America, much of the world thinks so.

THE INDONESIAN EXPERIENCE

Indonesians can be considered to be religious people. Indeed Indonesia is a religious society. Long before Islam and Christianity entered Indonesia, Hinduism and Buddhism were already well established. Islam entered and expanded in Indonesia peacefully through trade in three areas:

- Through Aceh, the northern part of Sumatra, and the eastern part of Indonesia in the tenth century, by Arabs traders
- Through Aceh and other parts of Sumatra in the eleventh century, through Indian/Gujarati traders
- Through Java and the southern part of Sumatra in the eleventh century, through Chinese traders

Since the thirteenth century, Islam has blossomed in Indonesia, and many Islamic kingdoms and sultanates were established and developed in the maritime continent. Therefore, in most literature, Islam is considered to have entered Indonesia in the thirteenth century and then systematically expanded not only through trading activities but also through preaching and cultural approaches. It was peacefully adapted to, and assimilated in harmony with, the local traditions and cultures inherited from the Hindu and Buddhist cultures.

Islam then expanded throughout the country via five religious institutions:a) prominent personalities in society; b) the establishment of mosques; c) adaptation and assimilation into existing local traditions and cultures; d) education (boarding schools or pesantren) and e) social activities, including marriage.

Especially in Java, these five networks were successfully created, developed, implemented, and monitored by the "Nine Wise Men," or "Wali Songo."

The colonial masters brought in Christianity: The Catholic Church came in through the Portuguese people in the fifteenth and sixteenth centuries and the Protestant Church came in through the Dutch people in the eighteenth and nineteenth centuries.

At the beginning of the twentieth century, the Islamic movement was influenced as well as driven by the following organizations: a) Syarikat Dagang Islam or Islamic Trading Society, established in 1904 and renamed Syarikat Islam or Islamic Society in 1911; today this organization has developed into several other Islamic organizations. b) Muhammadiyah, established in 1912 and c) Nahdatul Ulama, established in 1926.

Although 87.6% of the 220 million Indonesian people are Moslem, and Indonesia has the biggest Moslem society in the world, it is not an Islamic state. Indonesia is a secular though very religious republic

Muslim Society, Radical Islam, and Terrorism

in which various religions have been peacefully adopted and whose followers have lived in harmony and peace for centuries.

However, long before the Bali bombings of October 2002, the word terrorism was applied to certain kinds of violence in Indonesia. In the late 1970s, the Indonesian government termed a series of related murders and robberies in Java the "Warman's terror," after one of the perpetrators. In 1981, the hijacking of an Indonesian airliner by a group led by a former thug-turned-militant Muslim was deemed a terrorist act, for which the main plotters were executed. During an intensive counterinsurgency campaign in the early 1990s in Aceh, some Acehnes used the term terror to describe acts committed by the army against suspected pro-independence rebels.

But before the attacks on the World Trade Center, there was never any suggestion that acts of terror carried out in Indonesia had any links to organizations or individuals outside Indonesia's borders. Indonesians began going to the Pakistan-Afghanistan border for military training in 1985 and some of the first graduates of that training became the leaders of what later came to be known as Jemaah Islamiyah, which was created on January 1,1993, while the Afghan training program was still underway.

The origins of Jemaah Islamiyah, however, lay in the Darul Islam movement in Indonesia that started in 1949 as a rebellion in west Java. The movement was against the fledgling Indonesian government for ceding too much to the Dutch in order to have a peaceful end to Indonesia's independence struggle. Led by a man named Kartosoewirjo, it ended up as a movement to establish an Islamic state in the 1950s out of large swaths of west Java and parts of central Java. The movement was finally defeated in 1962.

Separately and independently, two other movements, also called Darul Islam, arose in Aceh and south Sulawesi. The south Sulawesi movement also spread into north Maluku. Both were expressions of regional resentment against the central government, and both took up the call for the establishment of an Islamic state.

The Aceh movement, led by a man named Daud Beureueh, began in 1953. Neither it nor the Sulawesi movement was a separatist movement, and both were committed to the idea of an Indonesian Republic; they just wanted an Islamic one. In 1960, as the end was drawing near for all of these rebellions, the Aceh and Sulawesi movements joined forces, at least on paper, and agreed to form the Federal Islamic Republic of Indonesia. The leadership of Darul Islam regrouped in 1974, and over the next few years recruited a new wave of followers. These people did not engage in any violence on Indonesian soil, however, until May 2000, when some of the men later involved in the Bali bombings planted explosives in churches in Medan, north Sumatra. The work was clumsy and unprofessional, and no one in Indonesia or abroad suspected links to an international network. But Hambali, an Indonesian veteran of Afghanistan who was already working closely with Al-Qaeda, was the key figure behind that early effort.

International awareness of Indonesian involvement in a transnational terrorist network came much later, after the late 2001 arrests in Singapore and Malaysia of men found to be members of Jemaah Islamiyah. But that discovery led to two fundamental misperceptions on the part of many international observers:

- That Jemaah Islamiyah was simply the Southeast Asian franchise of Al-Qaeda.
- That violence perpetrated by Muslim militants in the region had to have international dimensions.

Both thoughts were wrong, but so was the widespread denial in Indonesia that homegrown radicals could have international ties. However, the 1977 group saw themselves as attacking a repressive government at home; the 2000 group saw themselves as part of a global movement to attack the enemies of Islam. Recruitment of Indonesian mujahidin took place largely through Darul Islam networks, and particularly from religious study groups that doubled as Darul Islam cells in central Java and Jakarta.

The pull factors of the opportunity to take part in an international jihad and the availability of funding and logistical support coincided with some important push factors in Indonesia. Political Islam was under severe pressure from the state, and many Muslims were eager to sign up for the jihad abroad. Darul Islam members also saw training in Afghanistan as an opportunity to acquire the military capacity to take on the Indonesian state. The "Afghanistan experience" proved to be critical to the establishment of Jemaah Islamiyah and also gave the group a much more international outlook.

It was in Afghanistan that Jemaah Islamiyah developed bonds with men from other parts of southeast Asia, because all the southeast Asians trained together: Thais, Malaysians, Filipinos, Burmese, and even Muslim Cham from Cambodia. It is where they met fighters from Chechnya, Bosnia, Egypt, and other parts of the Muslim world. And it was in Afghanistan where future Jemaah Islamiyah members developed friendships with Abdulrazak Janjalani, the man who later became the leader of the Abu Sayyaf Group, and with guerrillas from the MILF. Perhaps more importantly, it was where the Darul Islam recruits bonded with each other.

Between 1985 and 1995, when fighting among different mujahidin factions in Afghanistan made continued training impossible, the total number of Indonesians who went through the Sayyaf military academy was just under 300. Those Afghan alumni came to constitute a powerful base for Jemaah Islamiyah and became the source of most of its top leaders.

For most members of Jemaah Islamiyah, however, the fundamental objective of establishing an Islamic state in Indonesia never changed. It is therefore critical to understand the Darul Islam roots of Jemaah Islamiyah for a number of reasons:

- The men who became part of Jemaah Islamiyah's central command went to Afghanistan as Jemaah Islamiyah cadres, not as Jemaah Islamiyah. Many of the strongholds of Jemaah Islamiyah support today are in areas where sympathy for Darul Islam was strong in the 1950s and 60s.
- Many of the offshoots and splinter groups of Darul Islam that exist around Indonesia today—by one count there are 14 different factions—have sent people to Mindanao and elsewhere to be trained by Jemaah Islamiyah instructors, or have sent fighters to Ambon (Molucca Island) or Poso (a city in central Celebes) where they joined Jemaah Islamiyah networks or invited Jemaah Islamiyah to give training in their own areas. Within Indonesia, the combination of religious-political motivation and military expertise seen in many of the bombing operations after 2000 is particularly characteristic of Darul Islam offshoots, of which Jemaah Islamiyah is one.
- Finally, many practices of Darul Islam were adopted by Jemaah Islamiyah, including the notion of raising funds for the Islamic struggle through robbery. Bank robberies, jewelry store robberies, and murders in order to get the victims' cash have been justified in this way.

But if the basic network for Jemaah Islamiyah developed in the mid-1980s, why did it only begin to use violence in mid-2000? There are several reasons:

First, Jemaah Islamiyah sees itself as a religious organization, not as a terrorist group. Its main activities from 1993 onward were religious study and preaching.

Second, there was a systematic effort to build up the organization so that it had the human and financial resources to focus on its long-term agenda of establishing an Islamic state.

Third, for many members, the effort to create a mass base through religious outreach was and continues to be far more important than bombing buildings.

In 1998, Jemaah Islamiyah began systematically increasing its contacts with the Taliban and Al-Qaeda by sending some of its senior members, such as Dr. Azhari, a Malaysian citizen, to Afghanistan for study tours of Taliban governance and additional military training. This same man helped supply arms and ammunition to Poso and was briefly arrested after the Marriott bombing, but released because of lack of

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evidence. Clearly the political atmosphere for him had changed between 1989 and 2000. The outbreak of communal conflict in Ambon in January 1999 provided a major incentive for Jemaah Islamiyah to undertake acts of terror inside Indonesia.

There is absolutely no reason to believe that Jemaah Islamiyah had any hand in the initial violence, but its leaders were able to capitalize on this as the first real opportunity to put all their training in jihad to use. Poso, more than anywhere else, proved to be fertile ground for recruiting suicide bombers. And once suicide bombers are in place, preventing terrorist acts becomes infinitely more difficult. Jemaah Islamiyah looked at Poso, and perhaps north Maluku, as the only places in Indonesia where the double agenda of jihad and dakwah could be served: Wage war, but also preach and practice pure Islam in a way that will further the aims of establishing an Islamic state.

We know that parts of Jemaah Islamiyah continue to function, even with more than 200 people being detained across southeast Asia for involvement in or association with the organization. Jemaah Islamiyah's stronghold continues to be in central Java, particularly Solo, and some of the top Jemaah Islamiyah leaders seem still to be based there. The group also has a strong presence in east Java, Lampung, and central Sulawesi, and has strong alliances with local partners in west Java and south Sulawesi. This is an organization whose membership almost certainly numbers in the thousands, but most are probably focused on dakwah, not bombing plots.

Though their communication has been disrupted, in part because of the sophisticated technology provided by the Australian government that permits tracing of mobile phone signals, Jemaah Islamiyah has also become more sophisticated about the security of hand phones and laptops. The fact that senior leaders are in prison also does not mean that communication among members has stopped. Until recently, the prevailing assumption has been that Jemaah Islamiyah is the only organization with the expertise, international ties, and ideology to constitute a likely partner in the region for Al-Qaeda or another international terrorist group.

However, there are two possibly flawed elements in this assumption: a)Jemaah Islamiyah as an institution is inclined to follow Al-Qaeda's lead; b) Jemaah Islamiyah is the most dangerous group around.

Rather, the group is much more focused on building up military capacity and creating a mass base through religious indoctrination to support what would effectively be an Islamic revolution in the country when the time is right— and the members of this faction appear to have a very long time frame.

The question is whether new leaders will emerge through the dakwah process. Members are now being recruited who will be more inclined to the Al-Qaeda view of the world.

That prospect could be particularly lethal if the kind of personal ties to other radical jihads around the world that the Afghanistan training provided in the late 1980s and 1990s are recreated. Preventing a similar international training center from developing must be a top priority. However, it could be precisely the lack of lengthy training, the impetus to use the results of that training immediately, and the attraction of martyrdom that could make men from some of the smaller groups more dangerous in the long run than Jemaah Islamiyah.

CONCLUDING REMARKS

During his exile, Khomeini coordinated an upsurge of opposition, first from Iraq and then from France, after demanding the Shah's abdication. On April 1, 1979, after a landslide victory in a national referendum, Khomeini declared an Islamic Republic, subsequently invested with a new constitution reflecting his ideals of Islamic government. Fundamentalist measures followed and revolutionary committees patrolled the streets enforcing Islamic codes of behavior and dress. Efforts were made to suppress Western influence, and many of the Western-educated elite fled the country. The early years of the revolutionary government were marked by the virtual elimination of political opposition and the consolidation and regularization of revolutionary organizations. All of this triggered an Islamic "awakening" worldwide and influenced some non-Shiite Islamic movements.

The average age of Palestine suicide bombers is the early twenties. Almost all are unmarried and expressed religious beliefs before recruitment (but no more than did the general population). They apparently span their population's normal distribution in terms of education, socioeconomic status, and personality type (introvert vs. extrovert). They all are Palestinian or from the Middle East.

Jemaah Islamiyah was created on January 1, 1993, as a religious organization, not as a terrorist group. Its main activities from 1993 onward have been religious study and preaching. There was a systematic effort to build up the organization so that it had the human and financial resources to focus on its long-term agenda of establishing an Islamic state in Indonesia. The effort to create a mass base through religious outreach was and continues to be far more important than bombing buildings. Indonesians began going to the Pakistan-Afghanistan border for military training in 1985 and some of the first graduates of that training became the leaders of what later came to be known as Jemaah Islamiyah. Beginning in 1988, Jemaah Islamiyah began systematically increasing its contacts with the Taliban and Al-Qaeda by sending some of its senior members to Afghanistan for study tours of Taliban governance and additional military training.

According to the World Bank Report, in the year 2002 the world population was 6.2 billion, with a Muslim population of 1.2 billion. Around 245 million, or 20% of the world's Moslems, live in the Middle East and North Africa. The majority (80%) of Moslems live in developing, low-income countries, with an average GNP/Capita (\$430 USD), or 19.3% of the average GNP/Capita (\$2,230 USD) of the Middle East and North African countries, and only 13.8% of the average GNP/Capita (\$3,107 USD) of the Middle East and North African Arabs countries.

The above-mentioned terrorist acts were carried out directly or indirectly by people coming from the North African and Middle East Islamic Sunnite Society, with an average GNP/Capita seven times higher than the majority (80%) of the Islamic people living in the poor developing countries of the world.

The "Palestine Case" is based on disputes between Palestine and Israel over possession of a contested homeland. The double standard used by some countries and the U.S. in evaluating and judging the confrontations and clashes in favor of Israel has embarrassed many countries and people in the world, including Islamic people. The Palestine suicide bombings, therefore, should not be considered as an Islamic act of confrontation or war but more as a reaction to the injustice act in solving the "Palestine Problem." The United States and its allies should change their behavior by directly addressing and lessening their sentiments of grievance and humiliation. The Palestinian suicide bombings are similar to the kamikaze bombings carried out by the Japanese during the Second World War as a last and hopeless attempt to defend itself against an economically and militarily superior enemy. The use of culture, beliefs, and religion (Islam) are the means for preparing, programming, systematically brainwashing, and indoctrinating suicide bombers to take part in military attacks against the enemy.

The tragedy of September 11 and the Al-Qaeda terrorist acts that took place before and after that time are based on a vision of Osama bin Laden and the people in the visible and invisible network of Al-Qaeda. The vision is to coordinate, control, and command the Islamic people worldwide through a "global caliphate," and perhaps later through a Western-inspired system of nation-states. The awakening of the Islamic people after the success of the Iranian Islamic revolution, the economic success derived from the oil boom in the Middle Eastern countries, and the success of the Afghanistan war against the Russians, in which Islamic fighters, including the Taliban, were successfully involved, encourage the people in the Al-Qaeda network to create their global caliphate. Following the Afghanistan war, the fall of the Russian Communist hegemony, the change from a bipolar to a unipolar world, and the behavior of the

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Superpower toward Palestine and the Middle Eastern problem nurse an irrational hatred toward the U.S. The suicide bombings carried out by the Al-Qaeda network are similar to the "Assassin network" mentioned earlier. The use of culture, beliefs, and religion (Islam) are the means for preparing, programming, systematically brainwashing, and indoctrinating suicide bombers. Al-Qaeda has never gained legitimacy in any Islamic society or country for implementing their vision and killing innocent people.

My final conclusion is that radicalism and terrorism have nothing to do with the Islamic people of the world, almost ninety percent of whom are taking part in a jihad, or holy war, against ignorance, injustice, and poverty.

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Chapter 12

Climate Change, Energy and Water Scarcity: Three Likely Sources of Conflict

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mocratic societies are solving a number of problems at present. Two of these problems, the complex security situation in Iraq and in Afghanistan, are top issues, with one common denominator: Terrorism. While we connect the terrorist attacks with radical Islamists, Islam itself is not necessarily the source. For example, at the 2003 Workshop, we heard the interesting presentation by Mr. Satish Chandra of India on the issue of water sources. This problem has the potential of resulting in armed conflict.

I would like to turn your attention now to many other problems that are possible sources of large and extensive conflicts if mankind does not solve them today.

CLIMATE CHANGES AND FUEL SOURCES

Regardless of the ever-increasing number of inhabitants on our planet, the changes in climate and the pumping of fossil fuel will likely create a very complicated situation that only radical action will be able to correct. Such changes involve three major issues: The lack of food (in some regions), a lack of drinking water, and the draining of fossil fuel sources, namely, oil. A study conducted for the Pentagon, entitled "Sudden Climate Change," as well as a number of other models, show that global warming and other climate changes in specific regions are occurring, including a growing trend toward extreme natural disasters and rising sea levels, with appropriate consequences.

The costs for dealing with extreme natural events has increased in recent decades. Global economic losses resulting from these catastrophes have risen 10.3 times, from 3.9 billion USD a year in the 1950s to 40 billion USD a year in the 1990s. In addition, the annual report of the world's largest secure insurance company, Munich Re, states that in 2003 natural disasters caused seven times more casualties than in 2002, when the number was 75,000, including 40,000 lost from the single December earthquake in Iran.

Besides earthquakes, which are of course unpredictable and cannot be foreseen, the extreme heat in Europe in 2003, perhaps connected with global warming, claimed 20,000 casualties. In the American

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Midwest, tornadoes devastated the area in May, and fires in California turned thousands of homes to ashes. The fires cost the insurance sector almost 2 billion USD, while hailstorms during the tornadoes caused damage in the amount of some 1 billion USD.

What we can conclude from these facts is that we can expect a higher number of catastrophes and natural disasters in upcoming years as a result of the increased effects of global warming.

Regarding fossil fuels, current society is dependent on hydrocarbons—oil and natural gas. That is because these fuels contain the most energy per unit (oil contains the most). But these sources are nonrenewable. It is alarming how they are being exhausted and used.

When we look at fuel in a context of energy commodity balance – two-fifths of mankind consumption is represented by oil (followed by coal, natural gas, and energy from hydroelectric and nuclear power plants).

According to the energy synopsis by Jan Hansen (2001), global production of oil culminated in 2000, which means that it will go down in about five years. Maximum production is 90 million barrels a day, even though demand is at 75 million barrels a day, and production is expected to grow by 2.5% per year, to 100 million barrels a day until 2010. The problem is that, except for the Middle East and the Caspian Sea, the rest of the world's well-known oil sites have decreased their production. Attention, therefore, will undoubtedly turn to these two regions.

OIL-RELATED CONFLICT

At the present time, seizure of natural sources is "the good reason" behind most conflicts, which explains the militarization of the Caspian region. Russia is presently active in that region conducting military exercises of a complex nature. The Caspian fleet has undergone changes and part of the Baltic Sea naval force has been transferred. Also in 2001 the 77 Self-Contained/Independent Marine Brigade was formed.

Kazakhstan and Azerbaijan, with the support of the U.S., will be building up their own naval fleets. The U.S. itself is reinforcing its influence in this region through various indirect activities. In the summer of 2001, a potential conflict between Azerbaijan and Iran was noted when Iran used its naval force and its air force to protect geologic survey works at a crude-oil field in a disputed area of the southern part of the Caspian Sea. At the same time, the Caspian region has not met expectations so far—it should hold at least 10% of the world's reserves— but at present the major pumping countries only get about 1.5%. However, the Caspian region expects almost a 7% yearly increase, and if there are no changes and no other sources discovered, it will be possible to pump crude oil in this region till 2023.

WORLDWIDE OIL CONSUMPTION

Yet industrially developed countries are using energy to the detriment of developing countries. For instance, the average consumption of one Canadian citizen a year, recalculated to an oil equivalent, is 10,000 kilograms. An inhabitant of Ethiopia uses only about 20 kilograms. This is hugely disproportionate. In addition, oil is consumed in economically developed countries but the major suppliers of oil are developing countries.

In terms of total figures, nations in the industrialized world continue to consume more of the world's petroleum products than those of the developing world. This gap is projected to narrow considerably between 2001 and 2025, however. In 2001, developing nations consumed about two-thirds (64%) as much oil as the industrialized nations, but by 2025 they are expected to consume 94% as much as the industrialized nations. This shift in consumption proportions can lead to tensions over oil sources.

Although there is no immediate danger that the world will run short of oil, at the present pumping rate, reserves are expected to last for 20 to 30 years until about 2026.

According to the World Energy Council, serious energy problems may not arise until after 2050, but it is necessary nonetheless to develop new sources and to have commonly observed conservation measures applied to current sources. Another source of information indicates that there are 1,020 billion barrels of known oil reserves, with 23.6 billion barrels being pumped a year: If there is no increase and pumping is kept at the 1998 level, reserves will last until 2041. According to a further source, there are 140.9 billion tons of oil in reserve, and if pumping continues at 3.47 billion tons a year, global oil reserves would be depleted before 2026.

However, even if I was certain that some radical changes will be made regarding energy consumption, the disproportionate allocation of reserves will never be solved, nor will the disproportionate consumption of energy or the gradual emptying of individual pumping sites.

Here are some statistics:

- OPEC has 108.4 billion tons of oil, or 76.9% of world reserves. The rest of the world has 32.5 billion tons.
- The largest verified oil reserves in the world are in the Middle East—91.6 billion tons. Non-verified reserves are 68 billion tons with 27.2 billion tons in OPEC member-countries.
- Regardless of the rate of pumping, oil could be pumped out from worldwide reserves for 41 years; from OPEC for 75 years; and from the Middle East for 88 years.

Because of the worldwide decrease in oil production, which is connected to escalating tension in the struggle to hold influence over vanishing reserves, military clashes may occur following the 2025–2030 period if the problem is not solved by appropriate political action.

WATER SHORTAGES AND RESULTING PROBLEMS

Now I would like to recall the presentation by Mr. Satish Chandra, the Deputy National Security Advisor of India, at last year's *Twentieth International Workshop* in Moscow. He discussed the point that a UN study concluded that almost two-thirds of the world's population, which is about 5.5 billion people, will face a serious water shortage before the year 2025.

The worst-case scenario predicts that around 2050 as many as 6 to 7 billion people will be endangered in 60 countries. Similarly, a study undertaken by the International Year of Water 2003 states that, in the near future, drinking water will become a source of tension and intense competition among nations. Future wars will likely not be waged for territory or for oil but for water. Worldwide, 1.2 billion people are starving because of a shortage of water, 2.4 billion people are living without adequate hygiene, and 60% of infant mortality is connected with poor water quality. It is estimated that up to 30 billion USD per year is spent on the production and distribution of drinking water as well as on providing hygiene.

Today, one-third of the world's population lives in countries in which the shortage of drinking water is the top issue—this includes Africa, western Asia, China, India, Indonesia, Kuwait, the Gaza strip, United Arab Emirates, the Bahamas, Qatar, the Maldives, Libya, Saudi Arabia, Malta, and Singapore. In addition, people today use 54% of all available water sources (lakes, rivers, and underground sources), but, under the present per capita consumption rates this could reach 90% in 25 years, leaving only 10% for the rest of the animal species. And, like petroleum pumping, drinking water pumping exhibits similar trends in the gap between developed and developing countries. Water consumption per capita per day in the U.S. is 7,200 liters (about 190 gallons) while in India it is 1,500 liters (about 40 gallons).

During the last half-century, there were 507 international conflicts because of water. Violence accompanied 37 of them and military activities took place in 21. The majority of conflicts occurred in the Middle East. However, most likely by the year 2025, the situation will grow even worse. Many of the regions mentioned earlier will enter the "catastrophic" category, in which water consumption will be under 1.0 cubic meter per capita a year. Water consumption has more than tripled since 1950.

The greatest rate of growth in water consumption is predicted to be in Africa and in the Middle East while the lowest rate of growth is expected to be in developed countries. The situation will be critical if nothing substantial is done in the Islamic regions and those regions influenced by Islam.

MUSLIM NATIONS AND VIOLENCE

In his deliberations, Samuel Huntington often goes too far but it is necessary to take his views into account. He states that Muslim countries resort to violence during international crises, and that they used it in 76 of the 142 crisis situations between 1928 and 1979 (his figures might be distorted because the last decades were not included). In 25 cases violence was used as the basic way to solve the crisis, and in the remaining 51 cases violence was used together with other means. Moreover, in Islamic countries violence was applied more than in any other place; 41% of the time it was part of full-scale war and 38% of the time the armed clashes were classified as serious.

During 1993–1994, there were three times more civilian conflicts that included Muslim participation than conflicts among non-Muslim populations. There were also more conflicts within and between Islamic countries than in any other population. The West experienced only two conflicts. In addition, 48 localities in 1993 experienced ethnic conflicts. According to the New York Times, there were 59 ethnic conflicts in those localities that were direct clashes between Muslims and non-Muslims. There were 31 conflicts among various groups and two-thirds of them were waged between Muslims and members of another population. There were 10 tribal conflicts in Africa.

If no crucial changes are made, we expect that:

- energy resources will decrease around 2020 and an energy crisis will occur around 2050.
- As to the use of water, the period around 2025 could be critical.

There is also another challenge. If the sea level continues to rise at the rate of 1-2 millimeters per year, in a century the level will rise 9.88 centimeters. During the last one hundred years the sea level rose 10-20 centimeters.

The last two factors alone could bring about a critical situation by 2020 and on.

THE EFFECTS OF GLOBAL WARMING

Scientific observations increasingly show that global warming is influenced by human activities. During this century, we are likely to see a 1.4 to 5.8degree Centigrade increase, which will affect our water distribution systems, water sources, seasonal cycles, ecosystems, extreme climate events, and many other things. Since the late nineteenth century, temperatures have risen by 0.6 degrees Centigrade plus/minus 0.2 degrees Centigrade. The greatest degree of warming took place between 1910 and 1940 and from 1976 until the present. In the northern hemisphere, where measurement is most accurate, the rate of warming during this century is higher than at any other time during the past one thousand years. Moreover, the 90s were the warmest decade of the millennium and 2002 was the warmest year ever.

Climate models are now predicting that, without any major changes or arrangements to stop the expected effect, global temperatures will go up by 1.4 to 5.8 degrees Centigrade up to the year 2100. These changes are greater than any that occurred in the past 10,000 years. Global warming will have a crit-

ical impact on all of mankind, affecting not only water sources and distribution systems but food production, sea levels, and natural disasters. Simulations show that warming by 0.6 °C could also lead to rising water expansiveness, but it is difficult to calculate the influence of the melting of ice in Greenland and Antarctica and the slow rectifying of the northern continents when they become free of the load of age-old glaciers.

Since the late 1960s, snow coverage has decreased by some 10% in the medium and higher latitudes of the northern hemisphere. During the last decades, the coverage of arctic sea ice has decreased by 10 to 15% in spring and summer, and also seems to be thinner by 40% in late summer and early autumn.

In addition, precipitation is higher—0.5% to 1% per decade—in most high latitudes in the northern hemisphere, with 2% higher cloud coverage. Precipitation in tropical longitudes—10° south to 10° north—appears to be higher by 0.2% to 0.3% per decade. On the other hand, a decrease was observed over the northern hemisphere in subtropical areas (10°–30° north) during the twentieth century, 0.3% per decade. In parts of Africa and Asia, the rate and intensity of drought seem to be much worse.

Global warming will have an effect on food production, namely in tropical and subtropical areas where agriculture is at the brink of high temperature tolerance. In central continental territories, such as the U.S. Corn Belt, and in vast parts of the medium latitudes of Asia, sub-Saharan Africa, and parts of Australia, dry and hot conditions are expected. But some improvement is likely to occur in Great Britain, Scandinavia, Europe, and North America.

Water sources will also be affected by changes in precipitation and evaporation. The infrastructure in lowlands will be devastated because of rising sea levels, floods, and other extreme weather events. Some sources say that the sea level will rise by 0.2 m by 2010, by 0.5 m by 2040, and by 1.0 m by 2090 (The World Bank and The World Resources Institute). Another scenario, "IS92," indicates an increase of 13 to 94 cm by 2100, and a "Lone Planet" scenario indicates an increase of some 8 to 30 cm by 2030 and 30 to 110 cm by 2100 (1 m of water is equal to 12 to 18% of the territory of Bangladesh).

Globally, precipitation will grow, but it is not certain where. However it is certain that in the second half of the twenty-first century, winter precipitation will be higher in the higher latitudes of the northern hemisphere and in Antarctica. Some territories in tropical regions will have more precipitation while others will have less. Australia, Central America, and South Africa should receive increasingly smaller amounts of winter precipitation.

The frequency and intensity of extreme weather events will likely change. With higher temperatures, there will probably be more hot days and heat waves and fewer frosty days and cold periods. Climate models continue to show extreme amounts of precipitation over many regions, with the risk of drought increasing in continental territories during summers. There is also evidence that hurricanes will be more intense, with more severe winds and more precipitation. In addition it is impossible to rule out other rapid and unexpected climate changes, the most dramatic of which would be the collapse of the western Antarctic ice shield. While this would lead to a catastrophic rise in sea level, it is not likely to happen in the twenty-first century.

Changes in ocean water circulation also can have a considerable impact on regional climates (for instance, the weakening of the Golf Stream will warm Europe). This may occur over several decades, but it is unknown whether or not global warming will trigger changes in ocean water circulation. Climate models show that even if the Golf Stream loses its strength, Europe will get warmer because of the greenhouse effect.

Social and economic systems tend to be vulnerable in developing countries that are economically ineffective and have weak institutions. People living in lowlands, slightly higher areas, and on small islands are particularly at risk. Densely populated areas are also more vulnerable to dangers such as storms, floods, and droughts. The most vulnerable populations live in the sub-Saharan region; in south, east, and southeastern Asia; and in the tropical territories of Latin America and some Pacific islands.

High sea levels also threaten drinking water supplies with contamination, including those in Israel, Thailand, islands in the Pacific and Indian Oceans and the Caribbean Sea, and the Mekong Delta in China and Vietnam.

MIGRATION AND THE ENVIRONMENT

While many people migrate from poor agriculture regions to urban areas, they often return to their homes because of a lack of space and work opportunities. Periodic droughts, floods, and cyclones worsen the situation. The soil becomes exhausted—there are two to three harvests per year—and drink-ing water in shallow wells becomes polluted with bacteria and chemicals. Deeper wells, on which nearly 40 million inhabitants depend, contain arsenic. It is expected that seasonal flooding will increase over a longer period of time because the higher sea level will slow down drainage in the affected region; it is also expected that living will get worse in these low-lying areas. This will lead to an increase in underground water salinity and therefore to the area's further deterioration. For example, flooding in 1998 deprived as many as 16 million people of their homes.

Future high tides will also be stronger as will cyclones. The most devastating cyclones were in 1970—300,000 to 500,000 people were killed—and in 1991cyclones claimed 140,000 to 200,000 lives. Fewer casualties were recorded after 1970 because a number of anti-cyclone barriers were built.

Climate changes related to global warming will cause population migrations not only in Bangladesh but in other parts of the world. Either rising sea levels, inland floods caused by higher precipitation, or devastating droughts will result in long-lasting crop failure and famine.

The solution is most likely to be found in eliminating differences among nations, but in times of huge migration it will also be found by preparing relatively large territories for settlement by millions of people or by integrating them into existing nations.

CONCLUDING REMARKS

The most endangered part of our planet is in the northern hemisphere, between 10° and 30°. In this area are countries in which Islam is the decisive state religion (out of 28 countries, 22 are at least 50% Islamic). Islam itself does not pose any problem, but some groups interpret and misuse it in their favor; in newly democratic areas they may use violence to solve problems. Lack of water or food or other effects of global warming, including mass migration, can worsen attempts to solve problems. This can lead to the use of terrorist tactics on an even greater scale. The period between 2025 and 2030 should be even more alarming than today.

Chapter 13

Indirect Threats to Global Security: Climate Change and Flu Pandemics

Mr. Satish Chandra¹

OPENING REMARKS

Indirect threats to global security arise not from issues customarily associated with security, such as war, regional conflict, civil strife, proliferation of nuclear weapons, and terrorism, but from issues traditionally not considered to significantly impact security, such as climate change, disease, poverty, and economic inequities. The latter threats could perhaps more appropriately be termed nonconventional rather than indirect, since failure to address them can have as disastrous an impact on our existence and well-being as the failure to address more conventional threats.

I will highlight the grave dangers posed by two of these threats, climate change and flu pandemics, and outline briefly what we can and need to do. Because both of these dangers are able to inflict on us, during the next few years, devastation of an order hitherto never visited on mankind, I would like to paint two entirely plausible hypothetical scenarios to bring home the gravity of the situation.

It is 2015. Despite much debate and warning, the world has done little to address the buildup of greenhouse gases and the consequent acceleration of global warming, which is accompanied by increasingly unpredictable world weather patterns. Extreme heat, storms, and droughts have created havoc for farmers. Mega-droughts are affecting major granaries. The world's agricultural production and freshwater resources are seriously stretched, reducing the planet's carrying capacity. Deaths from famine and drought are in the hundreds of thousands. Violent and frequent storms are lashing Western Europe, leading to the abandonment of low-lying cities such as The Hague. Rising sea levels have made countries such as Bangladesh nearly uninhabitable, resulting in mass migration.

This scenario, as frightening as it is, pales in comparison with what could overtake us by 2007 if the highly pathogenic form of bird flu "H5N1" becomes transmittable human to human; all it would take for this to happen is a simple gene shift in the bird flu virus, which could happen any day. In a globalized world linked by rapid air travel, the disease would spread like a raging forest fire. If it did, it would over-

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whelm our public health system, cripple our economies, and wipe out a billion people within the space of a few months—a 60 percent mortality rate is estimated.

Both of these scenarios may seem alarmist, but they are within the realm of possibility. We are, however, in a position to put in place structures and programs to mitigate and possibly even prevent such disasters. But a no-regrets strategy demands that this be done before it is too late.

As we examine what we need to do, we must take an in-depth look at the nature and extent of the threat of climate change and flu pandemics.

CLIMATE CHANGE

It is well established that the global warming we are experiencing today is the direct result of the increased concentration of greenhouse gases caused by human activity. The Inter-Governmental Panel on Climate Change (IPCC) has stated that since 1750 A.D. atmospheric concentrations of methane are up by 151 percent and carbon dioxide concentrations are up by 31 percent. Current levels of both of these concentrations (viz. 375 ppm [parts per million] and 1,760 ppb [parts per billion] have not been exceeded during the past 420,000 years. In addition, the current rate of increase of atmospheric CO2 concentrations viz. 1.5 ppm per year over the past two decades is unprecedented at least over the last 20,000 years. Seventy-five percent of anthropogenic CO2 emissions during the last two decades are due to fossil fuel burning and the remainder mainly to land use changes, particularly deforestation.

The fact of global warming is self-evident. We can all feel it. Maximum summer temperatures in Europe in 2003 were unlike anything seen in the preceding 100 years—6 degrees C higher than the 1961–91 average and 2 degrees C hotter than the average summer temperatures during the entire twentieth century. In North India, March 2004 temperatures were 5 to 7 degrees C above normal.

According to the IPCC, the global average surface temperature increased by about 0.6 degrees C during the twentieth century, and the 1990s were the warmest decade since the beginning of record keeping in 1861. As a result of global warming, snow cover since the late 1960s has declined by 10 percent. The thickness of Arctic Sea ice during the late-summer/autumn declined by 40 percent in recent decades. A widespread retreat of mountain glaciers in nonpolar regions has also occurred. The global average sea level has increased between 0.1 and 0.2 meters during the twentieth century. El Nino events, which bring severe droughts in some areas and floods in others, have become more frequent and more intense during the last 30 years compared to the previous 100 years. Coral reef bleaching, which leads to major loss of biodiversity in coastal areas, has become more frequent.

Some scientists believe that the extreme weather phenomenon witnessed in the 1990s is an indication that the 0.6 degree C warming during the twentieth century is part of an established upward and accelerating global warming spiral. The declining snow cover; the increased precipitation, which in turn increases water vapor; and the fact that yesterday's CO2 emissions continue to impact the future are all contributors to increasing warming. Indeed, even if we were able to freeze carbon dioxide concentrations at the current level of 375 ppm, global temperatures would rise another 1 degree C on top of what we have already experienced. Should this happen, according to a special report on climate change in the February 2004 edition of the Ecologist, glaciers and sea ice would in all probability vanish and the number of extreme events such as floods, landslides, heat waves, and violent storms would increase, inevitably having catastrophic effects on global food supplies. The report further postulates that if carbon dioxide emissions are curbed so that carbon dioxide concentrations increase only to 550 ppm, or roughly double pre-industrial levels, global temperatures would rise 2 degrees C over the next 100 years.

Study Projections

In this scenario, our current climate system would probably still be able to cope "without jumping unexpectedly to a very different and hard to predict state." It would nevertheless result in a sea level increase of a foot or more and even stronger climate events, including storms, sea surges, torrential rains, and droughts. If, however, energy use continues to grow at current rates, a four-fold increase in greenhouse gases compared to pre-industrial times could result. This in turn could result in an 8 degree C rise in global average temperatures, which would produce sea levels 12 meters higher than those existing today as well as the complete elimination of permanent polar ice zones. In this eventuality, we would lose our major capital cities and much of our best farmland, and be subjected to violent weather conditions that together would make survival virtually impossible. After looking into a number of global warming scenarios, the IPCC has projected global average surface temperature increases between 1.4 and 5.8 degrees C between 1990 and 2100. The Ecologist's report on climate change contends that these projections are perhaps far too optimistic.

Another study on this topic, "Abrupt Climate Change," was commissioned by Andrew Marshall for the U.S. government and developed in October 2003 by Peter Schwartz and Doug Randall. The study projects a sharp acceleration in atmospheric warming in the first decade of the twenty-first century. Average temperatures worldwide are predicted to increase by 0.5 degrees F and in the harder-hit regions by as much as 2 degrees F. Most of North America, Europe, and parts of South America should experience 30 percent more days with temperatures over 90 degrees F than a century ago. Weather patterns should become much more erratic-more floods in mountainous regions and prolonged droughts in grain-producing and coastal agricultural areas. Climate shifts will become a local economic nuisance as storms, droughts, and hot spells impact agriculture and other climate-dependent activities. More severe storms and typhoons should bring about higher storm surges and floods, making, in 2007, a few coastal cities such as The Hague uninhabitable. Climate shifts will also accelerate glacier melting, cause the disappearance of floating ice in the North Polar seas, make sea levels rise, and cause an increase in intensity of oceanic waves, which will damage coastal cities. As a result of the freshening of North Atlantic waters from higher precipitation and melting polar sea ice, the thermohaline circulation system will begin to collapse in 2010. This collapse will disrupt the temperate climate of Europe, which occurs because of the warm flows of the Gulf Stream.

With the collapse of the thermohaline circulation system, the report projects that Europe will be hardest hit by climate change in the period 2010–2020. Average annual temperatures will drop 6 degrees F, making northwest Europe colder and in fact more like Siberia. Reduced precipitation will cause soil loss contributing to food shortages. Europe will struggle to stem emigration from Scandinavian and northern European nations. Colder, windier, and drier weather will make growing seasons shorter and less productive throughout the northeastern United States, and longer and drier in the southwest. Coastal areas will remain at risk as ocean levels continue to rise. China will be hit hard by decreased monsoon reliability. Longer, colder winters and hotter summers with reduced precipitation will stress already tight energy and water supplies, and widespread famine will cause chaos and internal conflict. Bangladesh will become nearly uninhabitable due to persistent typhoons and rising sea levels. The report projects that as a result of these climatic changes, there will be a significant drop in the planet's ability to carry the existing population, and future wars will be fought over survival rather than religion, ideology, or national honor. Deaths from war and famine will run into the millions.

While the extreme view projected in this study is as yet a minority one, it is serious enough that the U.S. Senate Commerce Committee approved \$60 million for further research and Hollywood produced the climate-catastrophe film "The Day After Tomorrow." Whether or not the thermohaline circulation sys-

tem actually collapses in the short time projected in the study, climate change, as reportedly pointed out by Sir David King, the British government's chief scientist, is "the most severe problem we are facing today, more serious even than the threat of terrorism."

Even if a thermohaline circulation system collapse does not occur in the next decade or two, the consequences of global warming will be sufficiently serious in our lifetime. Two top U.S. government experts—Dr. Thomas Karl of the National Atmospheric and Oceanic Administration and Dr. Kevin Trenberth of the National Center for Atmospheric Research—published a paper in the December 5, 2003, issue of Science, warning that on our current course, the likely result is more frequent heat waves, droughts, extreme precipitation, events-related impacts such as wild fires, heat stress, vegetation changes, and sea level rise. In addition, a leading re-insurer, Swiss Re, released a report predicting that the financial costs of global warming will double every decade, rising to \$150 billion a year over the next 10 years. A major study published in Nature magazine projects that in the next 50 years, climate change will cause the extinction of a quarter of land animals and plants, more than a million species, and much of that loss—more than one-tenth of all plants and animals—is irreversible because of the extra greenhouse gases already discharged into the atmosphere. A recent study undertaken by WHO (World Health Organization) also found that climate change is responsible for 2.4 percent of diarrhea cases worldwide and for 2 percent of all cases of malaria. The study estimates that in the year 2000, 150,000 deaths were caused by climate change.

Economic Impact

The economic impact of climate change also will be enormous. Physical infrastructure—energy transmission systems, buildings, urban infrastructure, and so on—are directly affected by extreme events such as floods and cyclones. Extreme weather episodes also lead to migrations; urban flooding has already become a major issue on most continents. Agriculture, forestry, fisheries, and tourism, on which the livelihood of billions of people depends, are all highly sensitive to climate change. In addition, the insurance and finance services sector is adversely affected by weather-related events perceived to be linked to climate change.

The Need to Use New Technologies

The extent of climate change is directly linked to the increase in carbon dioxide concentrations, which in turn are determined by trends in carbon emissions from fossil fuel burning. Lowering global carbon emissions would require major changes in existing patterns of energy resource development, but right now we have the technological means to fix the problem. However, we need to utilize the full potential of a host of new technologies, such as wind turbines, highly efficient hybrid electric cars, fuel cell technologies, solar energy, and so on, together with those designed to eliminate industrial-byproduct gases. Greater use of natural gas, nuclear energy, and hydropower would further reduce the utilization of fossil fuels. Moreover, there are innumerable low-cost opportunities that need to be seized to promote efficient energy use in buildings, transportation, and manufacturing. There are also enormous opportunities to reduce the extent of forest biomass burning and to cut down methane and nitrous oxide emissions, which also contribute to global warming. In addition we can build carbon "sinks" through judicious reforestation programs. The IPCC has determined that it is entirely possible through such actions to reduce global emissions well below 2000 levels between 2010 and 2020, and much of the reduction could be achieved in a cost-effective manner.

The Need for International Agreements

While the entire planet is vulnerable to climate shifts, the capacity to adapt to and meet the challenges of climate change varies vastly from region to region. Simply put, developing countries and poorer populations have limited capacity to adjust to climate change. According to the Third Assessment Report (TAR), the adaptive capacity of human systems is high in Australia, New Zealand, Europe, and North America but low in Asia, Latin America, and the polar regions. Small island states are considered to be the most vulnerable to climate change.

With this in mind, the international community developed the UN Framework Convention on Climate Change at the 1992 Earth Summit and, subsequently, the Kyoto Protocol in 1997. These two guidelines show the way for addressing the dangers of climate change based on the following principles:

- Following the "precautionary principle," immediate efforts must be made to halt, if not reverse, global warming.
- All countries should take action to respond to climate change in accordance with their differing responsibilities and capabilities. The Kyoto Protocol imposed binding commitments only on developed countries to reduce their greenhouse gas emissions, and it may be that the main responsibility for global warming rests with the industrialized countries whose historic and current per-capita emission levels are at unsustainable levels and far in excess of those of developing countries. Climate change is being caused not by greenhouse gas emissions but by excessive levels of anthropogenic greenhouse gas emissions, the responsibility for which lies with industrialized countries. For instance, while India's current per-capita carbon emissions are 0.3 tons, far below the global average of 1.1 tons, those of the U.S. are of the order of about 5 tons. Moreover, developing countries lack the financial and technological capability to address global warming. Any binding commitments on developing countries to reduce greenhouse gas emissions would thus not only be inequitable but detrimental to the attainment of their primary goals, namely, economic and social development.
- The industrialized nations with the greatest historical contribution to climate change must take the lead in addressing the problem. At Kyoto they undertook to reduce, by 2012, their greenhouse gas emissions to 5.2 percent below their 1990 levels. In order to lessen the difficulty of meeting those targets, several measures were agreed to, including "flexibility mechanisms," that allow the trading of emission permits, the use of forests and other carbon sinks, and the earning of credits through use of a clean development mechanism (CDM) or joint implementation project.
- Developing countries must commit themselves to monitor and address their carbon monoxide emissions and to enter into contractual and conditional commitments to implement specific mitigation measures provided the full incremental costs are met by developed countries.

Regrettably the Kyoto Protocol has been stymied because both the U.S. and Russia have refused to ratify it; the protocol can become an instrument of international law only if ratified by 55 countries representing 55 percent of the emissions of the industrialized world. Since the U.S. and Russia together account for 53 percent of the industrialized world's emissions, the Kyoto Protocol cannot be entered into force. It is also disturbing that global carbon emissions from fossil fuel consumption have gone up by 9.1 percent between 1990 and 2000 and those of the U.S. from 22 to 24 percent of global carbon emissions. And instead of our working toward the Kyoto emission target of reducing industrialized countries' total greenhouse gases by 5.2 percent below their 1990 levels, actual carbon emissions are down only by 1.7 percent. The reductions that have been achieved are largely due to a 30 percent drop in Russia's carbon emissions and a 1.4 percent decline in EU carbon emission. The Russian decline may be largely attributed to the slowdown in its economy and to the closing of inefficient industries.

Other major industrialized countries, including Japan, Canada, and Australia, have seen massive increases in carbon emissions in the period 1990–2000. However, European countries in general and the U.K. and Germany in particular have performed fairly well in curbing carbon emissions through curtailing coal utilization and promoting more efficient and eco-friendly technologies. Many developing countries, notably Mexico, China, India, and the Philippines, have also taken some commendable steps to reduce carbon emissions growth. However, while individual countries can and must do whatever is possible to reduce greenhouse gas emissions, progress in the matter can most effectively be undertaken only within the framework of an international and legally binding agreement that clearly sets out the obligations and responsibilities of the parties concerned as to how clearly defined benchmarks and objectives can be achieved. In this context, there can be no substitute for the Kyoto Protocol; it is in our common interest that the protocol be ratified by all concerned. Failure to do so will condemn us to the perils of climate change.

All of us need to recognize that global warming is like cancer: Difficult to detect in the early stages and difficult to cure if detected late. Regrettably, we have detected global warming late, and there are some who feel that its consequences are reaching the point of irreversibility. Even if we were to cut back emissions to the levels suggested in the Kyoto Protocol, we would merely be scratching the surface of the problem. The stabilization of greenhouse gas concentrations at 450 ppm would require annual carbon emissions to drop to less than 21 billion tons over the next century. This would entail a cut of around 80 percent in global carbon emissions from present levels—much larger than what is being contemplated in the Kyoto Protocol. However, in the absence of anything better, we need to follow the Kyoto Protocol since it constitutes the first step in seriously addressing climate change in a truly global manner—the only way an issue of this nature can be addressed. Pending the protocol's ratification, the international community must push ahead with the implementation of the clean development mechanism, which should be incorporated into an international agreement because it will facilitate investment and technology flows to developing countries in exchange for carbon credits.

Recognizing Nuclear Power As Clean Energy

India believes that nuclear power can be an important component of clean energy technology usage. While every mention of India's nuclear program is immediately linked to our nuclear weapons development, our nuclear program has always been primarily anchored in developing applications for nuclear energy. Today nuclear power accounts for only about 3 percent of our total power production, but we have an ambitious growth program.

To put the scale of the problem in perspective, if India needed to achieve per-capita energy consumption commensurate with even the lower end of the present standard of living in developed countries, it would need to increase its electricity generation capacity from today's level of around 100,000 Mwe to around 1.5 million Mwe, i.e., to 15 times present capacity. If we did so using fossil fuels alone, this would mean additional carbon monoxide emissions equal to roughly the entire existing global level.

Therefore every one of India's efforts to increase the proportion of nuclear energy in our total energy output should be supported wholeheartedly. Instead, the pretext of nonproliferation concerns is frequently used to deny cooperation with India in this area. The irony is that India, which has an impeccable record on nonproliferation, is denied access to technology and investment that is important for its development in a manner that protects the global climate while clandestine transfers of nuclear, missile, and dual-use technologies escape unpunished even when exposed. This serves neither nonproliferation goals nor the objectives of environment-friendly development. Nuclear power must be recognized as clean energy and should be brought within the purview of CDM.

BIRD FLU PANDEMIC

If the possibility of the collapse of the thermohaline circulation system is alarming, the possibility of a human-to-human transmittable bird flu pandemic is a nightmare. What makes it so frightening is the fact that it could happen at any time and that we are ill prepared to face it. At current mortality rates, it could result in the sudden death of 15 to 20 percent of mankind.

The most severe health crisis in recent years in terms of numbers of deaths was the 1918–1919 influenza epidemic, which in the space of one year caused an estimated 40 million deaths worldwide. Begun in Kansas in March 1918, the epidemic spread to Europe and then to India, Australia, and New Zealand. The virulence and mortality rate of the first wave of the disease, in the spring of 1918, was only slightly above normal levels but the second wave, which began in the fall of 1918, was extraordinarily deadly, with mortality rates of 5 to 20 percent above normal levels. It is believed that the fall strain of the virus came about through genetic mutation and that the genetic structure of the virus was a form of a swine and avian influenza strain.

Since 1918, the world has seen several influenza outbreaks, most notably the 1957 Asian flu outbreak and the 1968 Hong Kong flu outbreak, each of which killed a million people. While WHO now has an Influenza Surveillance Program in place as well as an Influenza Pandemic Preparedness Plan, we still need to examine the possibility of the highly pathogenic H5N1 bird flu becoming transmittable from human to human, the outcome of such a situation, and what must be done to address the possibility.

Since the end of 2003, outbreaks of the highly pathogenic H5N1 strain of avian influenza, or bird flu, have occurred in eight Asian countries, resulting in the loss of 100 million poultry birds. The implications for human health are worrisome because of the extreme pathogenic nature of this virus—it has the capability to infect humans and cause severe illness, with mortality rates of 60 to 70 percent. It has already infected humans three times in the recent past: In 1997 and 2003 in Hong Kong and in 2004 in Vietnam and Thailand. So far the disease has been transmitted only to humans who came in contact with dead or diseased poultry—it has not yet mutated to being capable of human-to-human transmission.

The Likelihood of a Pandemic

Since the H5N1 strain has not been eliminated from its avian hosts, it is obviously endemic. The risk, therefore, that the virus could take on a new form that would make it capable of human-to- human transmission is considerable, especially because mass vaccinations of chickens, aimed at mitigating the disaster facing poultry farmers, has allowed the virus to continue to circulate among the vaccinated birds. It can thus linger indefinitely in poultry, making the gene mutation required to make it transmittable from human to human an even greater possibility.

It could be said that there are three prerequisites for the start of a pandemic: 1) a new virus must emerge against which the general population has little or no immunity; 2) the new virus must be able to replicate in humans and cause disease; and 3) the new virus must be efficiently transmitted from one human to another. Dr. Anarji Asamoa Baah, Assistant Director General, Communicable Diseases, WHO, asserts that, regarding H5N1, the first two prerequisites have already been met, and it is known that the virus can become more transmittable via two mechanisms, "adaptive mutation" and "genetic re-assortment." Dr. Baah has further contended that re-assortment of H5N1 with a human influenza virus can take place in humans without prior adaptation in other species such as swine. It is clear, therefore, that 1) the H5N1 virus will continue to circulate for a very long time in poultry birds; 2) the threat to public health will be there as long as the virus continues to circulate in poultry birds; 3) should the virus become transmittable from human to human, the consequences for human health worldwide, in the words of Dr. Baah, "could be devastating;" and 4) the world needs to be prepared to respond to the next influenza outbreak. During an Influenza Pandemic Preparedness meeting in Geneva in March 2004, the head of the World Health Organization warned, "We know another pandemic is inevitable. It is coming…we also know that we are unlikely to have enough drugs, vaccines, healthcare workers, and hospital capacity to cope in an ideal way."

On the basis of an epidemiological model project, WHO scientists predict that an influenza pandemic will result in 57 million to 132 million outpatient hospital visits, 1 million to 2.3 million admissions, and between 280,000 and 650,000 deaths in less than two years. The impact on poor nations would be much greater. But I submit that these projections are gross underestimates given the fact that the 1918–1919 influenza epidemic, with mortality rates of a maximum of 20 percent above normal level, caused as many as 40 million deaths. With mortality rates in excess of 60 percent, the H5N1 virus is bound to be much more deadly, particularly because in today's world of air connectivity, the spread of H5N1 would be much more rapid than that of the 1918 influenza epidemic. Indeed, the death toll could run into hundreds of millions.

Measures to Detect and Fight a Bird Flu Outbreak

In order to prepare ourselves for the coming H5N1 flu pandemic, we need to consider the following measures:

- Upgrade surveillance systems to ensure real-time detection of avian flu when it infects both poultry
 and humans. The surveillance challenge, so well put by Aileen Plant of Australia's Curtin University
 of Technology, is to "identify the first case, the first time humans are infected, the first time the disease goes from human to human, and then to identify when it starts to spread quickly." For surveillance to work, it must be transparent and based on regional and international cooperation.
- Once the avian flu is detected in poultry, rather than going in for poultry vaccination, it would be more prudent to engage in culling.
- On the detection of bird flu in humans, quarantines and travel advisories should be rigorously imposed with a view to containing the disease.
- As the pandemic would quickly exhaust healthcare system resources, plans need to be activated to develop back-up facilities and staff.
- Massive investment is required in influenza vaccine programs so that vaccines could be developed in shorter timeframes and greater quantities.
- Vaccine production capacity currently ranges from about 260 million to 280 million doses. In the event of a major pandemic, we would need at least a billion doses. We need, therefore, to augment our vaccine manufacturing capacities. And since it takes between four and six months to develop a vaccine once a virus has been isolated, we will not have much time to effectively cope with a deadly pandemic. Accordingly, we need to devise ways and means to reduce the timeframe for developing a vaccine.
- · Stocks of anti-viral influenza drugs need to be built up.

Part Three

Chapter 14

International Acquisition Cooperation: A Transformation Imperative

The Honorable Michael W. Wynne¹

OPENING REMARKS

Any different people are taking part in this Workshop: NATO allies, members of our international coalitions in Afghanistan and Iraq, Partnership for Peace members, and those engaged with us in maritime patrols, exercises, and information exchanges. This wide variety of voices is one of the best attributes of these meetings—it shows us that our different cultures and sometimes different politics share common attributes and interests, and that those attributes and interests are a source of great strength for us all. Each of us is contributing to the common good of global order—increasing prosperity and security as well as representative governments and individual rights—in our own way and according to our own means. Understanding and cooperation are leading to a more collegial and congenial world, even though there are some awkward moments along the way.

One of those awkward moments came a while ago when I was in Russia. I had just transferred some Russian expertise to my own operation, and my Russian colleagues and I were having a celebratory dinner. Since I had known that I would be making some brief remarks, I had practiced telling a joke story in Russian. I had even kept a newly trained language expert awake with my recitation. After I was introduced and had told my joke—there had been very polite laughter and applause—I felt pretty good. That was until my local representative leaned over and said, "They're wondering why the horse had to die." I said, "There was no horse in the story." He said, "Ohhh!"

Despite this kind of awkwardness, defense cooperation will continue to play an essential role in furthering global security. Through cooperative efforts we will ensure that every participant is as effective as possible in the coalition wars we will fight in the future. Effective industrial cooperation with our allies is a fundamental step for improving joint operational capabilities.

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INTERNATIONAL EFFORTS

In the past, we cooperated successfully in developing several systems: The Rolling Airframe missile, enhanced Harrier vertical-takeoff-and-landing aircraft, NATO Sea Sparrow missile, Hawk, and Multiple Launch Rocket System. Current programs such as the Joint Strike Fighter, Medium Extended Air Defense System, NATO Alliance Ground Surveillance, Eurohawk, and Multi-functional Information Distribution System provide what we hope are models of further defense cooperation.

As a businessman, I have developed programs in both Korea and Taiwan and have great respect for those colleagues' capabilities. My Director of Defense Research and Engineering, Dr. Ron Sega, recently returned from a series of talks in Asia focused on expanding our defense acquisition cooperation in this region. We began partnering early in the development phase of this cooperation when requirements could be harmonized and costs, technology, and work could be apportioned equitably.

I believe that the international defense industry has much to contribute to U.S. defense capabilities. From technologies such as microelectromechanical systems and composite materials to subsystems such as high-thrust rocket propulsion systems to the world-class helicopters produced by European firms, the U.S. can benefit greatly from cooperating with its allies.

ROADBLOCKS TO COOPERATION

Unfortunately, differing national priorities, governmental processes, and relative investment strategies have always created roadblocks to successful cooperation. Even with major efforts on the part of both the U.S. and foreign governments and bodies, a number of impediments to closer defense-industrial cooperation remain. But while there are negative aspects of past and present international cooperation in research and technology, there is good news as well. The U.S. and its allies and trading partners are natural candidates for closer cooperation in developing technology and equipment. We have cooperated in some successful programs in the past, and we can do more in the future.

CRITICAL FUTURE NEEDS

Let's address the real needs for the future—needs that must be met if we are to fight the new types of enemies who threaten not just one country or its interests but the fundamental fabric of the civilizations Americans and our friends live in.

Knowledge-Based Warfare

The overriding objective of U.S. defense acquisition is acquiring materiel and systems that enable knowledge-based warfare. Also known as knowledge-enabled warfare, this kind of warfare is the direction we are moving in. We are also moving toward knowledge-enabled logistics and knowledge-enabled business. Any product generated in the next few years that does not move our defense-enterprise posture in this direction is unlikely to reach the field.

A specific example: Since January 2004, we require that all purchases be marked with a unique identifier and that the value of that marked part be recorded in our inventory. This process is a prelude to two future processes: First, starting in July 2004, any DoD-purchased item costing more than \$5,000 will need to have a radio-frequency ID (RFID) tag, or Smart Tag. Second, this marking and recording will enable us to hold an accurate audit.

While we are woefully late with unique identification (UID), we will be on the leading edge for RFID. Walmart figured out RFID before we did, but given the scope of our logistics challenge, our need to go this route, and quickly, is obvious. So you will find we are partnering with Walmart for RFID, and between the two organizations we will cover a wide dispersion of manufacturing and distribution. Here's a partnering opportunity for all of you as well: We will be looking for your ideas and innovations in UID and RFID technology.

Network Centricity

Network centricity is another important area. If our new systems are not network centric, if the information collected by our many and growing numbers of sensors is not available to all who could make use of it, then we are not trading manpower for technology as efficiently as we might. The U.S. strategic scope is global, but we have to arrive quickly, with overwhelming forces that departed on short notice. The demands for information gathering, processing, disseminating, and reprocessing are driving us toward networked, interoperable solutions.

Just about every platform one can think of—a strike aircraft, an infantry vehicle, or a warship—is, or will eventually be, an information gatherer. Traditionally, the information those platforms have gathered has been reserved for their own use: Defense, targeting, and so on. But this must change.

The U.S. Army's Future Combat System and the Navy's Cooperative Engagement Capability offer examples of the way forward. The basic premise of both systems is networking and information sharing. In fact, that premise underlies our entire push toward knowledge-enabled warfare, which is, with our technological edge, that just about any platform—from satellites to submarines, from unmanned aerial vehicles to infantrymen—can generate some level of information that can be turned into intelligence and networked for anyone in a battle space to use.

Information-Age Logistics

But we must not forget the other cornerstone of operations: Logistics. Our military services have come far in reducing the iron mountains of munitions and parts that were necessary for Industrial Age warfare. But they have not come far enough to meet the new needs of Information Age warfare. The navy needs to buy ships in which crew members can lock the engine rooms during deployment. We do not have airmen servicing B-52 engines on global missions, so why should we tolerate sailors doing this on destroyers? In addition, the army needs to field hybrid-fuel, ultrareliable engines for use across their vehicle fleet. And the air force must have expeditionary strike aircraft that do not need to take an entire airbase of parts and technicians with them to remote regions of the world. We also need corrosion-resistant trucks, and we need expeditionary logistics units that can defend themselves against attacks by insurgents and are protected against theater ballistic missiles. Our ports and offshore sustainment stocks are also going to need manned and unmanned maritime surveillance for protection.

Industrial Partnerships

Our new national security era, with its new international security relationships, demands innovation, practical near-term responses, and efficient resourcing. That is where international industrial partnerships can play a crucial role. If allies and partners want to work with us, they must ask themselves how consistent a particular product is with our goals: Fighting from a position of technological dominance, providing integrated and efficient logistics, rationalizing resources, and developing and fielding products with a systems-engineering philosophy established at the outset.

As our international partners offer solutions, systems, and capabilities—and we expect brilliance and innovation from them—they must keep our goals and our new approach to fighting in mind. They must also reflect on the priority our national leadership has given to military transformation and remember the

basic element of that transformation—knowledge-enabled warfare and all that it entails: Network centricity; joint operations; and multi-mission, multi-service, and cross-cultural capability.

GUIDEPOSTS FOR ACHIEVING GLOBAL SECURITY

It would probably be prudent at this point to briefly discuss how we in the U.S. Department of Defense are approaching the transformation of our defense establishment into an establishment even more attuned to securing global security in the twenty-first century. Let me briefly address each of the seven key guideposts that I feel are central to maintaining our path to excellence.

1. Acquisition Excellence with Integrity. It is crucial that we improve the efficiency, effectiveness, and performance of our acquisition processes in order to provide our warfighters with systems of ever-increasing capability—systems that maintain a technological edge over the competition, incorporate user feedback, and provide quality at an affordable cost. Many European nations and multinational forces as well as other allies and friends are also incorporating reforms into their acquisition systems.

2. Integrated and Efficient Logistics. Our vision for the logistics officer of the future is someone who will be the commander's combat power manager. At his or her fingertips will be a precise account of how much combat power—in terms of combat systems, munitions, fuel, and replacement stocks—is at hand and how much would be expended during a given course of action. This is a fertile area and one in which we and all of our defense partners need to apply some smart thinking. In this area, interoperability takes on different, but no less important, characteristics than in operations.

3. Systems Integration and Engineering for Mission Success. It is important for us to reenergize the systems view of integrated architectures by instilling systems engineering best practices at all levels of our architectures. Network-centric, Information Age warfighting demands increasingly complex interoperability at the systems-of-systems, systems, and component levels.

4. Technology Dominance. This is the standard for future research technologies. Both we and our allies and partners possess technology necessary for the development of all defense-related systems. Warfighters and logisticians must have technologically superior military systems, and we in the U.S. fully recognize that our country does not have a lock on leading technologies. However, both we and each of our allies have technologies all of us need to ensure that coalitions have the best possible equipment—and can interoperate. We are now investing heavily in new and emerging technology and encouraging partnering when it makes sense. However, once we achieve a breakthrough after several wrong turns and much investment, most commercial firms and many government agencies would understand the reluctance to destroy by disclosure the effects of that breakthrough and the reluctance of bankers or funding sources to allow further pursuit of other costly technologies. Much like destroying patents, it decays our ability to continue our investment stream.

5. Rationalization of Resources. In the U.S. Defense Department, we are constantly seeking ways to make optimum use of our people, materiel, and money through such means as improving joint-service use of assets, transforming some of our support functions to industry, and repositioning infrastructure around the world. But there is another area that I believe is very important from both the overall Alliance and coalition perspectives, and that is the rationalization of requirements for military assets. Our respective governments spend too much money on duplicating already-existing capabilities or independently developing what is essentially the same capability. This ties up limited national budgets and precludes their use in filling stockpiles or modernizing other forces. All of us must do a better job of working together at both the government and the industry level to get the most "bang for the buck."

6. Strengthening the Industrial Base for Weapons System Design, Development, and Production as well as Logistics. Our primary thrust is to develop and employ a logical capabilities-based approach to identify and evaluate industrial-base sufficiency. We also must continually reassess export controls and focus international cooperation activities to leverage key foreign industrial capabilities. We recognize that at the core we need surety of supply, and we will be looking carefully to assure our soldiers that products will be available in times of need. Our reliance on international suppliers continues to be a cornerstone policy, and we are looking to expand that to our new trading partners. One key factor is that most true innovation comes from small suppliers; we are committed to helping these emerging companies navigate both the DoD and international systems.

7. A Motivated, Agile Workforce. People make the difference in any endeavor. Both we and our international partners are concerned about continuing to attract the best to our workforce as we are asked to obtain great technology at fair prices on a determined schedule. We recognize that we must be competitive in commercial opportunities for these same skills, but also recognize that they are a strategic asset and represent to us a competitive advantage. We are looking at far-reaching compensation, training, and motivational programs to keep the best people working toward our security goals.

CONCLUDING REMARKS

These are basically my thoughts on what we in the U.S. Department of Defense, our industry, and our allies and partners need to be looking at to enhance global security in this century. DoD is confident that, in the future, armaments cooperation between the U.S. and its friends around the world will build on the strong base we have established, and that we will realize even more success. In these troubled times that involve entirely new and uncertain international paradigms, I believe that armaments cooperation is not only desirable, but an imperative.

The Honorable Michael W. Wynne

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Chapter 15

International Cooperation: Advantages and Challenges

Mr. Al Volkman¹

THE ADVANTAGES OF INTERNATIONAL COOPERATION

he advantages of international cooperation are so obvious that they really need no repeating, but there are sometimes advantages to repeating them anyway—since they are important militarily, politically, and industrially.

The Military Advantages. From the U.S. perspective, the military advantages of cooperation are evident if you look at the history of the United States in the twentieth century. Every major conflict that we fought in during the twentieth century was with allies—I think sometimes the American public does not think about that, but it's true. In the twenty-first century, a rapid capture of Baghdad was possible as a result of our allies and the United Kingdom armed forces, who isolated Basra. It would have been much more difficult if that had not happened.

The Political Advantages. There are political advantages, obviously, to international military cooperation. The American public, and I believe most democratic people, expect that allies will share the risks and the rewards that are associated with engaging in military operations outside their borders.

The Industrial Advantages. Obviously, you can save money through sharing R&D expenditures, something that European nations are wrestling with now and trying to get a grip on. There are also obviously economies of scale associated with cooperating in the production of defense equipment. And there is the opportunity to apply manufacturing capabilities that are unique to particular countries and firms. In addition, there is the ability to share militarily useful technologies. I would also point out here that I believe, and I think many in the United States agree, that no single nation possesses all the technologies necessary for successful military operations in the twenty-first century. Those technologies exist in places around the world, and if we are going to be successful we need to share them.

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CHALLENGES TO INTERNATIONAL COOPERATION

While international cooperation has many advantages, there are also a number of challenges to it, particularly to international industrial cooperation.

Inadequate Defense Spending. One of the challenges we see in the United States is an unwillingness on the part of our European allies to spend adequately on defense. In our view, the money that is spent is often spent on the wrong thing

Protectionist Legislation. Protectionism in defense cooperation and defense industrial cooperation is a problem. There are many in the U.S. Congress who do not understand the benefits of international cooperation, both to our security and our economy. So protectionist legislation is frequently proposed in the United States Congress without consideration of the effects that it might have on our economic well-being and on our security.

Similarly, in my view, European parliaments are frequently more concerned with the economic benefits associated with industrial cooperation for military requirements than they are with the military benefits that will accrue as a result of that cooperation. General Jones alluded to the problem that, in fact, there were instances when useful military equipment needed to be put in the hands of fighting men but disagreements over industrial benefits prevented that—certainly a concern.

Unwillingness to Share Technology. Governments are frequently unwilling to share a technology. When firms are unwilling to share a technology, it is usually to preserve a commercial advantage, and most of us who come from capitalist countries understand the desire to preserve a commercial advantage. But when governments refuse to share a technology with their allies, the reasons are usually far more complex. In my experience, unwillingness to share technologies is probably the major challenge to closer industrial cooperation between the United States and its allies.

Chapter 16

Useful Mechanisms for International Cooperation: A German View

Dr. Hans-Heinrich Weise¹

he *Twenty-first International Workshop* on Global Security demonstrates the general consensus among its participants that the threats, risks, and challenges to our security—and, if necessary, to restoring security and stability, including nation building—cannot be shouldered by one nation alone, even the United States. They require alliances, partnerships, and international cooperation following a common, comprehensive political and military concept.

The German Minister of Defense, Dr. Struck, made these points quite clearly: NATO should play a stronger role in global security, Europe should see itself increasingly as a global actor, and NATO and the EU should cooperate closely with the United Nations and be prepared to jointly employ their resources and forces in support of the UN and under UN mandates.

MECHANISMS FOR COOPERATION

The ongoing transformation processes now taking place in the Alliance and the EU and on national levels should constitute the mechanisms for achieving these objectives. In addition to the security-political aspects of these transformations, military concepts based on network-enabled capabilities must also play decisive roles.

However, in order to optimize the potential of new technologies for networking our military forces, a higher degree of cooperation among partners—more than anything we have experienced in the past—is required. Such cooperation must begin with close interaction formulating doctrines and operational concepts, and to that end Germany, together with its Alliance partners, has engaged substantially in the CD&E process that was initiated by the U.S, and has been vigorously pursued through Allied Command Transformation (ACT). Germany also has been strongly supportive of the establishment of the NATO Response Force (NRF) as a catalyst for NATO transformation and has given priority to our force contribution to it. We are working to have Germany's NRF element fully network-enabled in 2007. We believe

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that the more partners engage in armament cooperation during the early phases of research, development, and production, the more efficient will be the joint operations of network-enabled allied forces—an absolute necessity.

Therefore we should revise what we have considered to be one of the major virtues of NATO: Namely, to bundle our competencies, capabilities, and resources in order to achieve optimal results, and to field systems and capabilities more economically by sharing their costs and producing them in larger quantities.

Currently we are on a promising path to transatlantic armaments cooperation. The recent decision by CNAD regarding the AGS program as well as the progress we are making in the trilateral MEADS program are good signs. However, the European partners in these programs have made their support conditional by requiring fair technology transfer between the partners and the U.S. regarding license granting. We are in the process of clarifying this situation with our American friends and are confident we will be able to find a reasonable solution.

As we work toward close transatlantic cooperation, European unification is making rapid progress. The European defense framework is shaping up. The political framework in the form of a European constitution is close to being agreed upon. Europe has set clear military Headline goals, defined required military capabilities, and is well on the way to establishing a European Defense Agency (EDA). In June 2003, the European Council tasked the appropriate bodies to create this intergovernmental agency during the year 2004, by joint action if the constitution is not yet in effect. In early May of 2004, the Ad Hoc Preparation Group approved the basic concept for the agency and delivered it to the appropriate political bodies, and we expect the June 2004 European Council meeting to make the final decisions regarding the founding of the agency.

EDA is a major step in European armaments cooperation—it will bring together the harmonization of military requirements with new initiatives on European research and technology programs. We will not reinvent the wheel, but will base the agency's work on that of already existing bodies, for example, OCCAR, the five-nation procurement agency, to manage cooperative programs on behalf of the nations. When EDA is founded, WEAG will cease to exist, and its panels will be transferred to EDA.

Thus Europe will increasingly speak with one voice in research, technology, and acquisition matters. We are convinced that a stronger Europe will strengthen both our common transatlantic objectives and our strategic goals for mastering the challenges of the future.

NEW GERMAN FORCE CATEGORIES

In order to meet the challenges of the future, the Bundeswehr will follow its new concept to implement three different force categories:

- A 35,000-strong Response Force will provide a responsive war-fighting capability on short notice and will be able to conduct high-intensity joint and network-based international operations. With our Response Force units we will take on the tasks that are part of our commitment to the NATO Response Force, the European Headline Goal, and other NATO- or European-led operations. These forces will also serve in national evacuation operations.
- A total of 70,000 Stabilization Forces will fulfill tasks within the broad spectrum of peace-keeping and stabilization operations. A maximum of 14,000 troops at a time will prepare the ground for peaceful political solutions to conflicts and take part in nation-building activities when necessary.
- Some 147,500 Support Forces will ensure timely and comprehensive support of all ongoing operations. These forces, for example, will ensure logistics and transport, run depots, provide military

police forces, and provide command and control capabilities. Their main aim will be to support the ongoing operations of Response Forces and Stabilization Forces.

We have substantially reoriented our research, technology, and armaments programs to serve these new force categories.

CONCLUDING REMARKS

Germany strongly supports the process of European integration, an effective European Security and Defense Policy, close armaments cooperation, and the establishment of a single European armaments market with a consolidated industrial structure. At the same time we consider it crucial for European nations to sustain a close, cooperative transatlantic partnership to keep the North Atlantic Alliance vital and powerful.

I am convinced that we must revive the trusting, frank, and open transatlantic dialogue we had in the past. Over the last 10 years, I am afraid we lost a great deal of its momentum. In Europe, for example, the process of European integration, of establishing European capabilities and European capacities to act, is dominating daily activities. In the U.S., on the other hand, colleagues are taking decisive action in which they invite European partners to participate—but they do not coordinate their intentions with potential partners ahead of time and just ask them to follow suit.

It is time to rediscover the old virtues. They must lead us back to the place where we are able to communicate our intentions and the hidden agendas behind official political statements. This Workshop is a valuable and encouraging building block for reaching this goal.

Dr. Hans-Heinrich Weise

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Chapter 17

Looking Forward after the Iraq War

Mr. David Stafford¹

am honored to be here in Berlin, a city that for sixty years has symbolized the triumph of freedom and democracy over totalitarianism. Restored today to its rightful place as Germany's seat of government, this beautiful city on the Spree thrives again as a strategic, economic and cultural center in the heart of Europe.

My remarks focus on transformation and transatlantic industrial cooperation as the Atlantic Alliance and the EU extend their engagement from the Balkans and the Mediterranean across the Caucasus and into Central Asia, confronting new asymmetric threats and challenges to our stability and security. I will focus specifically on how transatlantic defense industry cooperation can contribute to that effort.

In that regard, the fact that we gather less than a month after the accession of 7 new NATO members and within a week of the EU's welcoming its 10 new members is certainly most auspicious. Watching newscasts on 30 April, I was particularly struck by the shots of the thousand blue balloons released in front of the brightly-lit Brandenburg Gate, and was reminded of the many changes and vast transformation that have occurred since President Reagan issued his challenge in August 1986 to "tear down that Wall."

Who would then have imagined a Europe whole and free such as has come to fruition in the past 6 weeks? That NATO's 16 nations would now stand at 26? That the EU would swell to 25, and that both organizations would have 19 members in common? Who could foresee that NATO and the EU would have advanced as far in security and defense cooperation as the Berlin Plus agreement stipulates? Or that that vitally important NATO-Russia Council would result in such unprecedented cooperation with 57 combined exercises planned for this year alone? As General Klaus Naumann remarked, history is healing the wounds inflicted by totalitarianism in the twentieth century.

Even more strikingly, who would have predicted then that NATO would have become engaged in the Balkans or taken over the ISAF mission in Afghanistan?

It appears to me as I listen to our distinguished speakers at this workshop over these past two days that the Afghan mission is no mere anomaly, but rather the harbinger of Alliance engagement to come. Were

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NATO to be called upon by the UN or the OSCE as it has in the recent past, would the Alliance refuse a mandate for the Near East? I suspect not. For I submit that no other supra-national organization possesses the organization, the infrastructure and the decision-making capability to take on such daunting missions. In Afghanistan, NATO has demonstrated that it is the world's pre-eminent organization for generating, leading and supporting large, multinational and long-term peace support operations.

THE NEW STRATEGIC REALITIES

Two strategic realities confront us: First, while the European continent is unified as never before and the member nations of the Alliance are prosperous and secure, our stability remains dangerously at risk. Indeed, terrorism—as witnessed again recently in Madrid and Riyadh—as well as failed states and the looming threat of weapons of mass destruction all represent challenges that are, in many ways, more complex than those of the past. Meeting these challenges requires new ways of cooperation, new strategies, and new capabilities. As Foreign Minister Fischer so succinctly put it at this year's Munich Conference on Security and Stability, "we face a common threat."

Second, confronting these challenges will require international engagement, employing all the instruments of multilateral power—Diplomatic, Intelligence, Military and Economic (DIME). These engagements are more likely to occur well beyond NATO's traditional area of operations, with a stronger focus on the Caucasus and Central Asia than our partnership programs, while effective, have yielded to date.

The Alliance is clearly determined to modernize its structures and capabilities for this long and difficult struggle. Its efforts are reflected in the establishment of Allied Command Transformation, in the NATO Response Force that General Jones spoke of earlier, and in the Chemical, Biological, Radiological, and Nuclear (CBRN) battalions that are being established to deal with the aftermath of a WMD strike. We expect even more to emerge from next month's Istanbul Summit. As the Secretary General told the Slovenian Parliament two weeks ago, the Istanbul communiqué will certainly contain an Alliance commitment to send its forces wherever they are needed, and to defend against threats from wherever they arise.

With that said, we are each acutely aware of the yawning gap between intentions and capabilities. The forces of Allied Command Operations are already stretched to their limits supporting deployments in the Balkans and Afghanistan. Defense budgets, as allocated, will be unable to resource the additional force levels and capabilities required. As NATO, the EU and their member states confront this ends-means mismatch, the transatlantic defense industry must rise to the task and bring to bear its skills and key technological competencies that can provide our militaries with systems that enable knowledge.

After the last World War, the United States shifted its industrial production away from defense. As the Cold War emerged, the Soviet Union stepped up its production of military machinery, which resulted in a three-to-one quantitative advantage in their favor. The West leveled the playing field not by rejuvenating pre-WWII production quotas, but by employing what became known as the "offset strategy," a tactical framework whereby our military efforts capitalized on high value/high payoff technologies. The Stealth Project and today's precision guided munitions were the result of such planning. Desert Storm was the first opportunity we had to test and deploy the technologies developed during the Cold War. However, these developments represent a response to threats brought about by nation states, not those brought about by the mobile enemies that we face today. Our military capabilities were not designed to battle unconventional tactics such as attacks on civilian or infrastructure targets at home or abroad that are masterminded in the shadow of population centers sympathetic to their ideological cause. Today's and tomorrow's enemies are not nation states such as the former Soviet Union, but rather mobile entities within states such as Al-Qaeda that have both the capability to strike abroad as well as inside our borders.

HARNESSING THE POWER OF THE INFORMATION AGE

The United States and the Alliance are in the midst of a complex transformation to provide forces that are light, mobile, and rapidly deployable and that can be sustained as needed—in short, forces able to carry out the full spectrum of Alliance missions. With this fundamental shift, the transatlantic defense industry has strengthened its efforts in reconnaissance, surveillance, and network-centric warfare

Each day in Afghanistan and Iraq, the brave men and women of many Alliance nations and their coalition partners are putting their lives at risk. Many have paid the ultimate sacrifice.

As an executive in our Defense Industry, I keenly feel the need to bring forward the ingenuity of our company and make available the systems that protect our open societies and that thwart the agents of terrorism who challenge our Alliances values.

As the Alliance considers equipping the NATO Response Force, it should seek to leverage the investments being made in the richness of sensors, the reach afforded by connectivity and the ability to provide relevancy from this information that produces knowledge enablement simultaneously for all levels of command.

In the previous historical epoch, the three R's represented reading, writing and arithmetic. Those skills provided the references for exchange that shepherded in the Renaissance and allowed for standardization of scientific inquiry, and ultimately brought about the Industrial age. The three R's that are becoming the tenets of the Information Age—richness, reach, and relevancy—will be no less important.

In hindsight, we can now see that Moore's law has produced three successive management agendas: High volume data processing, decentralizing networks and the deconstruction of the richness and reach dynamic.

Metcalf's Law made the information more powerful and enabled the navigator to condition the data, tailoring it for their use while eliminating the need for the actors in between the end-user and the source.

America's businesses restructuring over the past decade was a result of implementing these successive management agendas. The rise in corporations' profitability and competitiveness is now seen as an actual determinate of these information age innovations and the restructuring of our industries has shown a positive impact to their productivity growth.

The industrial age could be characterized by extremely organized bureaucratic institutions with tightly controlled flows of information through a hierarchical structure for centralized decision making. The information age broke down the centralized organizational structures and encourages a freer flow of information while empowering decision making at the lowest responsible level of operations.

Harnessing the power of the information age will require an understanding of the information technology paradigm and its transformational effects on the Alliance's member nations, their military strategy and their deployment tactics. We can postulate that professional militaries will demand and continue to equip their forces with more ubiquitous C4ISR and that they will organize to extract the advantages that this new technology and its inherent flexibility and agility provide.

In the past, the controlling reality of war was uncertainty. The "fog of war" meant that commanders managed these uncertainties with regard to location of their own forces, the location of adjacent friendly forces, and the positions and intentions of their adversaries. Owing to these uncertainties and ambiguities, armies would mass along extended front lines; protect their flanks, mass "Iron Mountains" of supplies in the rear, which also required protection.

In Operation Iraqi Freedom, much of that changed. Manned and unmanned airplanes and satellites carried aloft the richness of sensors that monitored movement on the ground day or night, in all kinds of weather. As a result, the fog of war was lifted, revealing an electronically described landscape that gave our commanders a highly detailed picture of the battlefield through the reach afforded by connectivity.

Global Hawk—our unmanned high-altitude long endurance surveillance aircraft—is one example. Flying only three percent of high-altitude sorties, Global Hawk located and identified 55 percent of all time-critical targets. As the conflict progressed, the pilots of our strike fighters asked to be vectored into sectors supported by Global Hawk because they knew they would be much more likely to find and destroy mobile and fleeting targets.

In another example, when an Iraqi commander tried to attack the exposed flank of an extended American column under cover of a sandstorm his forces were easily spotted by our airborne sensors and quickly decimated by a precision strike.

And it wasn't simply commanders getting close to real-time information. In many instances this included the U.S. and British soldier or Marine in the field whose armored vehicles, trucks and Humvees were outfitted with satellite antennas and laptop computers netted together in a wireless web. This new system is called Blue Force Tracking, and it provides the war fighter with answers to three critical questions: Where am I? Where are my compatriots? And where is the enemy? In other words, it provides close to real-time situational awareness.

Operation Iraqi Freedom has been called the first network-centric war. What that means is that, owing to the added value of information technology, we were able to conduct joint integrated operations quickly and more effectively with comparatively fewer platforms and people. On the battlefields of Afghanistan and Iraq, the key lesson learned can be boiled down into a short equation: On future battlefields, information can substitute for mass of both personnel and materiel. Information is a decisive force multiplier.

The three R's ability to gather, manage, assimilate huge amounts of information can help reverse the asymmetries that terrorists have been exploiting to attack our free societies. Leveraging these R's can come to define this historical epoch's "offset strategy," and manage the investments relevant to the NATO out-of-area forces we seek to build.

TRANSATLANTIC DEFENSE INDUSTRY STRIDES

NATO's Alliance Ground Surveillance (AGS) is a noteworthy example of an investment for the new era in which transatlantic cooperation between government and industry has borne excellent results and where the capabilities will become essential to the objectives of the NRF. When the North Atlantic Council took the decision in 2001 to stand up a NATO-owned and operated Alliance Ground Surveillance capability by 2010, industries on both sides of the Atlantic answered to the call by proposing a viable industry concept to fulfill the requirement. By April 2002, a transatlantic team initially composed of EADS, Galileo Avionica and Northrop Grumman had developed a Transatlantic Industrial Proposed Solution, commonly known as TIPS, for NATO's consideration. In short order, Thales of France, Indra of Spain and General Dynamics Canada joined the team, making this an industrial powerhouse of companies with tremendous capabilities, all focused on answering NATO's call. Today, more than 75 committed industrial partners from all 26 NATO nations are participating in the program.

I am proud to say that on 22 April, NATO selected the TIPS industry consortium to provide its Alliance Ground Surveillance System. Our TIPS mixed fleet concept, taking advantage of the capabilities of the mid-size jet platform and the high altitude UAV will provide a responsive, deployable backbone for EU and Alliance operations. The Airbus 321 and Global Hawk are proven platforms with well-established and reliable logistics and training programs. All phases of the program are multinational, from definition through design and development to production and life cycle support, and, ultimately, training and operations. The TIPS NATO AGS System will provide situational awareness through a shared common grid that will be available to NATO and national decision makers. Using NATO standard links and procedures, forces of all nations will be able to participate with full access to all information. Crews will be multinational, with aircraft and ground stations manned by all participating nations. TIPS will present the NATO Response Force with a critical core capability by 2010, to meet NATO's ISR and command and control requirements for the twenty-first century industry. This is precisely the sort of success we can expect when governments and industry work closely together on projects of such immense importance to the Alliance. In the TIPS business case, over 70 percent of the funding for this program and over 70 percent of the jobs will accrue to European industry.

AVOIDING DUPLICATION

Neither North America nor Europe can afford duplication of forces. I am encouraged, therefore, that NATO and the EU have ensured with the new "Berlin Plus" protocol that capabilities such as NATO AGS will be available for EU operations. Limits on defense budgets alone tell us that we cannot afford to duplicate efforts on either side of the Atlantic. This is especially true of our inclination to continue funding for legacy systems that are not relevant to the current threat and that compete for funding with those critical technologies needed for the battlefields of the future. Nor can we afford to "reinvent" technological solutions, which already exist.

A prime example of transatlantic industrial and government-to-government cooperation supporting European military transformation is the Euro Hawk program, a co-development leveraging Northrop-Grumman's experience with the Global Hawk UAV, together with EADS on-board electronics and sensors. The successful German ELINT demonstration flights conducted in late October 2003 from the NATO base at Nordholz were the first High Altitude, Long Endurance UAV flights to take place in German airspace. This was a path-finding demonstration, pointing the way for practical solutions to national, NATO, and EU surveillance requirements. As this program matures, EADS and Northrop Grumman will become 50/50 partners in this effort with each of us contributing our own core competencies and technologies. On future deployments, the Euro Hawk could provide commanders unparalleled wide area search while also acting as an indispensable communications and data relay platform for widely dispersed units.

My lasting message today is that industry is ready to deliver information age solutions for our war fighters. We are ready with mature technologies; ready with cost-effective solutions; and ready to cooperate fully to satisfy national, NATO, and EU needs for modern defense systems capable of meeting present and future threats to our security and stability.

Mr.David Stafford

Policy Issues in Implementing Network-Centric Operations

Mr. Eugene Cunningham¹

OPENING REMARKS

would like to talk about the policy issues associated with implementing network-centric operations, network-centric systems. But from discussing this with a number of people, it is clear that there is a difference of opinion and a difference of understanding of what network-centric operations are all about. So allow me to give a personal example that will perhaps give you a framework.

A couple of months ago, at one in the morning, I got a phone call from my son. He said, "Dad, I just want you to know I'm alright." After I finally realized what my son was telling me, I of course said, "Alright from what?" Well, the date was March 11, and my son was in Madrid going to school. Before starting his class, my son's professor had thought enough to say, "We have had an incident, you all need to call home."

That is an example of a network-centric operation. Why? How? Well, there are a couple of things: 1) Twenty-two students in my son's classroom quickly whipped out cell phones and communicated with all their home commands; and 2) An intelligent actor was operating in that system, a Spanish professor whom I will never know who knew enough to keep his class from being distracted, from having his students' operations distracted, and who knew that there were home commands that eventually would have become concerned. He knew that if quick action wasn't taken, certainly there would be a number of phone calls and attempts made by family and friends to try to identify the status of their students.

This, of course, is a personal example, but it brings forward the point that we are in an age in which conventional warfare is certainly not what we need to design and scope for. We are in an age in which conventional tactics, conventional items, certainly the cell phone, are only part of the weapons used against us. Technology is used for us, but it is also used against us.

Mr. Eugene Cunningham is General Manager, International Business Development, Boeing Military Aircraft and Missile Systems.

ISSUES TO CONSIDER IN NETWORK-CENTRIC OPERATIONS

I would now like to talk about six points related to network-centric activities that I believe need to be considered in the policy and acquisition discussions that will take place in the future.

- First, the network itself. It needs to be a common architecture. As we have discussed, we cannot afford to develop independent architectures, we cannot afford to waste resources on different development paths and going in different directions. A common architecture needs to be agreed to and put forward. And development funds need to be used over and over again to refine that architecture, to improve it, and to ensure that there are no future incursions against it. A common architecture needs to be developed and needs to be shared.
- Second, the framework needs to be responsive, and the conditions under which the architecture is developed must look at the most critical decision-making structure. For now, one example might be missile defense. Certainly the response times, decision times, and analysis times for the missile defense scenario are the most critical to us. The commander needs to identify that a threat is imminent, the type of threat it is, the type of assets that are available, the choices that are available, and the probability of success. In the missile defense regime, we cannot afford a faulty execution. The margins are too close, the penalty is too high for failure.
- Third, a bridge is needed between military activities and non-military activities. Reference has been made to the transitional paramilitary activities in both Italy and Spain. Well, if there is a transition in activity, there needs to be a transition capability within the network, and that presents a unique problem. If indeed the network is going to bridge military and non-military or paramilitary activities, then the network has to be capable of distinguishing between a war-time environment and a civilian environment, because all of us here need to make certain that the personal freedoms that exist within a non-military environment are ensured. Because data mining is the key element of that network, we need to ensure that the personal liberties and freedoms of all citizens of the nations we represent are not infringed upon. At the same time, we must understand that we are not dealing only with state-sponsored activities but with non-governmental threats as well. So that means we have to look into the civilian side and the civilian data areas because we have to bring that information forward in order to make the data and the system both responsive and effective.
- Fourth, the system needs to be an enabler. Both General Jones and Michael Wynne have referred to the fact that we have large stockpiles of equipment that are not necessarily being used most effectively. If the network does indeed connect every soldier, sailor, and airman, every vehicle, every aircraft, every spacecraft, and every vessel, then you also know the status, the health, and the capability of all of those operators within that network. It is critical that the network be used to manage the health of the systems that are out there, not just the threat. As you provide that information, you can use the data mining techniques and some of the SGI systems we have seen to show the trends and developments of those environments, operations, training, or handling that may have an impact on the use and performance of the equipment or the individuals who are operating within the network.
- Fifth, interoperability. It is essential that the network be able to be transferred across all forces and all types of forces. The fact that one group is networked or two groups are networked is not going to be good enough. If we need to bring together the member-nations of NATO, the member-nations of the EU, and the Partnership for Peace countries, with all that each nation knows and the understanding that each nation has, then the network needs to be available to each nation, because that is the only way that all of us will get the information.

• Finally, these systems need to be affordable. No one nation can develop such a system, no one nation can put it forth. And to make sure that the system is adequately spread among all nations and all participants, we must endeavor to have a policy in which local industries are used as the key innovators and key installers on either legacy systems or newly developed systems. In that way both defense security and economic security will be brought forward by the development of the network, because local industry and local development activities as well as the broader development and maintenance of the network will be ensured.

CONCLUDING REMARKS

As you work your way through the six elements, please understand that none of them can stand on its own. They all need to be debated and reviewed, but it is essential that they be consistent as we talk about network activities. And as we look at the framework, we must be responsive and accurate, but we also must be all-inclusive, because a network that limits the ability of actors to bring intelligent decision making forward is not an intelligent network. There is too much information among the member-nations of our organizations to develop an exclusive network.

Mr. Eugene Cunningham

International Cooperation: What Is the Way Forward?

Ing. Dr. Giorgio Zappa¹

If the the second synchronization among different forces, and absolute air superiority, the answer is quite clear. But when you put on top of that the fact that we need more intelligence, more diplomacy, more security in our countries as well as in the country where we are involved in peacekeeping, then it seems to me that the risks of cooperation become greater. That is because when you speak about this kind of capability, you need to incorporate the different requirements, priorities, points of view, and national interests of all the countries and industries involved.

ISSUES SURROUNDING COOPERATION

A major problem concerns the concept of network-centric warfare, which has 15 different names for essentially the same concept. The European Union, the U.S., Australia, all have different terms. That means we must start a discussion that will give us one name for the one concept.

Regarding cooperation between governments in the fields of intelligence, security, and diplomacy, from the industry point of view you need some kind of software sharing. But it is difficult to imagine improving cooperation between the industries without changing the technology agreement between the European community and the U.S. community. It may be possible to build aircraft and satellites together, but in order to define or manage system capability, it is necessary to change the approach.

It is also difficult to imagine shared activities between the commercial, military, and defense industries, even more than in the past. When you talk about the military business now, you talk about the security business, which means you take a different approach but have the same capability. Also, some companies may be different than they were in the past. And now we must not only protect our own homelands but

Ing. Dr. Giorgio Zappa is Chairman and CEO of Alenia Aeronautica S.p.A.

work toward security in other countries. Finally, to provide full service, we must provide not only logistics but maintenance and other assistance. It is difficult to provide security in other countries without some kind of military assurance.

CONCLUDING REMARKS

While it seems possible to make changes to our industry, I insist that it is still too early to understand how the situation has changed since September 11. I believe we must understand it in order to change our approach to collaboration. Certainly, cooperation will increase, because we have all invested a great deal in homeland security and for defense, so for financial reasons we must connect our capability and imagine an international program. And, certainly, for European companies, the priority will be to integrate European capabilities and also to rationalize the expense for investing in technology to reduce the gap with the U.S. But if we want to deal with the problem of terrorism worldwide, we need to collaborate more. However, this is more complicated in the new security environment. The answer to the problem may be very different than it was four or five years ago.

Defense Cooperation after the Iraq War: All Quiet in the West?

Ingénieur Général de l'Armement Robert Ranquet¹

EU-RELATED DEFENSE COOPERATION

y speech is going to focus on only one question: Did the war in Iraq have any impact on defense cooperation? As I thought about this question, I took a candid look at one of the major actors in defense cooperation: The EU. I was struck by the spectacular progress it has made in this field while the Iraq war was unfolding. Indeed, beyond a temporary freshening of relations between the U.S. and some non-coalition European nations, the period since the Iraq war has seen very impressive forward motion in the European defense area.

For example, we have seen significant achievements on the ground with the first EU military operation, the ARTEMIS operation in the Congo. We have also seen significant progress in the conceptual field by having the European security strategy spelled out for the Union by Javier Solana. We have seen progress in the area of capabilities with the rather successful implementation of the Helsinki objectives through the European capability process (ECAP). We are close to setting a new, ambitious, longer-term objective with the 2010 Headline Goal. And we have seen concrete efforts to give the EU more credible military capabilities better adapted to current requirements for deployability and agility with the Battle Groups 1500 concept.

A very significant step taken by the EU to improve its operation is the creation of the European Defense Agency, an organization through which Europeans can strengthen their capabilities. This agency, which will be a major part of the Union's institutional framework, will be capabilities driven and have a critical role in the implementation of the 2010 Headline Goal. Under the direct political leadership of the ministers of defense, the agency will operate in several fields, including:

· Capabilities requirements

- The strengthening and widening of armaments cooperation
- · Making the European Defence Technological and Industrial Base more robust and competitive

Ingénieur Général de l'Armement Robert Ranquet is Deputy Director of Strategic Affairs in the Ministry of Defense of France.

• Defense research and dual-use research under the supervision of the European Commission

All of the progress we have made adds up to a pretty good record of achievement for the EU. While much has resulted from the boost to ESDP momentum provided by the U.K. and France at the St. Malo Summit, the EU is gaining strong internal momentum as it expands its membership and develops its fields of competency.

Certainly the shock of September 11 and the subsequent operations in Afghanistan and Iraq were key elements in making leaders around the world, particularly European leaders, more conscious of the necessity to increase their commitment to global security challenges. In addition, having the U.K. in the uncomfortable position of trying to bridge the U.S. coalition with the so-called Old Europe helped to make the ESDP development more acceptable to the still-reluctant U.S.

NATO-RELATED DEFENSE COOPERATION

I think it is fair to say that we have seen less momentum in the capabilities area. Of course, NATO has been struggling to take part in many serious and significant engagements on the ground, essentially in the Balkans and in Afghanistan, and has been building the NATO Response Force and promoting transformation through the ACT. But the general impression that NATO is still short of the capabilities it needs to fulfill extended political ambitions is correct: Statements made by former secretary general Lord Robertson during the last months of his tenure were crystal clear on that point. His successor, Mr. De Hoop Scheffer, is now pushing hard to revitalize the NATO capabilities-enhancement process, which we will evaluate at the Istanbul Summit.

CONCLUDING REMARKS

When considering the progress made by NATO and the EU, we must remember that EU progress will benefit NATO, and that any progress made by Europeans in either organization will ultimately benefit both. We can already see this in the capabilities field, for example, in the A400 M program, which will be the major contributor to future NATO strategic airlift capability. We can also see it in the forces field, for example, in the EUROCORPS being among the first units to be made available to the NRF and picked to provide HQ capabilities for the ISAF in Afghanistan.

Despite the unfortunate effects of the Iraq war, one positive effect is that it is compelling nations to concretely measure their commitment to improving their individual and collective defense capabilities.

The Technology Transfer Paradox

Mr. Jean-Pierre Maulny¹

CHANGES IN THE WORLD ORDER

oday we are in a paradoxical situation regarding technology transfer, and it is not easy to know what we need to do without taking this paradox into account.Before 1989, the world order was fairly simple. We had the West, we had the East, and it was impossible to transfer strategic technologies from the West to the East with the COCOM that had been implemented in 1949. Prior to 1989, economic globalization had also not taken place, and there was no sophisticated technology for global network communication. During that time we can say that the world was divided in all senses of the term—it was a closed world, not an open one.

The world that has emerged since 1989 is not at all comparable. First of all, there is the movement toward economic globalization and the development of new communications and information technologies. Globalization is not just a gimmick—the world economy and industry are now interdependent. For example, the Chairman of the Armed Services Committee of the U.S. House of Representatives wants to pass legislation known as the "Buy American Act," which would prohibit the U.S. from using foreign suppliers for the U.S. military. But this would be impossible, because American industry is no longer able to build some of the components that are used in armaments. U.S. defense manufacturers also use some German and Japanese machine tools and the "Buy American Act" would require that all U.S. defense manufacturers use U.S.-made machine tools. It is impossible for the U.S. to produce machine tools overnight, and it would cost a lot for U.S. manufacturers are dependent on certain U.S. technologies and components.

In the communications sector, we know that the Internet has revolutionized everything. Today, it is possible to be in contact with everyone in the world and to transmit data and knowledge in real time. The world is decidedly now a culturally and scientifically open world, not a closed world. Even Al-Qaeda uses the tools of the Western way of life, with the technological capability to transfer money and data in real time. Al-Qaeda is today the symbol of our internationalized open world.

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Both the movement toward economic globalization and the development of new information and communication technologies have been occurring very rapidly over the last 15 years.

CHANGES IN THE GEOSTRATEGIC LANDSCAPE

The geostrategic situation is also evolving. The year 1989 signified the victory of democracy and capitalism. Some would say, as George Bush père said, that a new world order was born with the end of the East-West confrontation. But the new world is not happening. The situation is now chaotic, without a clear line of confrontation between one group of states and another group of states. The situation is more fluid. For example, Libya was once a rogue state but recently changed its status by revealing its nuclear military program and then abandoning it. Another example is Pakistan, a key United States ally against terrorism but a state that cannot be categorized as a secure one in the future.

There is also more fluidity in what has been termed the Western camp. NATO is still a reality but it is not the reality it was in 1989. There is suspicion between allies, especially between France and the United States. Today France is closer to NATO than it was in 1989, but it is also further from the U.S. than it was in 1989. The war against terrorism is a real war, not the virtual war that was the East-West confrontation.

In this context, the United States has tended to implement a ban on technology transfer with the goal of maintaining a technological advantage against the enemy and potential enemies. But the question is not as simple as it was before 1989: Who is the enemy and how can the ban be constructed?

THE PARADOX IN TECHNOLOGY TRANSFER

It is at this level that the paradox begins to take effect. Taking into account that economic and industry globalization are taking place at the same time as the development of new information and communications technologies, it is much more difficult to forbid technology transfers. The tendency is thus to strengthen the means of control. But it is difficult to have a clear policy on the subject because the notion of allies is different in the United States than it was prior to 1989. For example, we can say that the Spain of Aznar was a strong ally of the U.S. but the Spain of Zapatero may not be. Similarly, France and Germany were not strong allies of the United States in 2003, but as Nicholas Burns recently said the situation is better now. The notion of what an ally is is highly relative for the United States, and it can change at any time. So when the United States want to prohibit technology transfer in a world in which it is very easy to transfer technology and in which the notion of an ally can be very relative and contingent, the natural course is to block transfer even for some communal components and to any type of state. I do not say this is a conscious policy for the U.S. today, but I think it is the tendency.

So the paradox of our contemporary world is that the natural tendency of the United States is to close the world though the world is naturally open. The fact that we do not have an organized world—democracies and NATO are not part of an entity with unified policies and the rogue states and terrorist organizations are not members of one club or bloc—does not simplify the situation.

It is my belief that we cannot remain in this paradox, that we have to resolve it. We cannot stay in this paradox because it is forcing us to use an inefficient policy to fight the real threat of the proliferation of weapons of mass destruction.

Right now, the general feeling is that the United States wants to maintain their technological superiority because they believe this superiority is the only real guarantee for their security. This position is not the best for two reasons: For technical reasons it cannot be efficient because it totally contradicts the capitalistic modern world that I described. For political reasons, it is not an opportune policy because U.S. allies and potential allies are its victims. I believe that you cannot employ the mechanisms of a closed world in a world that is in fact open. Regarding technology transfer, you would have to involve the largest possible number of states in your policy, and this would only be possible if you strictly limited the technology that was not desirable to transfer. Such a policy would deal only with weapons of mass destruction though it should also strengthen the means of controlling violations of treaties that forbid weapons of mass destruction. It also seems that you would have to verify whether or not dual-use technologies were being diverted from their civil uses.

CONCLUDING REMARKS

To sum up, I think it is difficult to have a confrontational world within an open world. The principal issue is not U.S. unilateralism, but the fact that to obtain satisfactory results in an open world one must continually negotiate. Today, the United States does not negotiate; they apply the mechanisms of a closed world. This is inefficient because the more they apply these mechanisms, the more they stifle globalization and the development of information and communications technologies, and the harder it becomes to obtain results. The issue today is not identifying threats and enemies, for of course Islamic terrorism and states such as North Korea are threats, but the issue is how to manage these threats. The way to do so is to have broad cooperation and to limit the ban on technology transfer to that which is strictly necessary.

Mr. Jean-Pierre Maulny

Part Four

Network-Enabled Capabilities—Issues and Implications

Dr. Linton Wells II¹

would like to address three broad areas related to what NATO calls network-enabled capabilities and the U.S. refers to as network-centric warfare: First, transnational issues related to network-enabled capabilities, especially as they pertain to the transatlantic alliance; second, how to acquire network-enabled capabilities in a resource-constrained environment; and third, the strategic implications of network-enabled capabilities.

TRANSNATIONAL ISSUES RELATED TO NETWORK-ENABLED CAPABILITIES

During the workshop we have heard many discussions about the future, focusing on:

- Global, non-traditional threats
- The need for NATO and the EU to engage in unfamiliar regions, such as the Greater Middle East
- · The problems of coalitions with changing partners
- · The demographic and environmental dimensions of security

However, we need to be careful about forecasts. The U.S. Defense Department has something called the Defense Program Projection (DPP), which looks 10 years beyond the end of our "Future Years Defense Program" (FYDP). This year, we will look out to 2021, mainly to make sure that there are no unaffordable convergences of major acquisition programs during those years. However, in the process of reviewing the DPP, someone noted that the 17 years between 2004 and 2021 are longer than those between the Wright brothers' first flight in 1903 and the end of World War I. In mid-1903 it would have been hard to forecast the needs of military aviation, which few imagined was possible, in a major war that few imagined was coming.

To test our forecasting ability in a more current scenario, let us look back 17 years from this 2004 workshop period, to 1987:

Dr. Linton Wells II is U.S. Assistant Secretary of Defense for Networks and Information Integration (acting).

- Our land forces were preparing for armored warfare in the Fulda Gap.
- Many of our aircraft were being designed for combat above the inter-German border.
- The navy had an objective of 600 ships, in part to defend the North Atlantic sea lanes.
- The mujahedin were regarded as valued freedom fighters against the Soviets in Afghanistan.
- There was a strong buffer against the Islamic Revolution in Iran—his name was Saddam Hussein.
- Almost no one had heard of the Internet.

It may be that we will improve our forecasting skills in the future, but, at a minimum, this look back suggests that the systems we acquire now should provide us with flexibility.

Network-enabled capabilities were described as important in the presentations made by General Kujat, Minister Struck, General Jones, Under Secretary Wynne, and others, even in situations short of general war. Mr. Cunningham also presented an excellent synopsis of essential network characteristics, Mr. Lentz reminded us that security must be designed into the network from the beginning, and General Joulwan admonished that we must continue to provide connectivity and situational awareness to existing forces even as we transform.

In his speech, General Jones spoke of four pillars of transformation:

- · Figuring out how to incorporate and use new technology
- Developing new operational concepts
- Reforming institutions
- · Changing the way we spend money

Network-enabled capabilities touch each of these pillars. In addition, information and communications technologies (and changes in doctrine) can help smaller nations make useful contributions to the Alliance or to coalitions, so we should design our systems for "plug and play."

Of the six changes General Jones called for in his presentation, network-enabled capabilities affect at least four:

- · Making our capabilities more usable
- · Improving "tooth-to-tail" ratios, especially by reducing logistics footprints
- Improving the sharing of all kinds of information, not only intelligence
- Overcoming challenges to transformation

In these areas, there is much to be optimistic about. Earlier we spoke about the transnational opportunities available in the Joint Tactical Radio System (JTRS), and the fact that much of the U.S. movement toward network-enabled capabilities was being based on web-based tools and commercial standards. The potential to incorporate NATO data standards from the Multi-National Interoperability Programme (MIP) into U.S. approaches also is very exciting. Moreover, commercial trends are in our favor in that the cost of computing, storing, and communicating is falling dramatically, and should continue to do so.

However, with that said, there also are challenges to bringing network-enabled capabilities to bear quickly, and deploying them where they are most needed:

Lessons learned from Iraq, which could be applied to many stabilization operations, suggest that we should consider new approaches in pre-war or pre-deployment planning if we are to take best advantage of the network-enabled capabilities that might be available. For example:

– The civil side in a civil-military operation has requirements that are just as valid as those of the military, but because they are not linked with supporting documentation with strange acronyms such as ICDs, CCDs, and TEMPs we often do not pay as much attention to their needs as we should.

– Before Operation Iraqi Freedom, humanitarian assistance units and disaster assistance response teams had developed tools for collaborating across national and organizational boundaries in austere information environments that might have been very useful early in the post-conflict period. However, for a variety of reasons, they were not adopted, and atrophied accordingly.

General Joulwan pointed to the importance of continuing to meet the needs of the existing force, even as we transform. Some studies have shown that transformational effects can be realized when as little as 8% to 10% of a force has adopted new technologies and operational concepts. This may be so, but timing the introduction of transformational capabilities and coordinating them with units that have not yet received the capabilities is critical.

Culture must be changed along with technology and operational concepts. For example, faced with exactly the same information, different practitioners may come to quite different conclusions. During a Partnership for Peace exercise a few years ago, U.S. military personnel and their European counterparts were shown the same common operational picture, based on network-centric principles. Some U.S. personnel looked at the richness of the display as an opportunity for low-level units to self-synchronize without waiting for orders from higher echelons. Some European leaders praised the clarity of the identical display because it allowed senior officers to make more centralized decisions. And some on both sides were concerned that the amount of information available to senior levels would cause them to micromanage the engagement.

We need to be clear in our terminology. As noted earlier, several similar phrases are being used in different quarters: Network-enabled capabilities, network-centric warfare, network-centric operations, knowledge-enabled warfare. I think that the first three are fully equivalent in substance, but we need to make sure that everyone understands what we are talking about. Moreover, fundamental concepts such as "control" (as in "command and control") probably need to be rethought in the network-centric environment.

As Bob Lentz mentioned earlier, information assurance concerns are absolutely critical, and need to be incorporated into the design of networks and network-centric concepts from the beginning.

Finally, we need to make hard decisions when sharing information in multinational environments and in interagency situations in which law enforcement and private sector data may be involved. We need to move beyond present coalition networks like CENTRIXS and Griffin to truly multinational information systems, but this will take hard work both in designing the systems and in constructing the information sharing policies to support them.

ACQUIRING NETWORK-ENABLED CAPABILITIES IN Å RESOURCE-CONSTRAINED ENVIRONMENT

In order to obtain network-enabled capabilities, we need to take four important steps:

- Leverage commercial trends
- · Change our business practices and TTPs (tactics, techniques, and procedures), not just technology
- Work together to rationalize resource allocations
- Recognize the dangers and impediments, and address them head on.

Leveraging Commercial Trends

One of the pioneers of the Internet revolution recently offered several insights into trends in commercial information and communication technology. Some highlights included:

Cell phones. In the early 1980s, AT&T completed a market forecast of the demand for cell phones. It concluded that the global market would reach 900,000 phones by the year 2000. In 2003, 500,000,000 cell phones were sold, a number that should reach a billion per year in just a few years' time.

– The next generation of phones being readied for distribution in late 2004 in Japan will have two distinct processors, one for the phone and one for computing applications. Although the input/output devices for the phones still need work, cell phones and portable computers are converging.

- The quality of digital photography built into phones will increase rapidly, threatening stand-alone digital cameras

- Linux is becoming the operating system of choice for the new cell phones, due to cost and stability. In a short while, most phones will ship network ready.

Play stations. Processors optimized for computer games cost only a few hundred dollars, but they are powerful because they are subsidized by computer gaming revenues, which now have surpassed motion picture revenues in the U.S.

- The University of Illinois recently put together the cards from 600 play stations (total cost: Under \$200k) and built a parallel supercomputer that ranked in the top 100 in the world. This power will continue to grow. The Play Station 3 is expected to ship in 2005 as part of a full-fledged attack on Microsoft-based PCs. A Play Station X, with 320 gigabytes of memory, enough to record 320 hours of television video, is under development. The result is a three-way competition/convergence among:

Windows, Linux, and Java operating systems

Mobile computing with integral phone and network links

- High-performance gaming computers.

In the Internet pioneer's view, it's not clear which combinations will win, but the net result will be a proliferation of increasingly powerful, networked systems at lower prices.

Embedded systems. The average car today has about 100 central processing units (CPUs), which increasingly are linked via wireless, packet-switched local area networks (LANs). In about five years there will be 400–500 CPUs/car, and each vehicle will be effectively a mobile, massively parallel computing system.

Linux also is becoming the dominant operating system for embedded computers.

– Radio-frequency (RF) sensors are becoming ubiquitous. Those being manufactured by Dust, Inc. (a spinoff of a DARPA project) are indicative of new generations that can wake up, report in, and go back to sleep to save power or draw energy from the interrogating RF signals.

- Before long, sensors will be available that have 3- to10-year battery lives and that can be scattered anywhere.

This environment of "creative destruction," in which product cycles are measured in months to weeks (in comparison to government budgeting cycles measured in years) suggests that we should build as much flexibility as possible into our infrastructures and adopt open standards wherever we can. This is the approach the U.S. is trying to take, using browser-based displays wherever possible and making strong commitments to international standards such as Internet Protocol version 6 (IPv6) and the commercial software communications architecture found in JTRS.

Changing Business Practices and TTPs, Not Just Technology

John Chambers, CEO of Cisco Systems, recently addressed the relationship between investments in information and communications technology (ICT) and increases in productivity. He found that compa-

nies that had preceded their ICT investments with business process reengineering had realized significant gains in productivity measured over several years. However, companies that had used only ICT to automate existing processes actually experienced reduced productivity. As was mentioned earlier, we need to co-evolve doctrine, organization, training, material, leadership, personnel, and facilities (DOTMLPF) to achieve the full benefits of transformation.

One senior NATO leader, as well as others, expressed concern that the increased visibility into lower-echelon activities that network-enabled capabilities provides will encourage senior officers to meddle and micromanage, potentially destroying junior officers' and noncommissioned officers' initiative. There is no doubt that this is a possibility, and there have been examples in the past in which fleet commanders called battle group commanders thousands of miles at sea to suggest they adjust their tactical dispositions. However, the potential for micromanaging can also be addressed by doctrine, training, and discipline. The Navy has already done this with its Composite Warfare Commander concept, wherein authority for different parts of an engagement is delegated to subordinate commanders; the approach has evolved into an effective one. Nonetheless, there are interactions between leadership and technology that need to be understood and addressed in our training environments.

The concerns of Generation Y, roughly those under 30, also need to be addressed. They come into the service, or start working for their employers, with an expectation of connectivity. Look at the way many teenagers today operate, with multiple windows open on their computers and multiple chat sessions underway simultaneously. They have continuous situational awareness of which friends are online and available, exquisitely tailored cell phone configurations, and continuous access to the information resources on the Web. We can learn a lot from them about network-enabled environments. But we also need to be careful, since this connectivity is not a "nice-to-have" thing for many of today's young people, but an inherent part of their culture. As we bring them into government employment, where this level of connectivity may either not be available or not allowed because of classified information, we can expect frustration and push-back.

Working Together to Rationalize Resource Allocations

General Jones described the exceptional transformations that have taken place within NATO, especially since the Prague Summit. From the standpoint of achieving network-enabled capabilities, these include:

- Establishment of the Allied Command Operations (ACO), which sets requirements
- Establishment of the Allied Command Transformation (ACT), which is the forcing agent for change through the development of Concepts of Operations (CONOPS), experimentation, and modeling and simulation

Both of these achievements are complemented by the work of the Hague Technical Center under the NATO C3 Agency, which is doing network-centric research, and by NATO's three current operations (Afghanistan, the Balkans, and the Mediterranean), which offer opportunities to introduce new operational concepts.

But in addition to these achievements, we should leverage the work of other partners, notably Sweden, which has been at the forefront of transformation, and Singapore, which has fenced 1% of its defense budget for transformation, established a center for military experimentation, and appointed a future systems architect. U.S. Strategic Planning Guidance has also called for accelerating the transformation to a network-centric force.

All told, these parallel initiatives offer exceptional opportunities for rationalizing investments in network-enabled capabilities. By taking advantage of commercial standards and data-centric strategies, as well as specific initiatives such as JTRS and the MIP, we should be able to achieve such capabilities and improve interoperability even within constrained resources. Mr. Cunningham's six principles for networks (build to a common architecture, establish a framework that is responsive to operational needs, maintain trust in activities on the network, set up the network as an enabler that allows capabilities to be used better, promote interoperability, and keep interoperability affordable), coupled with the prerequisite of addressing security issues during the design phase, also promote common objectives.

The future, however, is likely to see increased pressures on security spending, not only in Europe but also in the United States, after several years of exceptional growth. Clear choices will be offered between continuing traditional investments in platforms and moving to place more emphasis on the network and its capabilities. We need to make sure that the implications of the choices are understood fully.

Recognizing the Dangers and Addressing Them Head On

What back-ups are needed as we move toward network-centric solutions? Recently, for example, a military base had several of its computer networks go down, but the phones still worked. If, in the future, the telephone systems on the base were converted to Voice Over Internet Protocol (VOIP), a commercial trend in which phone calls ride over the computer network, then the back-up telephone service might not be available if a similar incident occurred again. As we take advantage of network-centric trends, we need to be aware of what fallback solutions, if any, will be needed. As someone put it, how long do we keep fitting sails on the steamships?

In order to manage the radio-frequency spectrum, we need to be aware of several things:

New intelligence, surveillance, and reconnaissance systems (ISRs) such as unmanned air vehicles (UAVs) can collect enormous amounts of information. They transmit it via very-wide-bandwidth datalinks, some of which exceed 250 megabits/second. In addition, mobile digitized forces will need to be connected robustly to exchange information on the battlefield, and advanced techniques such as "frequency hopping" may mean that information is sent over several different frequencies in a short period of time. All of this will require access to large amounts of the radio-frequency spectrum, and use of the spectrum will be much more dynamic than it has been in the past.

Today, the spectrum is managed through a series of fixed allocations of bandwidth that often vary between countries or regions. In other words, a frequency band in the U.S. may have one purpose while in Europe it could have another. In international meetings, such as the World Radio-Communications Conference (WRC), the U.S. and Europe sometimes find themselves at odds.

The movement of NATO (and potentially the EU) to a more expeditionary posture suggests that there will have to be close cooperation with Alliance partners and coalition members on spectrum use. It also turns out that there are new technologies and new policy approaches that can facilitate more efficient use of the radio frequency spectrum. We should explore opportunities to cooperate in both policy and technology issues in as many of these areas as possible.

Taking advantage of commercial trends means that we will make more use of commercial off-the-shelf technologies (COTS). Over the next several years, such technologies are likely to become more secure through a variety of market pressures and other incentives. However, market forces are not likely to make software strong enough to withstand dedicated attacks by well-funded, persistent, state-sponsored adversaries. Accordingly, there will almost certainly be a need for government-only solutions (GOTS) to support those special functions that won't be generated by the marketplace.

New technologies, such as wireless, bring great increases in performance and convenience. But they also introduce vulnerabilities that are real and potentially serious. The risks must be balanced systematically against the gains in determining policy choices. For example, the DoD recently issued a policy statement on the use of commercial wireless. This is a significant step forward, but also contains important restrictions, such as the requirement for using strong identification and authentication, issuing mandates concerning the use of approved encryption, and prohibiting their use in classified environment. These restrictions reflect both the opportunities the technology brings as well as the very real vulnerabilities associated with it.

We must address these kinds of questions head on and early, and not sweep them under the rug hoping they will go away. Because they won't.

STRATEGIC IMPLICATIONS OF NETWORK-ENABLED CAPABILITIES

Issues such as the ones described above too often are considered the province of technical specialists. But they frequently involve strategic issues that deserve serious attention at ministerial levels, for several reasons:

- Information and communications technologies are enormously powerful. They are changing the very fabric of our societies, the way we do business, and the way our young people (our future force structure) think and interact. Security-force leaders need to understand them in a broad political and economic context.
- These capabilities can improve the effectiveness of stabilization operations, especially if introduced early.
- · Key resource choices need to be made between platform-centric and network-centric approaches.
- Networks are most effective when they are as broad as possible; they may therefore cross traditional boundaries between agencies and even between nations.
- Many different sources of information need to be fused together, but some of this can't be done without changes in policies or even laws.
- The U.S. alone doesn't have all the answers to these issues. We need support from our Alliance partners in working through solutions.

CONCLUDING REMARKS

To sum up:

First, information and communications technologies are tremendously powerful, as noted above. Their implications need to be considered in a broad political, economic, and even diplomatic context, not just on a technical basis.

Second, the introduction of modern information and communications technologies, even short of full-fledged network-enabled capabilities, can have a direct, positive impact on the outcome of stabilization operations. Lessons learned from Afghanistan, Iraq, and other areas suggest strongly that connectivity and collaboration tools should be brought to bear on stabilization operations within days or weeks following the end of combat.

• This would allow us to establish communications quickly with key parties, collaborate more closely with partners, and provide coalition forces with the same information superiority that they demand during combat. Moreover, having these capabilities is essential to the effectiveness of indigenous security services (because it will improve their command and control), to enabling the information

flows that are the life-blood of democratic societies, and for helping to attract foreign investment as a country rebuilds.

• Therefore, while our planning in the past has largely focused on combat operations (Phases II and III), pre-war planning (the so-called Phase I) must expressly address the introduction of these capabilities early in the stabilization period (Phase IV). This will happen only through senior leadership's involvement.

Third, the new capabilities will not become available unless senior leaders decide to fund them. In a resource-constrained environment, the natural inclination will be to pursue traditional platform-centric or manpower-centric approaches instead of network-centric ones. However, without the networks, troops and stand-alone platforms will be much less effective, interoperability will be impeded, and transformation delayed. But the needed resource allocations won't be made without ministerial-level attention.

Fourth, the broader networks generally are more effective than the smaller ones; in addition to serving joint forces, the larger networks also should include coalition partners. In fact, some countries are choosing to extend their networks beyond traditional security establishments to include law enforcement, intelligence agencies, and providers of open source information. In certain cases, for example to protect critical national infrastructures such as power and water, public-private sector partnerships will be needed. But, again, such cross-agency outreach decisions require the personal involvement of government's most senior officials.

Fifth, what is being shared is a wide range of information, not just intelligence or military data. Rules for collecting, processing, storing, and disseminating such information may involve cultural, policy, and perhaps even legal issues. The establishment of rules to encourage "need to share" information and eliminate "hoarding" demands changes in thinking that can come only from the highest levels. The need to design security into new networks from the outset also will not come without senior-level insistence.

All of these issues are tied into the political fabric of the Alliance, and indeed to its future effectiveness. We in the U.S. don't have all the answers, and we need your help, feedback, and opinions as well as your support in implementing these critical transformations.

The reality is that information and communications technologies are having major impacts on societies across the globe, and will inevitably affect policy and strategy as well as technical areas. Network-enabled capabilities reflect the application of these transformational changes in the national security sphere, and they need to be given serious consideration within the nations of the transatlantic alliance. I ask that ministers and other senior personnel expand their thinking beyond traditional approaches to include these factors that are rapidly reshaping our world. Together we can look forward to an exciting future of dramatically increased, usable, network-enabled capabilities that benefit us all.

The Transition toward Network-Centric Operations

Mr. John Quilty¹

The theme of our workshop is the changing global security environment and the possible responses to the resulting global security challenges. Within that context, the concept of military and broader security transformation has come up several times. The concept of network-centric operations (NCO)—sometimes referred to as network-centric warfare or, in NATO parlance, network-enabled capability—is widely viewed as central to this transformation.

MOVING TOWARD NETWORK-CENTRIC OPERATIONS

The term network-centric, at its most fundamental level, implies that all participants in a military operation are broadly and interoperably connected and have full, shared access to the best available information. This notion of shared situational awareness becomes the foundation for a range of crucial operational capabilities, including collaborative decision-making, synchronized tactical operations, and targeting which reduces to the absolute minimum the probability of friendly fire incidents and collateral damage. In American sports terms, it is like "transforming" from playing football, with pre-defined plays and assigned roles, to playing soccer, with dynamic, opportunistic play enabled by situational awareness on the field.

Making network-centric operations functional requires two things: Building an enabling digital information infrastructure (the "smart network") and then exploiting that network, and the rich set of information it provides, to accomplish military missions. The first, more technical dimension involves introducing the Internet paradigm into military operations. The network is based largely on commercial technology, but with additional provisions to ensure that the resulting capability is robust and trustworthy. The exploitation dimension, which is operationally-driven, is often viewed as the introduction of new and innovative ways to execute missions (e.g., combat, peacekeeping) with all the derivative implications, including operating in a mode in which information flow and, therefore, decision making is far less hierarchical. This constitutes a culture change, indeed.

At the time of this Workshop, Mr. John Quilty was Senior Vice President and Director, C3I FFRDC, MITRE Corporation.

While the NCO concept arose in the early 1990s in the context of what might be called traditional warfare, its fundamental tenets have been adapted in less traditional domains as well (e.g., special operations). Progress has been visible in recent operations in central and southwest Asia. For example, we all saw Special Operations soldiers on horseback in Afghanistan calling in air support from B-52s delivering GPS-guided munitions. We also witnessed the application in Iraq of satellite-based networking to allow tactical commanders to see the positions of friendly troops in real time (so-called Blue Force Tracking).

This is not to say that NCO capability is a mature reality within the U.S. military or anywhere else. It is to say, however, that NCO capabilities are emerging in the field and that being connected and sharing information in complex situations has demonstrable operational payoff. I would also like to note that such capabilities are being developed in several European and other countries, both within and outside the NATO alliance. Although I have referred to U.S. experiences with which I am most familiar, several other countries have made both intellectual and tangible, practical progress in advancing NCO concepts and capabilities.

So here we have a concept that is becoming a reality across the global security community and which (1) integrates capability "building blocks" provided by individual nations to more effectively and efficiently support the conduct of Alliance/coalition operations, responding to General Jones' pleas for what he called "usability"; (2) is central to the notion of knowledge-based warfare as articulated by Secretary Wynne and (3) inherently facilitates the cooperative leveraging of the strength of national partners, as emphasized by General Naumann and others.

Modernizing the Alliance: Benefits and Risks Of a Network-Enabled Capability

Major General Ruud van Dam¹

The strategic vision for NATO that is currently being developed by Allied Command Transformation and Allied Command Operations indicates that future Alliance operations will be expeditionary, multidimensional, and effects based. The challenge will be for NATO to respond to the threats of an increasingly unstable world, particularly asymmetric threats emerging from rogue states and terrorist groups. Success requires that the Alliance integrate all available instruments of power, both military and political, and adopt new business practices and organizational constructs to deliver rapid, decisive operational and strategic outcomes outside its traditional AOR.

MODERNIZING ALLIANCE CAPABILITIES

Allied Command Transformation's immediate focus, working with NATO HQ, is to develop a road map that will modernize joint Alliance capabilities and enable NATO to create a truly networked force. This work requires the exploitation of modern and emerging technologies, particularly in the areas of information collection, synthesis, and dissemination; and the development of strategies to move from legacy stovepipe systems and business processes to an integrated, centric environment. This new way of doing business will drive radical change throughout the military. Doctrine, culture, and organizational structures will all need to change and traditional military boundaries will need to extend into the civil and political arenas.

THE BENEFITS OF NATO NETWORK-ENABLED CAPABILITIES

NATO network-enabled capability is a force multiplier that may ultimately result in real savings to our nations in the area of defense investment. However, I encourage you not to focus on savings too early, because then benefits will not be delivered. In fact we need to invest more money in NATO up front to

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realize a networked force that will let us do more with less. Developing a benefits case for NNEC and then a business case (once we get closer to solutions) are key areas we are addressing within ACT.

NATO network-enabled capability is critical to the transformation of military operations within NATO; we in ACT see it as the main catalyst for change. It is the key enabler to information superiority and improved situational awareness, letting us deliver precise and decisive military effects with unparalleled speed and accuracy through linking sensors, decision makers, and effectors. When implemented—our initial focus is on the NATO Response Force (NRF), which will be a technologically advanced, flexible, deployable, interoperable, and sustainable force of 20,000 troops—it will allow commanders to conduct missions across the spectrum of operations with greater awareness, confidence, and control. Its ability to collect, fuse, and analyze relevant information in near real time will allow rapid decision making and the rapid delivery of the most desired effect.

NATO network-enabled capability results in:

- · A robustly networked force, which improves information sharing
- Better information sharing and collaboration result in enhanced quality of knowledge and shared situational awareness
- Shared situational awareness that enables collaboration and self-synchronization and enhances sustainability and speed of command
- These in turn dramatically increase mission effectiveness, which acts as a force multiplier.

Introducing such transformational ideas does not happen without significant obstacles. Many are referring to NATO network-enabled capability as a paradigm shift in military operations, and, as with all paradigm shifts, there will be resistance, and hence risks to achieving the results we seek.

THE RISKS OF CHANGE

Just what are these risks and how do we mitigate them?

First, there is a technical risk—technology is a key enabler for NATO network-enabled capability and without substantial investment its potential benefits will not be delivered. Whether we like it or not, we do not have a blank sheet of paper. Consequently the issue of how to deal with legacy stovepipe systems represents a key challenge for NATO to address.

A major area of concern is providing communications reach and increased bandwith, a considerable challenge to national and NATO defense budgets. We cannot afford to throw existing systems away because we don't have the funds to replace them in the near term, so we need to find innovative solutions to bring about interoperability based on a legacy environment. This will require an investment in temporary interface solutions.

Second, there is a cultural risk. As I just outlined, NATO network-enabled capability brings with it changes to war-fighting methods (doctrine); organization evolvement, the development of new processes for sharing and using information (some of you may be familiar with Operational Net Assessment and the Effects Based Planning Process); and the move to a default position of information sharing rather than information withholding. All this needs to be achieved within the context of joint and coalition operations. Within individual nations these are huge challenges—within NATO, where consultation and agreement are absolute, achieving these requirements is even more problematic.

How is it to be done? It must be done! How are these largely cultural changes to be achieved?

First, they will be achieved through the power of our arguments, through education, through experimentation, and through demonstration. And second, they will be achieved by recognizing that it is going to take time and we must take a step-by-step approach.

CONCLUDING REMARKS

Though ACT has only existed for a few months, in that time we have formed a 20-man NATO Network-Enabled Capability Integrated Project Team and held our first NATO Network-Enabled Capability Conference in Norfolk, Virginia, which attracted over 250 senior military officers from across NATO. NATO and Partner nations have begun the process of learning about and understanding NATO Network-Enabled Capability. In 2005 we plan to spend 13 million Euros on this area and have planned over 30 related experiments. This is a serious focus for ACT, and while the challenges are great, failure is not an option.

Major General Ruud van Dam

The Network Revolution: Why It Is Important

Lieutenant General Johan Kihl¹

THE IMPORTANCE OF TRANSFORMATION

here are two reasons for transformation, and I think it is important to distinguish between them. One reason, of course, is the change in our security environment, the new threats. But the other one is technology development, which is a separate issue. It is a coincidence that both changes are happening at the same time, but the need for network-centric forces has not come about because of the change in the environment. However the change in the environment demands a restructuring of the armed forces.

What does transformation mean to us? It means a change in the structure of the armed forces. In the old days, during the Cold War, we used most of our money to buy a good deal of equipment for engagement systems. This was necessary; it was essential to prove to the enemy that it was never worth attacking a small country like ours because they would lose a lot more than they could gain.

Today, as we face many uncertainties, we need a totally different structure. And with the help of technology, we can now put most of our money into information systems and command and control systems, and less into engagement systems. We can connect those three elements into a network that ensures our information superiority, and we can give information to someone who can make a decision about it and who can send in some kind of engagement system. If you have that kind of network and can use it in real time, or very close to real time, then you have an advantage. During the Cold War we had additional forces just in case; today we have just enough forces and that is a big change.

What kind of forces do we need? What are the demands? We need forces with flexibility and mobility. We need joint forces, especially for small states. Exclusive systems are no longer viable in the future. They must be connected to each other as one whole system.

A REVOLUTIONARY NETWORK

Though people have been talking at the workshop about connecting platforms, we see the system in a much broader way. We need to look not only at platforms but at every service you can get from the plat-

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At the time of the Workshop, Lieutenant General Johan Kihl was Chief of Staff of the Swedish Armed Forces.

forms; then you can see how much you can use and the way you can use it. In Sweden, we don't talk about the military network, we talk about the network. It is a totally new playing field for the armed forces. But is it possible to keep up with the U.S. with this type of network? Yes, it is— not in all respects, but that is not necessary for other states. In command and control it is necessary, because then you can talk to each other.

Interoperability is of course essential. But we are not only talking about interoperability with other nations; we are talking about interoperability with other agencies. We need that in order to be sure we have home security. The problem is not technical; it is in people's minds. This is revolutionary, and people must realize that it is a new way of commanding troops, a new kind of tactic, a new way to organize units and systems. But we need to take part in many more exercises to be able to handle it, maybe every day; we must live in this network.

A number of people are skeptical about this net-centricity. I am not trying to convince them, because it does not matter what you or I think about network-centric defense; it will be put into use all over the world. We will all live in information-based societies. In fact, most of us are already living in them, and the rest will do so soon. So, no matter what we believe, we must accept it. And if we take advantage of it, then we can be very good actors in the future.

Security Challenges of Netcentricity

Mr. Robert Lentz¹

t the 2003 workshop we initiated serious discussion regarding the security challenges to achieving netcentricity. I am very honored to address this prestigious group again on this critical subject. To begin, I would like to discuss the security trends that are likely by 2010:

- One cyberbug will hit the Internet every five minutes, every hour of every day; the number of security incidents will swell to 400,000 a year, or 8,000 per week.
- Windows will approach 100 million lines of code.
- The average PC will cost only \$99 but contain nearly 200 million lines of code; within that code there will be two million bugs.
- Unimaginable computer power will challenge some of our best encryption technology.
- · Sophisticated hacker tools will be widely available.
- There will be another half billion Internet users.

As these trends indicate, netcentricity is a dual-edged sword. We have heard the tremendous operational advantages. But the security realities are leaving us at a critical crossroads.

ISSUES SURROUNDING NETCENTRICITY

One of the continuing realities from the 2003 workshop is the economic advantage of pursuing netcentricity: The force-multiplying effect and the awesome operational opportunities cannot be ignored. But none of this will have meaning if security issues are not addressed upfront, aggressively, not on the cheap, and globally.

However, we cannot assume that this will happen. The costs of adding security are significant if it is done after the architecture is locked in, the code is written, the weapons platform has been acquired, evaluation has begun, or, worse, a satellite system has been launched. Costs and operational damage are other facts of life of degraded infrastructure elements, of which we have only seen a glimpse.

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Mr. Robert Lentz is Director of Information Assurance in the office of the U.S. Assistant Secretary of Defense for Networks and Information Integration.

Software is the only modern technology that ignores quality until it is tested. Therefore the norm is one defect per every seven to ten lines of code. However, 99 percent of successful cyberattacks are against known vulnerabilities, and 77 percent of these are the result of design defects. Though cyberevents are preventable, we react to them rather than anticipate them, and each patching of the system costs from one million to four million dollars.

In addition, speed is everything in this business, not only for conducting network-centric operations but for defending the networks. Implementing layers of defense will do no good without establishing horizontal relationships both domestically and internationally.

THE NEED FOR NETCENTRIC CAPABILITIES

As we transform our information-assurance capabilities to enable netcentricity, we need to provide several key services. First, we must ensure authenticity by developing reliable cyber-identification credentials that will ensure a person's or a computer's identity without worrying that an adversary is trying to masquerade as someone legitimate. In addition, we must develop interoperable standards that bridge all sectors, including international partners.

Another key IA service will be "automation of privilege management." This service will easily provide end-users with access to necessary information resources regardless of where they are located on the network; conversely, it will help the owners of the information sources manage the increased demand for access that netcentricity will bring.

Cyberattacks happen often and often with great stealth. Critical operational processes must therefore continue to function effectively while under cyberattack. Our information-assurance strategy is based on the idea that appropriate defenses will stop most attacks. These protective mechanisms include physical, electronic, and procedural components as well as capabilities to alert and warn us of attacks. Because of their importance, such defenses must be kept current during rapid evolutions of technology, varying attack strategies, and organizational changes, but it will take significant technical and operational efforts to make this happen. If an adversary breaches our protections, we must have the capability to detect, contain, and then respond to the attack.

IA entails high levels of situational awareness, significant analytical capabilities to characterize the nature and extent of an attack, the formulation and coordination of effective courses of action, and the ability to rapidly execute approved courses of action across a global infrastructure. The tools and procedures required to protect against and react to attacks in a highly technical, complex, multi-organizational environment are correspondingly sophisticated.

But we can not afford to let the wireless revolution sneak up on us again. However, right now, our confidence in the security of wireless systems is not great. In addition, the cost to address wireless trust in a user-friendly way is very high.

CONCLUDING REMARKS

It is certainly a challenging time for the information-assurance community.

The pace of real-world operations remains high, and we have forces in harm's way fighting terrorism in many places throughout the world. But this is an international team fight. And not only do our military operations depend on our success, but in a broader sense the computer infrastructures that drive our economies and service our people also depend on our collective success. We must become organizationally agile and operationally adaptive.

Therefore we must focus more on the processes and capabilities that provide products and services. I agree that cultural change is our biggest hurdle. We must re-think and re-implement our accountability

because of the paradigm shift to network-centric operations. Law enforcement must also prosecute cyberattackers. And we need vigorous IA discoveries and inventions, both scientific and technical, to complement and keep pace with IT innovations. Finally, we must do this work together for the greatest effectiveness and affordability. All of us must trust the network and the software; a security expert said recently that software assurance is the next Manhattan Project, at a global level.

It is critical for us to know that information cannot be exploited or modified, and that the wrong people do not have access to our systems. We also need to know that the net will be available when a decision-maker needs it. Lastly, when we look the commander, the CEO, or the policy-maker in the eye, and tell them to trust the network, we need to know what we are talking about.

Mr. Robert Lentz

Part Five

Security in the Black Sea Region

His Excellency Prof. Ioan Mircea Pascu¹

OPENING REMARKS

Initentionally, I believe, our program is illustrating the growing gap between evolutionary technology and static politics. During earlier sessions on technology, we saw how rapidly that area is developing. Then, with the help of Nick Burns, and now, with this session, we are seeing that whatever we try to do about technology and however fascinated we might be with it we are back to square one, which is politics. Unfortunately, however, politics has not developed very much since it was first employed. These realities show us that perhaps we should apply inventiveness and ingenuity to transforming politics as well as to technology. I am not saying that we should back off on technological development but perhaps that we should start thinking about how technology and its development might help move the political arena forward.

THE IMPORTANCE OF THE BLACK SEA AREA

I would like to begin by thanking my colleagues Vecdi Gonul, Nikolai Svinarov, Gela Bezhuashvili, General Skvorzov, and Ambassador Khandogiy for answering the invitation to organize this panel and to present to you our national views on the Black Sea, an area that is becoming increasingly important and relevant. Geographically, it is a landlocked sea dominated by important land powers of the area. During the Crimean War, it was the main area of operation along with theaters in the Baltic and East Asia; opponents were Turkey and Russia and the involvement of France and Britain gave it a European dimension.

When we look at a map of this area, we see that one of the accesses to Russia is through the Black Sea. Turkey also has important interests because of its location there. The area actually opens toward three important strategic areas: The Balkans, the Caucasus, and the Caspian Sea, which opens toward Central Asia, the Middle East, and the Gulf. We also have the Danube, which is becoming the waterway of a united Europe. The sea is also a passageway for Caspian oil and gas for consumers in the West and a source of value in addressing traditional and nontraditional threats. Consequently, its current relevance and its importance for the foreseeable future are significant.

His Excellency Ioan Mircea Pascu is the Minister of National Defense of Romania.

In addition, the area is significant to three major actors in international politics: NATO, the EU, and Russia, because demarcation lines are not yet fully crystallized. To my mind we need to discuss how to approach and manage the area and its problems in order to minimize its negative potential and to maximize common access to its promising benefits. We must continue to coexist and further develop cooperative attitudes in order to guard the sea lanes, deal with nontraditional threats, and manage the environment in the interests of all the countries around the sea.

We also need to share intelligence, either through organizations or individuals, regarding terrorism, arms smuggling, drug smuggling, human trafficking, and organized crime. We must work together to do everything we can to stop some of the major problems we have been hearing about.

Currently we have effective bilateral exchanges with other countries. We have a good relationship with Turkey, and BLACKSEAFOR, which started as a cooperative effort in the area, now deals with an increasingly larger spectrum of activities in the area. It may develop into an avenue for intercepting threats and addressing smuggling and other issues, but that is a decision that must be made by all the coastal countries. However, I believe we are moving in that direction, and the situation urges us to exchange relevant information.

CONCLUDING REMARKS

The Black Sea is an area in what we are calling a complex emerging security region. I predict that over the next several years, European development will be centered around it. But will we engage in crystallizing the vision or will we let things develop on their own, and limit ourselves to managing whatever configuration emerges? I do not expect to get all the answers to all the problems today, but we can make a good start.

Black Sea Security: The Turkish Perspective

His Excellency Vecdi Gönül¹

he new security threats and challenges, which are transnational in nature, are becoming much more diverse and multidimensional in the new global security environment. Thus, providing security for the Black Sea region has become significant not only for the coastal states themselves, but also for the countries and the regional and international organizations taking part in this wider geography—the "wider Black Sea" region.

Much to our satisfaction, despite some frozen as well as some ongoing conflicts in Moldova, Georgia, and Azerbaijan, many cooperative efforts have contributed to promoting peace and stability in the Black Sea. Since 1992, trade has soared, stability has been achieved, and contact among our peoples has developed in this region.

REGIONAL AND INTERNATIONAL COOPERATION

When new challenges started to emerge in the Black Sea region, Turkey relied first and foremost on regional and international cooperation and solidarity. The Balkan Stability Pact, the Southeast Europe Defense Ministerial Initiative, and The Black Sea Economic Cooperation (BSEC) were all ideas fully supported by Turkey. Over time the coastal states of the Black Sea have developed a common understanding that they must pool their efforts for both the security and the prosperity of the area. This common way of thinking has resulted in BLACKSEAFOR and the Black Sea Economic Cooperation Organization—excellent examples of how regional cooperation can be fostered by intensifying our efforts to cope with the newly emerging challenges.

The Black Sea Economic Cooperation Organization and BLACKSEAFOR emerged as the manifestations of the will of all the regional countries. These countries' aim was to shape the region's present and future through their own united efforts. We continue to think that the security of the Black Sea should be handled first by the coastal states through the existing mechanisms in the region.

His Excellency Vecdi Gönül is the Minister of Defense of Turkey.

Especially since the end of the Cold War, Turkey's bilateral relations with Black Sea countries have developed significantly. We have signed 23 different agreements and protocols with Black Sea littorals, replacing the misgivings of the past with a climate of friendship and mutual trust.

Turkey also signed in 2001 a joint action plan with Russia for cooperation in Eurasia. With this plan, both countries took up the task of contributing further to strengthening peace, stability, democracy, human rights, and sustained development in Eurasia. During the Turkish Prime Minister's visit to Ukraine in April of 2004, Turkey also signed a joint action plan with Ukraine, beginning new cooperation with special emphasis on the Black Sea region.

Turkey's relations with Bulgaria and Romania have also developed further since the end of the Cold War era. We look forward to increasing cooperation and solidarity with these new allies against the challenges that lie ahead. Turkey has also considerably improved relations with Georgia following the collapse of the Soviet Union.

TRANSPORTATION AND ENVIRONMENTAL ISSUES

A significant security dimension of the Black Sea area is its strategic position as a transit corridor for energy resources. In addition to the huge amount of Russian oil reaching the Black Sea, the Caspian region's oil output has also been increasing. However, heavy tanker traffic in and out of the Black Sea and particularly in the Turkish Straits—where 135 million tons of oil have been transported, a number that is expected to increase by at least 50% by the year 2010—is causing serious concern for Turkey. Protecting the environment as well as ensuring the health, safety, and security of the local population are our main considerations.

In pursuit of that goal, I would like to highlight the importance of the Baku-Tbilisi-Ceyhan oil-pipeline project, which will divert 50 million tons of oil from the Black Sea terminals to pipeline systems annually. We are aware of the need for new alternative crude oil transportation systems as well as pipeline systems that bypass the Straits.

RESOLVING CONFLICTS AND FIGHTING TERROR

As far as political problems go, we must admit that the wider Black Sea region is unfortunately not without them. The South Caucasus, one of the sub-regions of the Black Sea basin connecting Europe to Central Asia, merits particular attention: The Abkhazia and Nagorno-Karabakh conflicts are main sources of instability in the region, and have waited more than a decade to be peacefully solved. We believe the region will become a major transport and trade corridor for the movement of oil, gas, goods, and services to and from world markets, and instability there may affect not only security in the Black Sea but also the entire Euro-Atlantic area. Turkey believes that it is time for major players in the region to pursue more active policies to solve these frozen conflicts.

The recent escalation of tension between Tbilisi and Adjara leadership has also been a cause of great concern for Turkey, but we are happy to be seeing a reduction of tension in the area.

In addition to working to solve these frozen as well as ongoing conflicts, the Black Sea littorals should also consolidate their efforts to fight transnational terror, organized crime of all sorts, and the proliferation of weapons of mass destruction in the region in a synergetic way. To that end, we began "Operation Black Sea Harmony" on March 1, 2004, mainly in the western Black Sea, to surveil and patrol the Istanbul Strait approaches and to trail suspected ships. We have also organized a Black Sea Political Consultation meeting in Ankara to discuss the modalities of its use in constabulary tasks in the Black Sea.

CONCLUDING REMARKS

It is Turkey's belief that increasing bilateral cooperation in the Black Sea region, coupled with enhanced multilateral instruments, will have a positive impact on peace, stability, and the well being of the entire region. Factors such as shared history, similar traditions and cultures, a common commitment to democracy and a free market economy, and the desire for sovereign equality among the countries of the Black Sea region constitute the prerequisites for facing the challenges of the twenty-first century. Regional and international cooperation are of greater importance than ever before for coping with the threats and challenges of the new century.

Turkish Defense Minister Vecdi Gönül

Bulgaria's Policy for Southeastern Europe

His Excellency Nikolai Svinarov¹

would like to begin by emphasizing that Bulgaria's regional policy in southeastern Europe (SEE) is based on active engagement, cooperation, confidence building, and good-neighbor relations. In its capacity as an EU negotiating member and a NATO member, my country believes that regional cooperation is an essential vehicle for facilitating the accession of every SEE country to the European and Euro-Atlantic institutions. Regional cooperation, no matter how successful, cannot and should not be regarded as a substitute for full-fledged integration. The best option is to integrate the Balkan countries into the European and Euro-Atlantic structures. This is true because the stability of the SEE countries guarantees the stability of Europe.

By extending invitations to Bulgaria, Romania, and Slovenia, NATO enlargement southward demonstrated a policy of integration rather than exclusion. Thus, our countries' return to the European mainstream was institutionalized in an efficient and cost-effective manner. We are confident that Bulgarian, Romanian, and Slovenian membership in NATO is forming a stable security foundation.

From a geostrategic point of view, NATO enlargement is not only strengthening the Alliance's southern flank but contributing to the organization's enhanced impact on Black Sea region processes. At the same time, the three Black Sea NATO member-countries, Bulgaria, Romania, and Turkey, are increasing the capacity of the Alliance to directly influence the strengthening of security in the Black Sea area and project greater security and stability throughout neighboring regions.

Bulgaria joined NATO ready and willing to make an effective military contribution and determined to fill in rather than expand the capability gap between North America and Europe. We believe this is exactly where regional security arrangements within the SEE countries may have an immediate impact. An outstanding example of the interoperability among SEE militaries and of overcoming the Cold War legacy and stereotypes is the creation of the Multinational Peace Force South East Europe (SEEBRIG). SEEBRIG is one of the few success stories and an outstanding demonstration of multinationalism as the organizing principle for regional security in southeastern Europe. It adds a new dimension to defense diplomacy in terms of military cooperation within the framework of the South East European Defense Ministerial process.

His Excellency Nikolai Svinarov is the Minister of Defense of Bulgaria.

Another success story is the Black Sea Naval Cooperation Task Group BLACKSEAFOR, a very serious step ahead in the efforts of all participating countries to create a new image for our region. The organization is important because: It marks a unique regional effort toward collective action on defense and security matters, begins an important regional initiative for generating security based on regional resources, gives the countries involved the opportunity to manifest and better protect their national interests, and outlines a change from narrow regional thinking to a much more universal approach to security and defense problems in the entire Euro-Atlantic zone.

The Black Sea Economic Cooperation, the Document on Security and Confidence Building Measures in the Naval Field in the Black Sea, and BLACKSEAFOR are very much part of the process of increasing the geostrategic importance of the Black Sea region. From their birth to the present day, these initiatives have worked to revive cooperation in the Black Sea region by further strengthening existing trade relations and promoting civil society and a market economy. Bulgaria enjoys very good bilateral, trilateral, and multilateral relations with the countries in the region. Our security policy is aimed at helping to strengthen confidence and security, continue the reform processes, and establish and build democratic institutions and promote the rule of law. My country is ready to share its experience as well as actively contribute to the further development of these processes.

In that context, the Black Sea region's great economic potential should not be regarded as possible strategic competition but definite strategic cooperation. As each state defines its strategic interest in the region it will become imperative to find balance among these interests by turning them into focal points of constructive economic and political goals.

My country firmly believes that the successful Balkan cooperation initiatives could serve as models for the Greater Black Sea region security cooperation. BLACKSEAFOR, together with the experience gained by the SEE nations from SEDM and SEEBRIG, PfP, and MAP form a solid basis for our countries to work together to achieve security, stability and prosperity for the nations in the Greater Black Sea region. This is of particular importance since looking into perspective the Greater Black Sea region is becoming more and more an important geostrategic element in the war against international terrorism and asymmetric threats as well as organized crime and illegal trafficking of people, drugs and arms.

Those of us who live in Europe's southern neighborhood are drawn together by the virtue of our shared Euro-Atlantic values and interests. Thus, we are bound in a common commitment to a better future. The dual NATO/EU enlargement eastward is the key to letting freedom, opportunity, and prosperity flourish in our neighborhood. This forum is the right place to discuss and formulate new security initiatives for our region and I am hopeful that this will happen.

A Common Vision for the Black Sea Region

His Excellency Gela Bezhuashvili¹

et me begin by congratulating our colleagues whose countries have joined the European Union and NATO. Their success will encourage other aspiring states to find their own place in the European family. Georgia believes that the wider the confines, and the closer the people within them, the more secure the world will be. Therefore along with its own efforts to achieve stability and NATO interoperability, Georgia is encouraged by the EU's and NATO's enlargement to the southeastern part of Europe. We aspire to be included in these wider confines because we are a European nation and share our history, culture, and values with other Europeans.

COMMON CHALLENGES AND A COMMON APPROACH TO MEETING THEM

The beginning of the twenty-first century is characterized by new threats and new challenges to global security. These challenges demand new solutions and full-fledged preventive measures. However, it is obvious that it is impossible to make the Euro-Atlantic area secure without incorporating into the global security system those regions that were heretofore referred to as on the periphery. Present risks such as terrorism know no borders, and antiterrorist campaigns must include those regions and states that previously received little attention. The new security landscape in Europe requires a common understanding of the joint challenges we face and joint efforts are needed to develop preventive measures to reduce the threats.

Because the Black Sea states are pieces of the same geostrategic puzzle, they must be part of a common security framework. The area must also be recognized as a region of paramount importance regarding security guarantees for the Euro–Atlantic community; NATO's enlargement as well as the positive new arrangements between NATO and Russia, NATO and Ukraine, and NATO and Georgia are already providing it with a new security dimension.

His Excellency Gela Bezhuashvili is the Minister of Defense of Georgia.

BLACK SEA FUNCTIONALITY

Because of recent developments, the Black Sea is no longer a sea of confrontation—partner countries now share it. In fact, the sea has been transformed from a landlocked area, with limited international transactions, to an open sea that is a center of economic interests and an important transportation corridor at the crossroads of Europe, the Middle East, and Central Asia. The Black Sea has regained its historic function as one of the great Silk Road routes.

Through the Black Sea region, Caspian oil and gas resources now flow to Europe and other world markets, making significant contributions to the security of world energy sources. As a trans-Caucasian transportation corridor, the sea also provides access to new regional markets and promotes the development of the transcontinental communications network.

THE NEW SECURITY DIMENSION

As NATO expands eastward, it is inevitably approaching the Black Sea's eastern coast. Up until now, Romania and Bulgaria have been considered Europe's gateway to the east, but now the Black Sea countries are the new frontier for the Alliance and the Union. In fact, the southeastern part of the Black Sea region can be thought of as a kind of filter that can protect Europe from transnational threats, including:

- The spread of terrorism
- · Smuggling of drugs and weapons (conventional as well as nuclear)
- · Illegal human trafficking
- Illegal migration

By extending cooperation to the countries in our region, NATO and the European Union will gain strong and reliable partners on their eastern flanks. Those partners can help Europe solve many difficult issues as well as open up new markets and new opportunities. In other words, further integrating the Black Sea area into the European community can create a win-win situation for all concerned parties. The Alliance and the Union should move further into the southeastern Black Sea region.

Because threats of a transnational nature cannot be fought by separate countries alone, common challenges must be addressed with close cooperation as well as the full involvement of the community of nations. By standing together, and by making the Black Sea region a front-line partner, all of us can be net contributors to lasting European stability and prosperity.

COOPERATION INITIATIVES

Black Sea countries already know that sharing interests increases our chances for success. And despite our affiliations with different alliances and political-military organizations, Turkey, Russia, Georgia, Ukraine, and the Balkans share concern for the Black Sea, making the sea a link rather than a gap between us. Currently BLACKSEAFOR and the economic initiative BSEC are working toward enhancing peace and stability in the region as well as promoting cooperation among the Black Sea states. There is also intensive cooperation with the North Atlantic Treaty Organization through a number of its programs and initiatives, and we are firmly on our way to integrating with both European and Euro-Atlantic structures.

Georgia was also the first of the CIS countries to take part in an Individual Partnership Action Plan (IPAP), a new NATO initiative that brings aspiring countries closer to Alliance membership. At the same time the NATO-Russia Council and NATO-Ukraine cooperation have given us a solid base for new initiatives to promote peace and stability not only in Europe but throughout Eurasia as well. The Wider

Europe Neighborhood Initiative is an opportunity for our region to help develop a secure and friendly neighborhood, and Georgia is unequivocally determined to become a member of this project.

THE NEED FOR A COMMON VISION

Establishing and developing a common strategy for the Black Sea region is one of the great challenges of a wider Europe. But it is essential that we have a common understanding and a common vision of our region's future. The states in our region should expand cooperation under the framework of existing regional organizations, or go even further and launch a new format for cooperation that will help establish a common approach to the goals we are all striving to reach. Based on the perspective of European and Euro-Atlantic institutions, a common vision will also be a powerful strategic tool for contributing to stability and prosperity in the South Caucasus as well as the entire Black Sea region. While responsibility comes with making such a contribution, Georgia is ready to take on the challenge.

CONCLUDING REMARKS

I would like to close by saying again that only with common efforts and close cooperation will we be able to build a more secure, more stable Europe for the generations to come. By investing in the success of Black Sea regional cooperation we can positively affect the entire European security structure. My region has greatly matured, and it is high time not only to consider its capabilities but also time to take concrete steps toward incorporating them.

Georgian Defense Minister Gela Bezhuashvili

Building Security in the Black Sea Region

Ambassador Volodymyr Khandogiy¹

It goes without saying that security is one of the key factors in stability and prosperity in every country in every region of the world; its importance can hardly be overstated. However, there are regions whose importance goes far beyond the countries belonging to them, and the Black Sea area is one of those. For Ukraine, it provides the only maritime route to the Mediterranean and other world oceans and gives us the opportunity to diversify our energy supplies.

COOPERATIVE EFFORTS IN THE BLACK SEA REGION

The strategic potential of the Black Sea, which is vital for Ukraine's independence, can be fully utilized only if conditions there ensure regional stability and security. That is why Ukraine, from the very beginning of its independence, has played an active role in developing cooperation in this region in several areas, including the military.

One of the most important initiatives in that effort is the document that provides naval confidenceand security-building measures in the Black Sea, as well as mechanisms for cooperation. Participating states consider this document a key element in the development of cooperation in the region. In the first assessment meeting, organized in Vienna by Bulgaria in December 2003, representatives of the participating states underlined the importance of information exchange according to provisions of the document. Such exchange involves information on communication channels, naval forces deployed within the zone of application, large planned national naval activities, and so on. In the area of cooperation between navies, I would like to point out that the first annual tactical confidence-building naval exercise, GALATHEA 2004, was hosted by Bulgaria between May 23 and June 4, 2004.

Although the document has not been in place for long, it is a good example of effective cooperation. Of course, there is still much to be done, but we are certain that tasks that are carried out according to the document will benefit each participating state as well as the region as a whole. We believe the Black Sea naval confidence- and security-building measures will make a tangible contribution to European security.

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BLACKSEAFOR

BLACKSEAFOR, a unique institution, has also proved its effectiveness and become instrumental in strengthening security not only in the Black Sea region but in the entire Euro-Atlantic area. Since it was established in 2001, BLACKSEAFOR, or the Black Sea Naval Cooperation Task Group, has become an active and essential tool of cooperation among participating states. Working committees have demonstrated their ability to implement their tasks properly. In order to maintain a high level of interoperability with navies of the participating states, Ukraine takes an active part in BLACKSEAFOR activities. For instance, we proposed conducting a search-and-rescue training exercise that would simulate an operation to assist a submarine in an emergency. This proposal was agreed to by the representatives of the navies of the littoral states at a meeting of COMBLACKSEAFOR in April 2003 in Bulgaria.

Ukraine has also proposed the possibility of creating a permanent command center that could be operational not only for the period of time BLACKSEAFOR is active but for the whole year. In our view, this center would be very useful if a naval cooperation task group is asked to perform tasks beyond the activation period. A permanent command center would also contribute to the interoperability and standardization of our naval units. In addition we think it is important to update existing communication systems by establishing communication networks between units and headquarters. This would make data exchange easier and faster.

MEETING THE NEW THREATS

All of the above initiatives are particularly important since recent events have shown that we must be prepared to meet the new asymmetric threats and challenges that are emerging in the international security field. The Black Sea region has no immunity in this respect. But the question is, Do we have the proper mechanisms to respond? We cannot exclude the possibility that attempts will be made to seize a trade vessel or a passenger ship to smuggle arms or to conduct terrorist acts. There are serious regional security challenges from separatist movements in the area, such as illegal drug trade, arms sales, and illegal migration, including trafficking in human beings. But our cooperation in the Black Sea region should not be limited to the resolution of these problems and the development of military cooperation.

The fundamental issue is that we will never achieve security in the Black Sea region if we exclude certain countries in the region from the mainstream of European and Euro-Atlantic integration. We are absolutely certain that the ultimate fate of the Black Sea region should not be limited to bridging Europe and Asia. All interested countries in the region should be given an opportunity to become an integral part of a new Europe and the new Euro-Atlantic security structure.

NATO and EU enlargement will deeply affect the political and economic situation in our region, but further enlargement of these organizations is inevitable; it is the only way to enhance stability and well-being in this part of the world. In this connection, I would like to mention a new initiative that is now being elaborated in Euro-Atlantic think tanks. The idea is to form a new group of like-minded countries to pursue common objectives, including their Euro-Atlantic ambitions. We believe that this is a step in the right direction and hope to be able to support this interesting initiative. I would also like to mention GUAAM, an emerging political and security framework for a number of countries, which can play a special role in strengthening cooperation in the Black Sea region in regard to responding to new challenges. One of the initiative's main tasks is to expand its geography and ensure support for activities both within the region and beyond. In conclusion, I would like to stress that, as important as it is alone, the Black Sea region is a part of the wider Euro-Atlantic security area. And the security of the Black Sea area states, both economic and political, can be assured only through existing global mechanisms.

Black Sea Security: The Russian Viewpoint

Colonel General Alexander Skvorzov¹

Russia sees the creation of a coherent system for countering actual challenges and threats as a universal way to ensure security in any region of the world, including the Black Sea. Such a system should match the vital interests of each state, provide international stability, and sustain development over the longer term.

And while there are many different approaches to creating such a regional security architecture, one point is clear: Until the concerns of all regional states, including the Russian Federation, are duly taken into account, the security of the Black Sea region cannot be effectively ensured. We are working from this viewpoint as we develop relations with other states; looking to the south is one of our priorities.

THE NEED TO INCLUDE THE RUSSIAN VIEWPOINT

As we discuss the issues, we welcome the desire of this workshop that representatives of a broad range of countries be included. It is also important that the opinion of the representatives of the armed forces of the Russian Federation be heard. It is perplexing to us that an international "expert" conference on Black Sea security was held in Bratislava on May 7-8, 2004, under the aegis of the George Marshall Foundation, without Russian representation. Along with specialists from the U.S. and other NATO member-states, the ministers of foreign affairs from Bulgaria, Georgia, Moldova, Romania, Turkey, and Ukraine were invited, and issues regarding military and political cooperation relating to the Black Sea and the Caucasus were discussed. But representatives of one of the biggest Black Sea states, Russia, were not invited to the conference.

Many experts believe that to hold meetings of this kind without Russian participation is illogical, and that it would have been opportune to invite Russians to the Bratislava meeting. By not providing Russian representatives with the opportunity to attend the workshop, our side has developed reasonable doubts as to the intentions of the workshop's organizers, especially regarding the intention of taking Russia's strategic concerns in the region into account.

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Colonel General Alexander Skvorzov is Deputy Chief of Defense of the Russian Federation Armed Forces.

ADDRESSING THE NEW CHALLENGES

Russia is deeply convinced that the problems regarding the use of force in the modern world can only be addressed by strengthening the core role of the United Nations and that of international law. It is only by doing so that we can provide an effective answer to modern challenges and threats. Today the Black Sea region, as well as the entire European continent, must continue its fight against transnational threats, including extremism and terrorism, organized crime, narcotics and human trafficking, weapons smuggling, and money laundering resulting from criminal activities.

Russia supports international efforts aimed at coping with the new challenges. We stand for a decrease in military force within a system of collective security for the European continent. We also support using political measures to prevent and settle crises and urge international cooperation, including in the military area.

MECHANISMS TO ENSURE BLACK SEA SECURITY

The Black Sea region security efforts that we are discussing at this workshop represent, in our view, a classic model of regional security. The economic and integration successes as well as political stability confirm that it is an effective model based on time-tested international law and unique multilateral agreements. It goes without saying that the Black Sea should remain a region of cooperation and openness.

One of the key and most authoritative international documents regulating navy activities and, consequently, stability and security in the region is the Montreux Convention of 1936. I would like to take this opportunity to express my gratitude to Turkey, which has been guaranteeing for many decades regular and strict compliance with this instrument by the Black Sea and out-of-region states. While the convention does not prevent the possibility of large groups of out-of-region combat ships appearing in the Black Sea basin, it does put time limits on visits by small squads and single ships of no more than 21 days. By limiting the waters only to navy ships of the Black Sea states, these states enjoy peace and stability. We all know the unfortunate circumstances that can arise when large units of military force appear on peaceful shores, disregarding any concerns or traditions except their own—relations are sharply aggravated and the situation is destabilized for many years to come.

In the opinion of the Russian Federation, the Montreux Convention of 1936 is one of the major guarantors of peace and tranquility in the Black Sea area. Therefore we should not only carefully abide by it but protect it. It is unthinkable that geographically remote countries should move Black Sea states to a second-class role.

Another efficient international legal instrument that takes into account modern challenges and threats to security is BLACKSEAFOR. As you know, this legal instrument regulates the activities of naval ships from Bulgaria, Georgia, Romania, Russia, Turkey, and Ukraine and is aimed at fulfilling many of the tasks agreed upon by all the parties. BLACKSEAFOR was conceived and launched as a framework for ensuring regional stability and security and for developing inter-state cooperation and dialogue.

This multinational naval group can also be used under extraordinary circumstances in the Black Sea. Its tasks can include search-and-rescue, humanitarian operations, removal of sea mines, ecological monitoring, joint exercises, and goodwill visits. According to Article 7 of the agreement, BLACKSEAFOR may also be used in peace-making operations under the UNSC or OSCE mandate if these organizations make a request. BLACKSEAFOR provides a unique approach to ensuring stability and security in the Black Sea. It is the first legal instrument to provide for the exchange of military data related not only to land components of national armed forces but to their marine component as well.

Because naval forces are comparable to and, regarding their mobility, frequently superior to, heavy land forces, it is our opinion that including naval activities in the Black Sea framework of confidence-building measures is a logical, natural way to build up the pan-European security system. Doing so could set an example for similar activities in other "hot" regions.

CONCLUDING REMARKS

I would like to conclude by saying that the current mechanisms for ensuring security in the Black Sea region are functioning successfully and do not require revision. But there is still great opportunity to develop additional confidence-building measures, to increase cooperation in military and military-technical areas, and to address challenges and threats, ecological problems, navigation issues, and joint search-and-rescue needs. Our countries have a rich history of friendly relations and common political and economic interests regarding the Black Sea region, and great potential for cooperation. We should make this potential reality by confidently strengthening our relationships and keeping them open.

Colonel General Alexander Skvorzov

Russia and the New Security Landscape

Ambassador Dr. Franz Cede¹

Since we met in Berlin, ten countries have joined the EU. Earlier in 2004, NATO admitted seven Central and Eastern European nations as new member-states of the Atlantic Alliance. The political, economic, and strategic significance of these developments can hardly be overestimated. They conclude a process that was triggered by the dissolution of the Warsaw Pact and the end of the Soviet Union, and confirm the Western reorientation of these countries that for more than 50 years were the satellite states of the Soviet Union or, as in the case of the Baltic States, were treated as an integral part of the Soviet Union. The integration of these countries into European and transatlantic security structures is a sea change of the greatest order.

Under the leadership of President Putin, Russia has adjusted to the new realities in Europe with remarkable professionalism and a keen sense of pragmatism, given the fact that the Eastern European countries' membership in the EU and NATO meant in substance that Moscow had to say goodbye forever to the idea of forging a special relationship with its "near abroad" in Central and Eastern Europe. Ukraine, Belarus, and Moldova and most of the former Warsaw Pact and COMECON countries are now integrated into Western institutions on the basis of binding norms of international law.

PAST BARRIERS TO ACCEPTING THE NEW SECURITY LANDSCAPE

Why was it so difficult for Russia to accept the new security landscape in Europe? I should like to identify three main reasons: The psychological factor, the loss of superpower status, and the vested interests of the military-industrial complex.

The Psychological Factor

For the political and military establishment, which is still dominated by those who spent most of their professional lives in the former Soviet Union, NATO is still mainly seen as a military bloc led by the U.S. and directed against the security interests of Russia. The paradigm change in international relations has

Ambassador Dr. Franz Cede is the Austrian Ambassador to NATO.

not yet sunk into the minds of these people, and NATO's military operation against the Milosevic regime has done a lot to confirm their negative attitude.

"Lost Empire" Status

Another reason behind the dissatisfaction of Russia's ruling class toward NATO's eastward expansion can be found in the fact that, unlike the former Soviet Union, today's Russia can no longer shape the destiny of those countries that belonged for more than two generations to its sphere of influence in Europe. This realization, that the political order that was established in the wake of World War II is definitely gone, has not been easy for the Russian leadership to digest. The dissolution of the Soviet Union meant the end of world-power status for Moscow. Although the permanent seat in the Security Council and the maintenance of a nuclear arsenal continue to ensure Russia's status as a great power, Russia had to accept that she could no longer play in the same league as the U.S., which remains the only global superpower.

The Vested Interests of the Military-Industrial Complex

The oversized Russian armed forces and their contingent armament sector are faced with an identity crisis. The changes in the international security landscape that resulted from the political transformations in Europe have not yet led to a fundamental reform of the Russian military. The strategic concept of the Russian Federation in fact still applies to a war in which the deployment of huge armies and massive military hardware would be needed. For those holding positions of power in the Russian armed forces, it goes without saying that a reform of the army in response to the new challenges would diminish their influence and perhaps even lead to the loss of their jobs. No wonder they are having a hard time acknowledging the new security threats and NATO's rapid adjustments to them.

STRENGTHENING RUSSIA-NATO TIES

Against this background it seems that President Putin's policy regarding the eastward enlargement of NATO and the EU is a wise one. As he overcame difficulties at home and found viable solutions to the problems that resulted from the enlargement process, he was still able to safeguard, against all odds a cooperative relationship both with the U.S. and Europe. Despite the divisive Iraq conflict and the negative fallout from Allied Force, the NATO-led operation against the Federal Republic of Yugoslavia in 1999, we continue to see the restoration of normal and businesslike relations between Russia and its Euro-Atlantic partners. President Putin has not made NATO's extension to the east a bone of contention, and has accepted the recent EU enlargement in a way that takes into account Russia's interest in maintaining healthy relations with the U.S. and its European partners. The strengthening of the Russia-NATO framework as well as the way in which Russia-EU relations are being conducted give further evidence of the importance both sides attach to mutual cooperation.

CONCLUDING REMARKS

In the book "NATO-Russia, Between Cooperation and Confrontation," an Austrian analyst described the delicate development of the NATO-EU relationship. It is my assessment that we are going in the direction of cooperation. This was illustrated to me when President Putin sent his new foreign minister, Sergei Lavrov, to participate in businesslike and constructive talks at NATO on April 2, 2004—the very day when an emotional flag-raising ceremony took place at NATO headquarters to salute the seven new Eastern European member-states. This augurs well for the future.

Russia's Relations with the United States and Europe

Mr. Markus Meckel, MdB¹

Ver since the collapse of the Berlin Wall in 1989 and the collapse of the Soviet Union in 1991, it has been our understanding that relations with Russia are key to security in Europe—there can be no security in Europe without or against Russia. That was the basis for the CSCE's Charter of Paris in November 1990 as well as for the NATO-Russia Founding Act in 1996.

President Putin has made some progress in stabilizing the situation in Russia. For example, the country has seen significant economic growth of some 7% during the last four years. It has also serviced its external debt and improved its credit rating. Workers and pensioners are paid regularly, instead of waiting for months as they did under Mr. Yeltsin. While much of this success is due to favorable oil prices and increased exports, it boosted President Putin's public standing and brought him a landslide victory in the March 2004 elections.

HISTORICAL DEVELOPMENT

September 11 was a turning point for Russia's relationship with the West, and with NATO and the United States in particular. Although still a major power militarily, Russia now lacks political and economic weight. Putin's aim is to restore Russia to its former greatness and importance in world politics, but this will require modernization of its political and economic structures. President Putin has realized that such work can only be achieved by expanding cooperation with the United States and the EU. He saw September 11 as an opportunity to redefine Russia's relationship with the United States and NATO and to bring about a radical change in the direction of Russian foreign and security policy. NATO reacted to this situation positively by creating the NATO-Russia Council in May 2002 and by continuing to intensify consultations in this format ever since.

Today, however, we are facing common threats:

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1. For quite some time Russia has seen the spread of Islamic fundamentalism and separatist movements in the south, endangering the territorial integrity of the Federation. September 11 made clear that

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international terrorism is a common threat and that effective international cooperation is needed to counter it.

2. The proliferation of weapons of mass destruction (WMD) is a potential danger to all of us. We need to strengthen the nuclear nonproliferation regime and provide for effective inspections and sanctions for noncompliance. Russia, with its vast stockpiles of nuclear material and a network of technological cooperation, will be a key player in these efforts. To this end, the G8 launched an initiative in 2002 to finance the safeguarding of Russian nuclear stockpiles with U.S.\$20 billion over ten years.

3. We also have a common interest in dealing with regional conflicts and instability, such as in the Balkans, the Caucasus, and Central Asia. I regret that Russia withdrew its contributions to SFOR and KFOR in 2003, the only serious joint action between NATO and Russia. But Russia continues to support operations in Afghanistan with intelligence and transit.

Strategic cooperation on these issues is necessary. But unfortunately the common threats do not always translate into common approaches for dealing with them. We are confronting several major problems in our relationship.

POSSIBLE CAUSES OF TENSIONS

While Russian criticism of NATO enlargement subsided in recent years, prior to that time it was harshly attacked as an expansionist project endangering Russian security. In the run-up to the accession of seven new members, concerns were voiced again, in particular against establishing permanent U.S. bases on the territory of new members and against the Baltic countries. The U.S. was also criticized for not respecting the modified CFE (Conventional Forces in Europe) Treaty, which sets limits on troop deployments. But the Baltic states can only join after the treaty has been entered into force. The main reason that states have not ratified the treaty is that Russia has failed to fulfill its commitments to re-deploy troops. At the OSCE's Istanbul Summit in 1999, Russia pledged to withdraw troops from the Transdniestr Region of Moldova and from Georgia unless the local government agreed to an extension by the end of 2002. But since then little progress has been made on either count.

Russia's criticism may have something to do with the contradictions in Russian strategic thinking. Whereas Putin's national security strategy of 2000 emphasized domestic instability and threats to security, the current military doctrine is still designed to fight the battles of the Cold War. Furthermore, some serious domestic challenges are yet to be accepted. The negative demographic trend is endangering future development, especially in the Far East, and the low birth rate (under 1%) and the rapid spread of AIDS (over a million people are infected) paint a horrifying scenario. All of this may negatively affect Russia's future international role.

However, most of the problems in our relationship with Russia are actually related to domestic developments in that country. Criticism of massive human rights violations in Chechnya was toned down as part of the joint fight against terrorism but became more vocal again both in the EU and in the United States towards the end of 2003. The EU called upon Russia to stop the disappearances and the widespread abuse at the hands of security forces, to improve access for humanitarian aid, and to seek a peaceful solution to the conflict. Because of the problems Russia was downgraded to a "potential" strategic partner in the final version of the EU Security Strategy in December 2003.

SKEPTICISM OVER CONCENTRATION POWER

President Putin seems to have made some progress toward instating the rule of law (he called it the "dictatorship of laws") by reasserting the authority of the central government over the regions and busi-

ness oligarchs. But in an attempt to create a strong state he may have damaged the fragile roots of democracy in Russia, undermining the hope for common bonds with the West:

- He gained full control of the electronic media when the last independent station, NTW, was taken over by Gazprom and the editorial board was changed.
- The chief executive of Yukos was arrested in autumn 2003 after pledging financial support to opposition parties and starting negotiations to sell a significant stake in his company to Exxon Mobil or another foreign company without consulting the Kremlin. It may be true that Mr. Khodorkowsky benefited from the wild and nontransparent privatization process in the early 1990s, and that he and other oligarchs should be held responsible for any illegal activity. But the proceedings against him raise serious concerns about the respect for legal due process and the independence of the judiciary.
- Last but not least, President Putin perfected his design of "directed democracy" with the stunning success of his parties, United Russia and Homeland, in the December 2003 Duma elections. The only two democratic opposition parties, Yabloko and the Union of Right-Wing Forces, failed to unite and were marginalized. In his desire for control, President Putin may have gone even further than he actually wanted to, trying to co-opt several key leaders of opposition parties and civil society for his presidential advisory bodies. But his monopolization of power puts him at odds with the basic values of his partners in the West. There is now growing doubt that President Putin will be able to establish a functioning market economy without any checks and balances in the political sphere, because any such system will be open to corruption and nepotism. Considering the strength of some of the oligarchs in the business world and in organized crime, this is a real danger. And it may negatively affect partners in Europe and the U.S. as Russia continues to integrate into the global market.

RECENT POSITIVE STEPS

There are, however, some encouraging signs in relations with Russia. After several months of bitter accusations, Russia and the EU agreed to extend the Partnership and Cooperation Agreement of 1997 to the 10 new member-states. The EU also granted Russia better market access for some steel and agricultural and nuclear-energy products in order to prevent the disruption of traditional trade relations with Central and Eastern European countries. In addition, the transit of goods between the Russian mainland and Kaliningrad was guaranteed, and visa-free-travel was offered as a long-term prospect.

But the regulation of transit to and from Kaliningrad is insufficient to deal with the problems of that area. The enclave is in danger of becoming a hotbed of poverty, infectious diseases, and organized crime. Unless Russia and the EU both seriously commit themselves to promoting economic development in Kaliningrad, the region will fall further behind, not only in comparison to neighboring Poland and Lithuania but also with the rest of Russia. If the current trend were reversed, Kaliningrad could become an important example of strategic cooperation between Russia and the EU.

CONCLUDING REMARKS

It is important that we continue to identify areas of common interest and engage in practical cooperation with partners in Russia. The fight against terrorism will not suffice as the basis for long-term fruitful cooperation. Energy policy has been suggested by many as one potential common strategic interest. Russia is the largest producer of oil and gas in the world as well as one of the biggest exporters outside OPEC. Since both the U.S. and the EU want to reduce dependence on fossil fuels from the Middle East, Russia is seen as a key partner. The country, however, needs significant investments and technological innovation in order to improve oil exploration, drilling, and transport through pipelines. Foreign investors and partners will need to play a key role in the modernization process. But so far no strategic agreement has been reached. One of the reasons may be that the interests of the EU and the U.S. conflict, since they are competing for access to scarce resources. The EU, apart from securing safe oil supplies, would like to improve energy efficiency and address the problem of climate change by luring Russia into signing the Kyoto Protocol. The U.S seems to be primarily interested in securing large oil supplies to counter the upward pressure on prices. Private businesses may have their own interests and not desire political intervention.

But the key factor probably is that neither side trusts the other enough to agree to strategic interdependence. We do not know whether we want to rely on a Russia whose direction we are not certain of whether it will stabilize or collapse. And the Russians probably fear that they will be taken advantage of in any kind of long-term deal. In addition to all of that, both the European Union and the transatlantic relationship are undergoing a period of fundamental change.

Especially for Europeans, pragmatic cooperation with our Russian neighbor is imperative. We need to promote democracy and the rule of law in Russia and speak out if our views differ from those of the Russian government. Only in that way can we find out whether there is a meeting of hearts and minds and whether our relationship can develop into one of true strategic partnership.

Russia's Response to Terrorism: The Need For a New Approach

Dr. Andrei Piontkovsky1

A fter the latest terrorist attack in Moscow, we are again hearing proposals to bring back the death penalty. There are calls to "Torch them with a red hot iron" and to "Go to the end." There are demands for applying the principle of collective responsibility to entire ethnic groups (which in mass consciousness means "Beat up the blacks"). On the first page of our largest-circulation newspaper we see a father, whose son died in the latest tragedy, saying, "I now want to kill all of them, anyplace I see them." We can only feel sympathy for this grief-stricken man. But with calls to "Go to the end" we are again trying to obliterate from our memories the fact that we have already "gone to the end" more than once, and that we have already torched everything we could. We are forgetting that we have already applied the death penalty in advance, as a preventive measure, against tens of thousands of peaceful fellow citizens. We are also forgetting that on the other side there are undoubtedly quite a few people who are saying about us Russians, "I now want to kill all of them, anyplace I see them." Without understanding these realities it is impossible to grasp the true nature of the terrorism that threatens us or to find effective defenses.

METAPHYSICAL TERRORISM

In its twentieth-century form, terrorism was usually a means to an end, a tool for achieving concrete political goals. In dozens of armed conflicts, separatists such as the IRA or the Basques used terror along with other methods to win independence or autonomy from a central government. But in the twenty-first century we are confronting a new phenomenon, which I would conditionally call "metaphysical terrorism." This new form of terrorism, practiced mainly by radical Islamists such as Al-Qaeda, does not even present specific demands, such as the release of a prisoner or the independence of a region. As a matter of principle it simply denies Western civilization the right to exist, and seeks its total destruction.

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That distinction is crucial. For a long time we confronted a Chechen independence movement that in specific situations sometimes used terror as a means to an end. But the challenge facing us now is one of metaphysical terrorism, and to a large extent it is we ourselves who have brought that challenge into being. We have constantly repeated that we are fighting not Chechen separatism but international terrorism, and this has finally become a self-fulfilling prophecy. Thanks to the methods that we have used in this war, we have turned almost the entire populace of Chechnya into our enemies. We have created a huge reserve of living bombs, desperate people ready to carry out the plans of worldwide metaphysical terrorism.

Consider what our head of state said right after the metro explosion: That Russia does not negotiate with terrorists but destroys them. It seems to me that this phrase reveals precisely his lack of understanding of the type of terror we now confront. His wording would have been perfectly "a propos" (though debatable) if the authorities had received a phone call from some "liberation front" right after the explosion, declaring, "It was we who blew up the subway. If you do not carry out such and such demands within two weeks, we will blow up something else. We propose that you negotiate with us." But for a long time there have been no such communications, so the words of our head of state make no sense. And the terrorists' answer to his words has simply been silence—the meaning of which is, "We do not negotiate with Russians, we blow them up in their metro."

Of course we can tell ourselves if we like that we do have a message from the terrorists: The European parliament's resolution calling on us to negotiate. If we seriously believe that, let's torch the European parliament with a red hot iron.

THE NEED FOR A NEW GOVERNMENT APPROACH

Let me suggest a thought that may be paradoxical. The classic enemies with whom we have long fought, the Chechen separatists led by Maskhadov and the like, have objectively become our allies in the fight against global terrorism—because global terrorism is now destroying, first and foremost, Chechnya itself. We can still try to separate Chechen separatism from global terrorism; as a political task this is far from unsolvable. But nobody in Chechnya who is offering any kind of concrete proposal, including Maskhadov, is now insisting on full independence. In general the words "independence" and "territorial integrity" have simply lost their meanings in the face of the tragedy that has befallen both the Chechens and ourselves. The only thing that makes sense now is a radical change in our government's treatment of the Chechen populace, a full halt to the abuses being committed by the federal armed forces and the Kadyrov gunmen, and a willingness to negotiate with anyone who is not conducting terrorist attacks against peaceful citizens.

There is one more fearsome aspect of this problem. All of these calls to "Beat the blacks" and so on are triggering a self-perpetuating cycle of violence and terror extending far beyond the borders of Chechnya. We started this war to keep Chechnya Russian; what we are achieving is to turn Russia into Chechnya.

Part Six

Responding to the Current Challenges

Ambassador Jean De Ruyt¹

THE CHALLENGES OF THE CURRENT ENVIRONMENT

ur topic—the broad concept of security for the twenty-first century—is a very ambitious one. In introducing the panel and as the only representative from the United Nations, I would like to outline how we in New York approach this issue which in the United Nations is debated every day. The post-Cold War environment is one of increasingly open borders and easy communications, with aeroplanes, mobile phones and the Internet reaching the most remote areas of the world. This creates increasing interdependence in trade, investments, and energy resources. A threat to the environment in one part of the world can be a threat for the entire planet; diseases spread instantly, migrations, organized crime, and terrorism are a challenge for every society. In such an environment, a security failure even in a remote place in Africa can affect the most protected societies in Europe or the U.S.

The problem is that this interdependence is developing at a time when inequalities among our societies are growing instead of diminishing. The opening up of the world has not necessarily brought our civilizations closer to each other. On the contrary, differences tend to generate clashes: Cultural differences generate misunderstandings, and inequalities generate frustration and resentment, which can easily translate into aggression or terrorist activities.

INSTRUMENTS TO MEET THE CHALLENGES

This is the situation in which we find ourselves: A very open world where misunderstandings due to cultural differences and inequalities have an increasingly destabilizing effect.

We must address this complex situation, but we cannot use the traditional tools of foreign and defense policy because these threats are complex, global and can often be addressed only (remotely) far away from our national borders. I have identified four possible instruments which might help us face them:

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1. The first is the development of solidarity at the world level. We must address the issues of poverty, inequality, education, health care, the promotion of democracy and the rule of law, fulfilling the committments of the Millenium Declaration adopted by the leaders of the world in the year 2000.

2. The second instrument is preventive action. Many crises can be diffused if they are addressed in time with the tools of preventive diplomacy. Actions of this type can be carried out by neighboring countries, by regional organizations, the European Union, the UN or non-governmental organizations.

3. The third instrument is military intervention. Preventive diplomacy as well as management in a crisis zone often require the use of force. All our militaries are currently adapting their means to be able to participate in preventive actions and peace enforcement operations.

4. The fourth instrument is the conclusion of universal treaties, those which establish principles and values at the world level, those which organize the protection of our environment and also treaties to face new challenges like the spread of weapons of mass destruction and terrorism.

CONCLUDING REMARKS

I believe that multilateralism is the key word when it comes to facing the global threats of the twenty-first century. These threats can only be addressed by collective action with multilateral tools.

Global Responses to the 21st Century Challenges

His Excellency Linas Linkevicius¹

oday we live in a very dangerous world, where we have to expect the unexpected. The enemy we face is a far more unpredictable one than we have ever had. His cause is not ideology or politics, but hatred and destruction, and he will not hesitate a moment to obtain weapons of mass destruction. I would like to raise a few ideas about how the global community should respond to these challenges of the twenty-first century.

THE NEED TO TAKE ACTION

A good security concept must outline clear goals, evaluate threats, and indicate means for eradicating those threats. But do we really need a new concept? We already have clear goals: Combating terrorism and the proliferation of WMD, preventing ethnic bloodshed, and strengthening democracy across the globe. We know where the threats come from: Rogue regimes, failing states, religious hatred, frozen conflicts, and so on. We also know what we have to do to deal with these problems. What we need now is action, not reflection, not new concepts, not food-for-thought papers. The Madrid bombings were another wake-up call to European leaders. But while the tragedy of September 11 led to the defeat of the Taliban regime in Afghanistan, will we remember March 11 as the day terrorism defeated Europe? We all know what happened when Europe ignored the threat of Fascism back in the 1930's, and we must not make the same mistake again.

We do not lack resources—we lack efficiency. We have developed a lot of good concepts, for example, the EU's Headline Goal for 2010, but the first one has not yet been properly implemented. It is good to have ambitious plans, but good planning must take into account the reasonable allocation of assets. On the one hand, small countries such as Lithuania seek to pool resources in order to avoid unnecessary duplication. On the other hand, we cannot keep tearing ourselves apart and devoting all of our people, time, and money to analyzing an ever-growing number of new initiatives. Perhaps we should consider declaring a moratorium on the creation of new concepts until we manage to implement existing ones.

We cannot fight real threats with paper concepts. What we lack is the political will to take radical steps that may be ahead of their time. The UN peacekeepers were unable to stop genocide in Srebrenica, but

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what was right in that situation—to abide by existing international law or to defend innocent people at any cost? NATO intervened in Kosovo without a clear UN resolution and saved many lives, but this year we commemorate the tenth anniversary of the genocide in Rwanda, where 800,000 people were murdered in 100 days. Are we ready to prevent that from happening again? We must finally admit that while we live in the twenty-first century we still do not have a reliable, legal international crisis-management mechanism for responsive decision-making procedures and capabilities. We have many international organizations, but in most cases these organizations can act only when it is too late.

REVAMPING INTERNATIONAL INSTITUTIONS FOR BETTER COOPERATION

We must rethink the overall framework of international institutions. The UN does not provide global security the way it is expected to—the Security Council, which has the supreme authority to preserve international security, vetoes peacekeeping initiatives more often than it endorses them. But reforming the UN would not be sufficient: Only the combined efforts of nation-states and several institutions—the UN, NATO, the OSCE, and the EU—can bring peace, security, and well-being to the world. Only by working together can the UN, NATO, and the EU bring the Middle East Peace Plan back to life. The Greater Middle East Initiative must grow beyond dialogue to a wide network of relationships and partnerships among different institutions and states.

DEVELOPING PEACE PLANS

Europe is not yet whole, free, and at peace. We must admit to ourselves that the isolating strategy being used on Belarus has failed and must be adjusted. We cannot expect positive changes within a country by isolating it from the outside world. Combined efforts by the UN, NATO, and the EU paid off in the Balkans, and these organizations could take a similar approach to the South Caucasus, another troubled region close to EU borders. We must draft an extensive peace plan for this region before it is too late. Instead of isolating failing states we must reach out to them, and help them turn into states of success.

In addition to diplomatic crisis-prevention efforts, we must also be ready to use military force preemptively. We cannot afford a strategy of reacting to threats of the kind we face today. Using conventional measures against non-conventional threats will not work—we simply cannot deter ruthless fanatics with conventional forces. We must be one step ahead of our enemy if we are to succeed. This means having expeditionary forces carry out preemptive actions (we do need a world police force).

CARRYING OUT PEACE-BUILDING OPERATIONS AT THE SAME TIME AS MILITARY OPERATIONS

As a Minister of Defense, I must ask myself what the role of the military should be in ensuring human security and providing civil defense. The armed forces can remove Taliban-like regimes but can they win peace and establish a constitutional order? As we are learning in Iraq, to prevent post-conflict anarchy, civilian crisis management and peace-building efforts must take place at the same time as military operations. A good example is the situation in Afghanistan, where a NATO peacekeeping force provides security and order while provincial reconstruction teams work with local authorities to rebuild the country.

MOVING FROM NATIONAL SECURITY TO HUMAN SECURITY

We must change our mindset and remove the notion of national borders from our perception of security. Modern threats do not target borders—they erase borders. Terrorists do not target territory or state sovereignty—they target people. Therefore we must shift our focus from national security to human security, the security of each and every human being. Economic deprivation, water and food shortages, organized crime, corruption of state bureaucracy—these are the old causes of what we call the new threats. As long as human life and welfare are at risk, new failed states, new Husseins, and new bin Ladens will emerge.

USING COLLECTIVE ACTION

We need to find collective solutions to transnational threats. I am happy to see that NATO is dealing more often with security problems in a collective way, through air policing, the NATO Response Force (NRF), Allied Ground Surveillance (AGS), and multinational logistics, to name some of the most important allied projects. I would like to express sincere gratitude to Belgium, Denmark, the United Kingdom, and Norway for providing air force assets for the air-policing mission above the Baltic States. It is a great indication that the spirit of collectiveness within NATO is stronger than ever.

FURTHER STRENGTHENING NATO-RUSSIA RELATIONS

NATO-Russia relations present another good example of our ability to transform our thinking. The former enemies now sit at one table and make common decisions in some 20 working groups. Of course, there is always room for improvement in taking concrete steps forward. For example, a Russian peace-keeping brigade assigned to NATO operations would be a real breakthrough into the kind of cooperation that is needed in the twenty-first century. NATO and Russia could also consider launching a common training project in Kaliningrad. Lithuania is ready and willing to play an active role in further strengthening this partnership.

THINKING AND ACTING GLOBALLY

I do believe that small countries such as Lithuania can make a difference in today's world. Threats to peace and security concern each and every nation— size does not matter. Small states must start thinking and acting globally: If we make the right decisions and adapt our military to the new environment, we can narrow the capability gap between the U.S. and Europe. Usability of forces in international operations must become the buzzword in our defense planning. For example, one day Lithuania may find itself in a situation in which a substantial part of our armed forces is deployed in a region far away. Though some say that modern soldiers are no longer glorious heroes, defenders of the motherland, I ask you, what can be more heroic than to risk one's life fighting for the peace and welfare of another nation?

CONCLUDING REMARKS

While we talk about the uncertainty of the global security environment, the tragedy of September 11 was in fact the end of the world as we knew it. Since then the world has changed, and our thinking regarding global security must change accordingly. But let me finish my remarks on an optimistic note: Saddam Hussein is a war prisoner, Colonel Quaddafi wants to disarm, India and Pakistan are holding peace talks, Iraq will soon have a democratic government, and, last but not least, Afghani children can play football again. I hope these are only the first signs of how the global security order will look like in the twenty-first century. But to get there we need to act and we need to act now.

His Excellency Linas Linkevicius

A Broader Concept of Security for the 21st Century

Mr. Marc Perrin de Brichambaut¹

would like to use as my starting point the issue that Minister Struck highlighted—the global nature of present and future security issues, their multiple dimensions, and the need for broad cooperation among nations to deal with them.

TRANSFORMATION AND SOCIAL CHANGE

An analysis of our security problems, the risks and threats, suggests that they derive largely from accelerated transformation and the modernization of societies. These processes bring remarkable benefits regarding economic growth as well as improve social conditions within an increasingly interdependent global economy. However, they also create considerable tension within and among societies. These tensions, both domestic and international, are likely to intensify in the coming decades because interrelationships are strong and growing.

Any vision of security, therefore, must start from an understanding of the dynamics of social change within every society, in all its complexity. The first step is to carefully assess the situation in each case and try to see where the forces at work are leading.

For instance, in the field of nonproliferation, states are motivated by a variety of cultural, social, and political factors: The needs of regimes to assert themselves at home, regional ambitions, defending against perceived external pressure, and self-esteem.

STRATEGIES FOR TRANSFORMATION

A continuing analysis of the dynamics of societies raises the question of how the community of advanced nations can encourage, facilitate, and reward evolutions that allow the orderly and peaceful transformation of each society, according to its own dynamics, toward a situation that meshes with the universal values that all societies seek: Human rights, economic development, health, education, and participation in government. Incorporating these values is basically the responsibility of each society; out-

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side involvement can result in shock and rejection, and direct interference is traumatic. Yet because of self-interests and the need for collective solidarity, live and let live is not an option.

Determining which sort of strategy the more advanced nations should use regarding the Near and Middle East is now on the table. The U.S., after supporting the status quo for years, has shifted to a strategy of actively transforming the societies in the region. It is now dedicating to this ambitious endeavor considerable political attention, resources, and manpower, but it is encountering serious reservations and even hostility. Paradoxically the U.S. is using a UN document written by Arabs to argue in favor of the need for change and reform.

The extreme difficulties experienced so far show how unpredictable a strategy of active transformation can be. The modernization process in this region needs time, as well as broad support and acceptance by a large majority, to make its effects felt.

The EU is following its own slower strategy in the region and does not have the same type of commitment. It is emphasizing development assistance and political and cultural cooperation in a broad dialogue—the Barcelona process. But ultimately only cooperation between the EU and the U.S. to define and implement strategies and their cooperation in the field of global governance incorporating the UN and other multilateral tools can make sponsoring orderly change viable. Until that happens, there are going to be many sources of instability as well as a large demand for the main tool of preventive and curative action, because it is the only tool available.

USING MILITARY FORCES

Military forces are clearly the principal response component of states that are willing to act; they are the most effective tool available on short notice to support nation building. They are also likely to be in high demand, but they will need to be complemented and used wisely because of their cost. This will be particularly true for European countries, which for societal and cultural reasons are less willing to bear the burden of high-intensity military action. These countries will be content to let the United States deal with the brief periods of high-intensity warfare, which have occurred once every four years in the recent past. Only a few Europeans will be capable of and willing to work with the U.S. in theater crises.

Indeed the trend is already visible: European countries are now acting in coalition, within NATO or the EU, or are greatly involved independently in stabilization operations around the world. These countries are currently deploying almost 70,000 troops on far-flung missions: 14 percent of the United Kingdom's ground forces and 5 percent of Poland's and Portugal's. The transformation of all of Europe's ground forces will increase the absolute number and relative ratio of forces that can be projected and provide them with the equipment appropriate to the situation.

Three requirements derive from the current trends regarding forces needed by European countries, bearing in mind that an unpredictable security environment requires flexibility and responsiveness.

Infantry

Because stabilization and prevention require boots on the ground, sheer numbers will continue to matter. The transformation process will lead to a larger number of available troops because of professionalization and training.

European nations should aim at being able to continuously deploy 125,000 troops, 15 percent of their ground forces. This will come at significant cost because some of these forces will need to be at high readiness and be projectable, requiring expensive support (U.S. personnel costs have grown by 17 percent in 7 years). Today's missions are not low tech, and controlling space and violence requires sophisticated equipment.

Intelligence

Performing complex stabilization duties will require a good understanding of local situations as well as continuous monitoring; both are needed in order to effectively combat the formidable capabilities available to the forces of disruption and destruction. Terrorist modes of actions can be prevented only through relentless human and technological search operations and, when necessary, destroy operations. Good intelligence capabilities will be particularly crucial for those Europeans who are close to areas of discord and whose societies are vulnerable. The civilian-military dimension is also essential to support the processes of stabilization and nation building.

Interoperability

It is clear that we must work cooperatively in various frameworks— interoperability affects not only communication but many other dimensions, including structures, training and exercises, and being able to work together. We must prepare in advance a number of key interfaces between different kinds of forces.

The U.S. is in a class by itself when it comes to using information technology and creating sophisticated Network Centric Warfare capabilities. These fast-evolving new capabilities are very elaborate but not always accessible to others, nor are they always relevant to the concrete needs of a given theater. The U.S., therefore, must build into its new information systems usable interfaces that allow partners and allies to plug in easily.

Europeans must work hard to become interoperable among themselves. NATO is the tool for making this happen, although it has not proved fully effective in the past. Europeans also must learn to combine the civilian and military tools at their disposal to pursue stabilization and nation building. And both Americans and Europeans must learn to work with other countries that are likely to provide a significant part of the manpower involved in stabilization. Non-U.S., non-EU countries have provided the 70,000 troops now deployed by the UN throughout Africa. Structures and interfaces will need to be designed to work with them.

CONCLUDING REMARKS

In summary, for Europe to assist in the orderly transformation of societies so that long-term global security can be insured, we will need the effective support of substantial military forces to promote stability and nation building. While this work is already well advanced, it needs continuous and constant dedicated effort.

Mr. Marc Perrin de Brichambaut

The Security Threat and its Political, Military, Technological and Industrial Responses

Mr. Jean-Louis Gergorin¹

et me start by saying that, as a first-time participant in this Workshop, I am impressed by its quality and free spirit. In my speech, I would like to concentrate on three issues: The current security threat, the political-military response, and the technology and industry response. The points will be discussed below.

THE THREAT

For most decision makers in Europe, and despite what leading journalists put forward as public opinion, I see no major difference with the U.S. assessment of the threat. We are indeed in a situation very comparable to that at the beginning of the Cold War. We are facing a major enemy—a loose coalition of Islamic radical terrorists with the potential to use weapons of mass destruction in the long term—and a war that will probably last for years if not decades. Exactly as in the Cold War, we must face this threat with a global response.

However, there is one major difference between Europeans and Americans that has not been emphasized. It is the fact that there are two ways to fight an enemy: One is to neutralize him by killing him or arresting him, the other is to neutralize him by converting him or reducing his constituency. If we look at the first three years of the Cold War, between 1947 and 1950, when the United States and President Truman decided to respond to the Soviet challenge against Turkey and Greece and to the Communist challenge in Western Europe and Asia, we see that the reactions of the "founding fathers" of the Western Alliance, President Truman, General Marshall, and Secretary Acheson, were both military and political. NATO was created, the rearmament of U.S. forces was begun, and the military build-up was restarted. At the same time, there was the Marshall Plan and a number of activities that were undertaken, sometimes covertly, by U.S. intelligence agencies to support democratic movements in Western Europe—social democratic movements and social-democratic non-communist trade unions.

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The net result of this activity was that, from 1947 to 1950, the number of what I would call Communist sympathizers in the major political battlefield of Western Europe significantly decreased and the strength of Communism was sharply reduced. This was a major achievement and it was further developed by the economic rebuilding of Europe and European integration, with the full support of the United States.

If we now look at the first approximately three years of the new world war against Islamic terrorism—from September 11, 2001, to May 2004—we see that the exact reverse has happened. After an initial military success, we are not doing extremely well militarily, and find ourselves in a stalemate; even though we are prevailing somewhat in Afghanistan, we are in a bad situation in Iraq. Politically, things are far worse. According to polls the Pew Research Center has taken, as well as to analyses that have been conducted in France, the U.K., and Turkey, not to mention in the Arab, Islamic, and Asian worlds, the number of those sympathetic to radical Islam in the Muslim world has dramatically increased. For reasons that we all know, the situation further deteriorated in May and June of 2004. We are facing a major challenge that we must absolutely respond to. Things will only get worse if we don't.

THE POLITICAL-MILITARY RESPONSE

I believe that there is no better organization than NATO to face these threats because NATO is an alliance that is both political and military. Its success is well established and it is enjoying even greater legitimacy since it integrated the new Eastern European democracies that were freed from Communism. This integration, by the way, is a perfect example of why NATO is successful. It is successful because it is based on multilateral consensus, something that is very important in terms of legitimacy although it is sometimes hated in Washington. It is a consensus that does not prevent NATO from being effective, as was demonstrated in Kosovo. So NATO is the best solution, especially since the concept of the "coalition of the willing," which was so fashionable in Washington two years ago, has been found to quickly turn into the "coalition of the unwilling" when things go wrong. What is happening now with the coalition of the willing in Iraq clearly demonstrates that this is not the right way to proceed.

TECHNOLOGY CALL AND INDUSTRY RESPONSE

It is fairly clear that we are facing a major transformation in the art of war. I am especially grateful to Dr. Wells for giving one of the greatest exposes on network-centric capabilities and what they mean. However, with due respect, I must disagree with Dr. Wells on one point that is often mentioned by U.S. presenters: It is the notion that what is happening will further reinforce the technology dominance of the U.S. I do not believe that this is entirely true. We are building toward network-centric warfare but we should not forget about network-centric terrorism (NCT). In fact, September 11 was an example of network-centric terrorism using crude but effective network-centric capabilities, including the Internet and mobile phones. NCT will get worse with the development of very advanced commercial technologies.

Second, I think that Europeans are absolutely able to innovate in the network fields, as demonstrated by their success in a variety of commercial network-oriented technologies or software technologies. We can see the success in Europe of Nokia, of SAP, of various telecom companies, of Dassault Systems in CATCAM, clearly demonstrating that we are not lagging. We have only one technology that goes back and forth between Asia, Europe, and America. In platforms, Europeans have also demonstrated that they are not lagging at all in their work on satellites, helicopters or aircraft, both commercial and military.

Yet there clearly is a funding gap, and we must do better and harmonize better. This is why I am personally in favor of a far more powerful European defense agency than the one that is currently being planned, though it is a first step.

There is also another point: Just as Americans must accept that they cannot win wars if they do not win the battle of the minds in the Islamic world, they must understand that they will not convince Europeans to fully accept a totally integrated defense market if there is not a two-way street, if the technology limitations that currently exist are not lifted. These limitations paralyze effective transatlantic cooperation. However, when we do succeed in overcoming these limitations, as was the case recently with the Airborne Ground Surveillance System—an important project for NATO in this new era—we see many good prospects. So I believe that Washington must make efforts to keep a more open mind toward Europe regarding technology transfer and technology cooperation. At the same time, European nations need to accept, rationalize, and eliminate waste and, as soon as they can, increase their budgets.

Mr. Jean-Louis Gergorin

The Balkans, Afghanistan, and the Control of Nuclear Armaments

Ambassador Jaromir Novotny¹

OPENING REMARKS

t is difficult to speak on the last day of the workshop, when almost everything has been said. We have heard how successful we are in the Balkans, how smoothly NATO and EU enlargement are progressing, how the general situation in Europe is quite good, how cooperation between the West and Russia is on the right path, how the situation in Iraq is not ideal but will be better, and how we are doing well so far in Afghanistan. I would like to make some remarks that go in a slightly different direction.

CURRENT ISSUES IN THE BALKANS

I do not agree that we are truly successful in the Balkans. What have we achieved after more than 15 years of engagement? Yes, the people of Bosnia, Kosovo, and Serbia have stopped killing each other, and this is a success. But what else have we achieved? We have not solved the basic problem: the statehood of these territories has not been defined. We have created two international protectorates (Bosnia and Herzegovina, and Kosovo) and one artificial state called Serbia and Montenegro, which their inhabitants do not like. We have given them deadlines to solve their problems, but they have all been postponed. And Bosnian politicians, like their counterparts in Kosovo and Serbia and Montenegro, are now going ahead only because of heavy pressure from the international community.

The last ethnic riots in Kosovo have shown us what Kosovars think about human rights. The international structures in Kosovo were surprised and completely unprepared for the eruption of atrocities. Kosovo is actually governed by local mafia organizations, and the society there is one of the most corrupt in the world. To make matters even worse, the international organizations in Kosovo are becoming more and more corrupt as well.

What is the future for Kosovo? What are we proposing to its inhabitants? Are the people there still part of Serbia and Montenegro, which, according to all valid U.N. resolutions, they are? Is Kosovo a territory

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with special status, different currency, a different system of taxation and law, protected by the U.N. and on the path to independence? Or will Kosovo be united with Albania? Nobody is prepared to define its future status.

Bosnia and Herzegovina is another difficult situation. It is an international protectorate that consists of two state entities (perhaps three—what is the status of Brcko?) and three national entities. The Dayton Agreement froze all its problems, making the main obstacle to progress the relationships inside. This protectorate is also corrupt at all levels of society.

There, as well as in Kosovo, the very fragile peace cannot be sustained without huge financial support from the international community and without a visible military presence. How long will our countries be ready to pay for it?

Serbia and Montenegro were forced together. The deadline for solving the problems of their being together is 2005. But in the time they have had so far, nothing has happened. They have two different economic systems, and they use two different currencies. Next year shall we give them another deadline? We are not solving the problems, we are only postponing the solutions with more deadlines. In fact we are preserving the status quo. But for how long?

THE "FORGOTTEN WAR" IN AFGHANISTAN

Afghanistan looks to me like a forgotten war. Karzai has control only over Kabul and only during the day. Warlords continue to keep their private armies. Drug production is at a record level, with an estimated value of U.S. \$25 billion. Do we have this amount of money to replace the warlords' profits? Some are saying that nobody is rich enough to buy Afghanistan. The warlords are on your side only until the moment they are paid, and if somebody offers them more, they will be loyal to him.

THE NEED FOR NUCLEAR ARMAMENT CONTROL

It is a great paradox that the nuclear armaments control mechanism has been the only victim of the end of the Cold War. At the close of the 1990s, nuclear states other than the U.S. and Russia had only 5 percent of the nuclear arsenals. Today they have 20 percent, and during the next 10 years they will have 60 to 70 percent. But no one is interested in this. No one is counting how many nuclear players we have now. The public was much more interested in this issue 10 years ago, but now it is not. And the U.S. and Russia aren't interested in each other's arsenal either. Their interest is on the same level as France's interest in the nuclear arsenal of the U.K. But both powers, the U.S. and Russia, will have to renovate, change, and modernize their nuclear arsenals during the next few years, because, due to their age, they are becoming obsolete.

Today we have no effective international agreement that acts as a nuclear armaments control mechanism. And if we cannot satisfactorily solve the problems of the nuclear programs of North Korea and Iran, then we can expect to see an eruption of efforts to obtain nuclear arms, from Japan to Saudi Arabia.

Future Wars: Meeting the Challenges

Dr. Werner Fasslabend¹

OPENING REMARKS

Www. For me, the question of who will start the war is the beginning of an answer. I see two major groups: States and non-governmental organizations such as tribes or different ethnic groups, and especially private war organizations. Al-Qaeda certainly was a breakthrough in the latter, because it went from a regional stage to a global one. I believe we will be confronted by similar phenomena in the future.

What can we do? I assume that in the future we will have five or six, or at least three and a half, real players on the global stage, and that the relationship among them and their regional influences will be not only important but decisive as to whether or not we will have peace. The questions of regional order and global order are therefore crucial for us.

SIGNIFICANT WORLD HOT SPOTS

But everyone will have problems. For China, the province of Xinjiang, the China Sea, Eastern Siberia, and the country's predominance in southeast Asia are all very important, but the most important topic will certainly be Taiwan. Why? Because this is possibly a hot spot between the interests of the United States and the interests of China. Bringing Taiwan back home to China would mean, on the one hand, that the belt of islands and peninsulas between the United States and the Asian mainland would be interrupted, so there is certainly some American interest in holding Taiwan in the U.S. zone of influence. Probably this is a question of time and involves the tendency toward independence, but whichever side it goes to, Taiwan, in my view, will be the hottest spot during the next 20 or 30 years.

Regarding India, probably Satish Chandra can tell us much more. But there will be new threats as I see it, not only because of climate change or a demographic explosion, but also because of the question of

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who will influence Southeast Asia. Of course the situation in India is not isolated, but will correspond to the situation of the fast-rising Chinese power.

Russia will also have problems. I will not say much about them, but a new one will involve Eastern Siberia. The so-called unequal treaties from the Nineteenth century and the demographic explosion in China, together with climate change, will bring this question to the front. You can imagine that something will happen if you realize that every year, even with the one-child rule, the population of China increases by between 30 and 35 million people; within two years China increased its population more than the whole population of France. Compare that with the 150 million Russians in the vast Russian empire.

The Middle East will certainly remain another big problem, and the outcome will depend on what the United States is able to do there. But I want to warn you about thinking this is an Islamic question. This is not an Islamic question. It is just the consequence of geography and an issue of some regional countries having major power and the Islamic states being unable to form a genuine power. If we build a picture of an Islamic threat, then we will get one and we will not be able to handle it. We will lose it, I am absolutely sure. I think we must spend a good deal of time thinking this over.

MEETING THE CHALLENGES

How can we minimize the risk? Of course, we must establish something like a global order system, at least a structure. We must define the "in-between states" because there is a bank of small and slightly larger countries in-between the big powers. We must also define the most sensible points to concentrate on and we must try to take clear steps to define the priorities.

The question of the Middle East is the highest priority for me at the moment, and when you get right down to it you see that it is, in reality, a question of a few square miles in Palestine—which side they will go to. But this issue does not only threaten the security of the United States, Europe, and the Middle East itself, but it may be decisive as to whether the United States keeps or loses its world dominance. I underline every word General Naumann said, and believe that we have to make these facts even clearer. And we have to act decisively.

At present, the most important thing is to not give private war organizations like Al-Qaeda a chance. What I mean by that is that the biggest danger is polarization, polarization within the Arab and Islamic societies. In the short term you can only go to the cells and wipe them out, but in the long term you have to go to the roots and find the reason why, the background of the problem. Polarization will give private war organizations more strength; one of their major goals is to polarize society and in that way get financing and recruit forces. We must not give them this chance. First, we must integrate all the minorities in our homeland, in the United States and in Europe, and next we must cooperate intensively not only with the governments but specific societies in countries in which private war organizations play a role.

CONCLUDING REMARKS

In conclusion, I see a political window in 2005. The year after the American presidential election could be the year we get a least one step further in the Middle East. I hope we will manage to find some solutions that will be decisive for the next 10 or 15 years.

An Indian Perspective on Global Security

General Ashok Mehta¹

will try to give an Indian's perspective of the developments following September 11, including the global fight against terror and the situations in Afghanistan and Iraq. The question must be asked: Is the world a safer place nearly three years after September 11? The answer is no. Sri Lanka's Rohan Gunaratne, an expert on counterterrorism, says that Operation Enduring Freedom, that is, the war in Afghanistan, merely dispersed Al Qaeda and the Taliban. It made the United States and Europe secure only until the Madrid bombings of March 11, 2004.

The danger of terrorism is widespread. In the "Patterns of Global Terrorism" report of 2003, India was named the biggest victim of terrorism, followed by Colombia, Saudi Arabia, and Pakistan. The arc of instability stretches from Palestine to Pakistan, and there are many terrorist groups. Al Qaeda is just one component, in addition to the other autonomous groups that are part of the International Islamic Front (Jehad), which was established in 1998. Prominent among them are Lashkar e Taiyyaba and Jaish e Mohammad, which operate in Kashmir. Regrettably, due to a lack of cooperation and coordinated action against the Jehad, the Jehadis are winning the war. Even more regrettably, very little has been done to address the root causes of terrorism.

In March of 2004, Operation Mountain Storm, in Pakistan's south Waziristan, showed the multinational character of the terrorist conglomerate.Uighur Chinese, Chechens, Uzbeks, Al Qaeda members, Taliban members, and others were captured, but there are many more terrorists holed up, waiting to be taken out. The good news is that Al Qaeda is still not in possession of fissionable material to use in a nuclear bomb.

India understands the complexities of the situation in Afghanistan. Many great games have played out there—for at least three centuries Britain and the Soviet Union have tried to pacify that ungovernable country without success. This time around, the U.S.-NATO effort seems to be more sustained and comprehensive. I wish them good luck, but I believe that the claims made in this conference that two-thirds of Afghanistan is stable are rather exaggerated. The noted journalist Thomas Friedman thinks that Afghanistan is on steroids. Warlords are operating freely and taming the tribes is not going to be easy. While India is involved in the country's reconstruction, the provincial reconstruction teams operating

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under NATO auspices are likely to be put to a severe test. Further, the election scheduled for September 2004 is rather optimistic.

I have had the honor of writing a book calledWar Dispatches, Operation Iraqi Freedom, which was published recently. In the book I note that there are three parts to the military operations there: The secret war before the war, the real war (Operation Iraqi Freedom), and the war after the war, the current phase of fighting. The U.S.-led coalition forces carried out a brilliant conventional operation to bring down Saddam, but they ignored the stability phase. Shock and awe won the war but lost the hearts and minds campaign. And while U.S. forces excel in hi-tech wars, they do not do so in low- intensity conflict, a point that the U.S. military must factor in during its ongoing transformation.

In regard to this point, I'd like to cite the last paragraph of the post-script to my book: "In November, Commander-in-Chief George Bush made a surprise visit to pep up the defeated morale of the U.S. soldiers in Baghdad. But some questions remained: The size of residual coalition forces and their relationship with the provisional government; who would look after U.S. strategic and economic interests in Iraq and the region; what would be the impact of an accelerated U.S. transfer of power on its longer-term goals in the Gulf and the Middle East; would this abridged strategy forced by electoral compulsions hold?; would the UN carry the can? Whatever the revised priorities in Iraq between finding WMD, Saddam, democracy. and Iraqi self-rule, the U.S must not be seen to be quitting or failing."

All of this is playing out now. In addition, there are two other principles for stability operations that must also stay in play during the current war in Iraq. They are using proportionate/minimum force and having good faith.

One of the key lessons learned from the wars in Iraq and Afghanistan is that there are limits to what the military alone can do. Therefore we need alternative strategies. The days of mass maneuvering and all-out wars are over. From the panoply of military capabilities, we need to identify what is usable.

There is also a need to redefine military victory or success. A decisive outcome in the war in Afghanistan and in Iraq has been insufficient to shape the desired politico-military objectives. Part of redefining victory must inevitably include a reexamination of the whole concept of intervention and nation building. The litmus test of successful intervention must be that you achieve a better end state than you had before the intervention.

India is the world's largest provider of peacekeepers. At present there are Indian peacekeepers in Eritrea, Congo, Lebanon, and, soon, Sudan. India's position on Iraq is that if there is an explicit UN mandate for troops in Iraq and a request for them from the Iraqi government, then India would consider that request. However, there is an all-party resolution in force, agreed to in July 2003, not to get involved in Iraq. But several issues have changed since then to enable India to reconsider: The reality on the ground, the need to help Iraq (the Indian military trained the Iraqi military from 1972 to 1991), and the need to maintain our commitment to the UN and the U.S.

A word about India's relations with the outside world. India is in the unique position of increasing its strategic relations with the EU, the U.S., Russia, and, soon, China. There is also talk of ties between NATO and the Indian military. I would like to end my presentation with these few points:

- We need more of the UN, more international laws, and more human rights.
- Multilateralism, or, as the EU says, effective multilateralism, must be our password. This is not the time to go it alone. International cooperation and taking cooperative security measures are the paths to follow. Therefore, I encourage you to spare a thought for global interests concurrent with your national self-interests.
- The abuse of Iraqis by coalition soldiers is as devastating as a suicide bomb. Whatever we do in Iraq must be acceptable to the people of Iraq.

Strategic Concepts for the Iraq War, Conflict in the Middle East, and the Global Struggle Against Terrorism

General Klaus Naumann¹

Since I am a speaker who no longer holds any office, I have to be frank. I am going to leave aside the Iraq War, which the coalition forces conducted militarily in a truly superb manner and in which the U.S. armed forces participated in network-centric operations and demonstrated to the world what information dominance coupled with effective engagement can achieve. I am going to leave aside the crisis-management phase that preceded the war, in which we saw more political mismanagement on both sides of the Atlantic than ever before, damaging NATO more than anything else in its 55-year history. I am also going to leave aside the fact that planning for the post-war period was poor, to say the least, and I will refrain from providing an outsider's advice on how to handle the situation in Iraq, as so many retired people do these days, including some in this country. My point of departure is going to be that all of us have a common interest in stability in Iraq, and hence we have a common responsibility to prevent civil war and the danger of Iraq becoming a failing state. I will concentrate on the mid term, that is, the period that will follow the elections that are foreseen. However, I want to note that the next few months may be the most difficult yet, since there will be no Iraqi government that can claim to represent the people of Iraq and there will be a security arrangement in place that many Iraqis will see as a continuation of the occupation regime.

A COMPREHENSIVE APPROACH TO SECURITY IN THE GREATER MIDDLE EAST

What I am going to do is offer some ideas on a comprehensive approach to the three aspects of this panel's topic: Iraq, the Middle East, and global terrorism.

Let me begin with three preliminary remarks:

1. The terrorism the world is now confronted with was neither triggered by the U.S.-led war nor by any other political or military action of the US Government. Its roots are deeply seeded in rejection of our Western way of life, respect for human rights, the rule of law, and religious freedom, which the terrorist

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leaders see spreading in a world that is interconnected by modern communication. They see their islands of ideology, their systemic and self-produced inability to reform, under attack, since communication no longer allows them to manipulate their followers.

2. None of this session's three issues can be looked at in isolation, and none can be solved without progress in the other two.

3. The strategic issue is to defeat terrorism and to stabilize the Greater Middle East. Iraq and the Middle East are operational issues within this framework.

Therefore the task Americans and Europeans have to take on is a highly complex one that may require the efforts of a generation or so. To this end one will need a clear and convincing vision to win the lasting support of the nations involved.

Anyone who wishes to develop a strategic concept should first have a clear perception of the terrorism that confronts Americans and Europeans alike.

It is a new form of terrorism that is the number-one danger for all of us. It is brutally destructive and aims at our most vulnerable spot: Our civil societies and our highly vulnerable infrastructure. It is a form of terrorism that pays no respect to any rules or laws and that is determined to use limitless, extreme violence to achieve its aim: To force us to surrender. I am therefore convinced that we have not yet seen the climax of terrorism and that we will see further escalation of violence.

No country should believe that it is safe from terrorist attacks, but as we defend our societies we have to strike a balance between protection and the preservation of citizens' individual liberties. The objective of our opponents is to enforce the end of the so-called globalization, of free societies and the rule of human rights, which they see as a deadly threat to their islands of ideology and religious zeal. They see themselves as under attack by the free flow of information that characterizes post-modern societies, and they know that they cannot protect their islands of ideologies in an increasingly interconnected world. They therefore embarked on an existential fight, which means that there is but one answer for us: We must never surrender. Any concession to these enemies will be seen by them as an invitation to escalate and to continue. They know what some in our countries have failed so far to understand: That this is a global conflict in which they have but one chance to win, and that is by separating the U.S. from Europe and the few other countries that share our values and convictions.

Our response, therefore, must be unity; we must be resolved to resist while simultaneously prepared to extend a helping hand to address the political, economic, and societal roots of terrorism. This means that we need more than just military means in our toolbox. We also need to have a strategy that is tailored to the region from which terrorism is most likely to spread—the Greater Middle East, a region of incredible diversity that is closer to Europe than to the U.S. and which is of vital interest to both entities.

The transformation of the Greater Middle East is the central challenge of our times. There we must combat preventively the reasons for terrorism; in fact, nowhere is a fundamental shift in Western strategy more necessary than in this region if we are to confront the forces that create the dangerous nexus between terrorism, failed states, rogue regimes, and weapons of mass destruction. Such a shift requires ending the double standard that has led both Europeans and Americans to downplay or ignore the pursuit of democracy and human rights in the region for the sake of so-called stability, which was often nothing more than the preservation of economic interests.

It is time for the NATO nations to put themselves squarely on the side of building human rights, civil liberties, and market reforms, not just in so-called rogue states but also in "moderate" countries such as those on the Arabian peninsula and in Egypt and the Levant. This, however, must never mean imposing a Western-made concept on a region of incredible diversity.

THE ISRAELI-PALESTINIAN CONFLICT

We need to understand that the central issue is the conflict between Israel and the Palestinians—we need to forge a peace that gives Israelis security and Palestinians dignity. Neither the Arabs nor the Israelis nor the NATO nations can afford to continue the fighting between the Israelis and the Palestinians. Peace must be based on a formula of land for peace, that is, on the two-states approach, and with an understanding that there will be no lasting stability in the Middle East without a settlement with Iran and stability in Iraq.

The only country that can move the peace process forward is the United States. But the U.S. has lost credibility in the Muslim world, and recent reports of intolerable misbehavior on the part of some Americans may have ruined America's reputation for quite some time to come. Nevertheless, another attempt must be made to prove to the Palestinians that they will live in their own state and that not everything proposed by Jerusalem will simply be accepted by the West. On the other hand there must never be the slightest doubt in anybody's mind that the right of Israel to exist as a Jewish state in the Middle East is not negotiable.

For all of these reasons, Iraq is a concern to all NATO nations, regardless of whether or not they supported the war. European allies and the EU must therefore understand that they need to back the U.S., which likely will increase the chances for success. But to allow consensus to develop, NATO will need time, and the U.S. must understand that being backed does not mean that they can execute any step they decide on without proper consultation, and that being backed will never mean that NATO is under U.S. command.

WORKING WITH NATO, THE U.S., AND THE EU

The NATO nations, therefore, should focus on a strategic initiative focused on the Greater Middle East, and should launch it by making a genuine offer of dialogue. Such dialogue could take advantage of NATO's extant Mediterranean Dialogue as well as take into account the lessons learned from PfP. But it must be more than a GME PfP. If it were nothing more than a remake, then it would be seen as another attempt to impose a Western-made concept on the region or as a barely veiled excuse to use the GME focus as a remedy to heal the transatlantic rift.

Most of the nations in the Greater Middle East look at NATO as a synonym for the U.S., and they do not trust the U.S. They also tend to forget that it is their own systemic inability to reform that has produced their backwardness. Therefore the U.S. and Europe must work together and develop a concept for the region with the people from the region.

The first step in developing such a concept could be to extend a hand of friendship to the Muslim world, inviting reformers from the region to cooperate with the NATO nations to develop and tailor concepts that take into account the heritage of the nations concerned as well as the aspirations of those who wish to see the rule of human rights. Such an effort will require dedicating more substantial resources, intellectual as well as financial, to support reform in the Greater Middle East, and it is for this reason that I believe NATO would be the right place to take on such an effort. NATO has a framework through which we can bring to bear the expertise as well as the resources of the U.S. and Europe. In NATO we might be able to combine hard and soft politics, since we will need them both, and produce security in its southern and southeastern periphery. We could eliminate the reasons for conflict and terror through a combination of aid and dialogue and orchestrated international pressure on the ruling elites to reform.

This brings me to the second leg of a comprehensive NATO strategy. Peace settlements often need accompanying stabilization efforts, and no organization is better placed than NATO to provide these,

although it means committing forces for rather time-consuming deployments. NATO should shift its main emphasis to this region and offer to be the guarantor of stability there if the nations in the region wish it to do so.

Because of the nature of the new terror threats, prevention and reactive stabilization operations no longer suffice to maintain peace, prevent armed conflict, and defeat terrorism. NATO must therefore have the political resolve and the military capability to intervene proactively outside the NATO Treaty Area, in order to keep the risks at a distance from allied territory and fight terrorism on its home turf. In that way NATO might be able to provide deterrence to some extent and to act decisively when all other options no longer promise success.

A NEW VISION FOR NATO

What I have in mind, then, is a new vision for NATO, a NATO concept for the Greater Middle East which I would not call Harmel but would be another two-track approach: Conflict prevention through dialogue and cooperation and security on NATO's periphery through, if necessary, armed intervention and post-conflict stabilization operations. This approach would be a generational effort like the generational effort that brough the confrontation in Europe to an end. But it would be of such magnitude that it could never be accomplished by a coalition of the willing. What would be needed is an alliance that would rally behind the bold vision, and which would be much more than the sum of specific initiatives, like Afghanistan. Our more inward-looking nations, however, may need to be convinced by a vision before they might be willing to commit resources and to see such an effort through. Therefore, NATO might be well advised to begin thinking now of such a comprehensive vision for the fight against terrorism and for peace in the Greater Middle East in order to be prepared for the call that may come in 2005 from an elected Iraqi government.

Coping with Conflicts and Challenges

The Rt Hon Bruce George, MP1

OPENING REMARKS

www.environment, we have the clash of civilizations, chemical (as well as biological and radiological) weapons, climate change, either too much or too little CO2, the chasm dividing Europe and North America regarding capabilities, coping with the challenge of defense cuts, and Canada was mentioned along with a resurgent China, and the question of whether there should be a bigger coalition in Iraq. In addition we have talked about doing better in post-conflict reconstruction, crisis management, and counter-proliferation. There are also the dangers of Al-Qaeda, which can be spelled with a C, as well as the threats in Chechnya, the Caucasus, and the Caspian Sea region. We have also talked about the need for better connectivity of information systems and communications, the failures of counter-terrorism, and the dangers of cyber-terrorism, and, the biggest danger of all, Mr. Chandra's chickens.

I would now like to address a few isolated elements of what I think was a superb collection of presentations on Iraq and the Middle East.

THE ISRAELI-PALESTINIAN CONFLICT

Al-Qaeda forces are clearly manipulating the crisis in Palestine and Israel: They have no direct interest, they are capitalizing upon it. Even though people are telling us that there is no link between Palestine and Israel and the general fight against terrorism, don't believe it. You know there is. The juxtaposition of Israel, Palestine, and Iraq delegitimizes the United States and the United Kingdom and makes any proposed solution seem improbable. So I am counting the time to the presidential election in the United States in the hope that the U.S. government, be it Republican or Democrat, will feel freed from its conspicuous subjugation to the will of the Israeli government. Now, please don't think I am anti-Semitic, I am really not. I want to see an Israel that is safe and secure, but I do not see how that is incompatible with

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an independent secure Palestine. I just hope that when the election is over and an agenda can be reconstituted, we will remember the road map that does not begin with C and that must not be neglected. Developments in southern Israel must be consistent with the general implementation of the road map to which the U.S. is supposedly a party. Surely this is the appropriate way to proceed, and I hope diplomacy will ultimately prevail.

ACCESS TO AMERICAN MARKETS

Most people at this workshop are involved one way or another with the military. Clearly forces must be well equipped, properly configured, and properly funded. I heard the eloquent plea from France for more access to American markets. I would be more convinced if the French defense market was as open as the market they wish to see in the United States. But here is one plea, and it is not a plea for the Brits. There are two types of allies, allies with a capital A and allies with a small a. Allies with a capital A are constant, they are there with you when the going gets tough and even when decisions are being made that are stupid. Allies with a small a pick and choose which conflicts they get into. But what irritates me about not just Mr. Hunter's "Buy America" act, which is truly absurd although one can excuse him because perhaps an election is coming, is the fact that it is ludicrous not to believe that if the United States wishes to export, then it must allow imports.

I think the French and the Americans have much in common—no wonder they were allies in the late eighteenth century—and that is the desire to keep the market as closed as they can possibly keep it. We are pretty stupid: We are open to anybody, but even worse than Hunter's act, we are calling on others for the ITA waiver. Ludicrous! It is one thing to not be nice to your fair-weather allies, but not being nice to your real allies is unacceptable. Really, we are talking about transmitting unclassified documents. We are not even getting that in the United Kingdom. So I think the U.S. has a little bit to ponder in the months ahead. I have no anxieties about the executive, but whoever said no one is safe while the legislature is in session clearly had the U.S. Congress in mind.

CONVINCING OUR POPULATIONS OF THE THREAT

When it comes to dealing with terrorism, the military has an important role. The Blair government produced a white paper that said our military strategy should be to prevent, to contain, to deter, to coerce, to disrupt, to defeat and destroy other conventional and terrorist opponents. But the fight against terrorism is not exclusively, not largely, a military activity. It is a societal activity and that is why the population must be convinced that there is a threat. Now you may have done that in the U.S., but I hear endlessly from people in my country that the threat of terrorism is a fabrication, it is a "wind up," as we say, it is an illusion that allows the government to assume greater and greater power. Well, we have to do more to convince people that, as the government endlessly says in the U.K., a serious attack is not likely, it is inevitable. And in that fight some compromises on human rights, whether you like it or not, regrettably will have to be made.

COORDINATING RESOURCES

Unless you can coordinate the activities of central, regional, and local governments, unless you have connectivity, and unless you have a government that says and thinks in a collective way and does not simply reflect the balance of democracy within that system, you have to do better. We have to get the police better trained, we have to make intelligence more effective, we have to get the private security industry better involved in what we call the wider police family. And since the principal targets of terrorism are

commercial in nature, then we must put more responsibility on security managers and the directors responsible in large and small enterprises, and companies will have to play a bigger part in defending themselves.

ISLAMIC EXTREMISM

For my last point, I would like to say that all along we have had in our minds that the principal threat is not Russia, it is not smuggling—they are both problems but they are not insuperable problems. The problem we face is Islamic extremism and that is something that we have not been very well prepared for, not as well as we ought to have been. There have been 1,400 years of struggle between Islam and non-Islamic states: The periods of Islamic hegemony and the periods in recent years of Western hegemony. And there are many causes of Islamic extremism.

But their extremism is not their strength, it is their weakness. They represent failed states, they represent countries, as the UN said recently, that find it very difficult to run their economy, experience corruption, have a lack of experience, improperly use indigenous resources, exclude 50% of the population, i.e., women, from involvement in decision making. And so I think that one of the first things that should be done is for people to start looking in the mirror and wondering where their failures are in addition to seeing where we have contributed in the past or the present to those evils that are befalling Islamic states. There are, as I said, connections between Iraq, Israel, and Palestine and I think we ought to remind people that it was the United States and NATO that supported Muslim people in Bosnia, Macedonia, and Kosovo. They forget that. They also forget that the United States virtually defeated the United Kingdom, France, and Israel over the issue of the Suez Canal. So the United States' record in dealing with Islam is not as negative as some people would see it.

It is very important that we become more successful—we have been miserably unsuccessful—in convincing the so-called Arab street, because they have grievances against their own governments. It is rather ironic and unfortunate that the Islamic governments that are fully in support of the war against terrorism are governments that themselves are almost illegitimate, that are closed governments that deny access to their own people. The chickens are coming home to roost in Saudi Arabia, and if they do not mend their ways pretty swiftly it will be to their profound disadvantage and even more profoundly to our disadvantage. So we have to listen, not succumb, not engage in a process of appeasement; if Arabs or Muslims scream, we cannot drop to our knees and say, What do you want? We cannot do that, but we have to show that there is no clash of civilizations, that there is a great deal in common between our civilization and their civilization and that maybe we can contribute more, if they wish it.

I was in Algeria recently but before that I knew little about Algerian history. Almost 2,000 people were killed in their civil war, and the elections were stolen by the military in 1991 when Islamic extremists won it. Then, twelve years later, they had one of the best-conducted elections I have ever seen, and I am a professional observer of elections because of my role in the OSCE parliamentary assembly. So I truly think that Muslim countries can become civil societies—Malaysia, Indonesia, best of all, Turkey, Morocco, with the beginning of reform with the young king, Algeria, with the reforms by President Bouteflika, Jordan, which was surrounded by crises but now shows evidence of a burgeoning democracy.

So let's not entirely give up hope. Let us hope that one day Uzbekistan, Kazhakstan, and Kyrgystan will continue the process of democratization. Let us try to rekindle that interest, though not in our exact style of democracy—it is ludicrous to assume that you can simply transfer a set of political structures and a political culture to a region that has not experienced them. But we need to encourage Islamic states in the principles of justice, integrity, and tolerance, and it would help if we show a little more of those things

ourselves. We should encourage a gradual association with more moderate Islamic forces, and we should perhaps do far more than we have been doing.

In his presentation, former Indonesian president Habibie said that Islam is compatible with democracy and with scientific improvement. Here is a man who is a scientist, an engineer, a rationalist, and a devoted Muslim who became president for a short time, and in his mind he can reconcile civil society and an Islamic state. He believes that one can be rational, scientific, and Muslim. Now, there are not many people like that around, and those that are must be encouraged.

CONCLUDING REMARKS

I believe we are in a dangerous situation in the world, but I believe there is also much good that we have forgotten. Things are better now than they were. For example, when we talked about the Black Sea, I did not see many problems there. Russia, I hope, is democratizing, and Bulgaria and Romania are now allies. A lot of good is happening, but we must deal with Islamic fundamentalism. Whether or not you agree with the American/British action in Iraq, it is no time to gloat, it is no time to say those bastards deserved it, let us see if we can gain from the wreckage. It is in the interest of us all, those who are there and those who are not, to help the Allies move towards extricating themselves administratively and politically. I hope that by 2005 we will see a government that will have some elements of representation and that will be a little more democratic. And I think it is in all of our interests, the UN, NATO, the Germans, the French, the Spanish, the Chinese, everybody, that, despite the many failures we have had, when the process finishes it is more right than wrong.

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Top Row:

Mr. Hans-Joachim Gante, Managing Director of the German Aerospace Industries Association (BDLI) and Mr. Markus Meckel, MdB, member of the Bundestag and Head of the German Delegation to the NATO Parliamentary Assembly (from left to right).

Mr. Rainer Hertrich, Co-Chief Executive Officer of the European Aeronautic Defense and Space Company (EADS) (center).

His Excellency Linas Linkevicius, Minister of National Defense of Lithuania and General Harald Kujat, Chairman of the NATO Military Committee (from left to right).

Middle Row:

His Excellency Prof. Ioan Mircea Pascu, Minister of National Defense of Romania; Colonel General Alexander Skvorzov, Deputy Chief of the Russian General Staff; His Excellency Nikolai Svinarov, Minister of Defense of Bulgaria; Ambassador Volodymyr Khandogiy, Ukrainian Ambassador to NATO, Belgium and Luxembourg; His Excellency Gela Bezhuashvili, Minister of Defense of Georgia (from left to right).

Bottom Row:

Mr. Kent Schneider, President, Defense Enterprise Solutions, Northrop Grumman Information Technology; Mr. David Stafford, Sector Vice President, Business & Strategy Development, Northrop-Grumman Corporation Integrated Systems; Mr. K.C. Brown, Northrop Grumman Corporation (from left to right).

General James L. Jones, USMC, Supreme Allied Commander, Europe.

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Top Row:

Ambassador Nicholas Burns, U.S. Permanent Representative on the North Atlantic Council and Mr. Marc Perrin de Brichambaut, Director for Strategic Affairs, Ministry of Defense of France (from left to right).

The Honorable Michael W. Wynne, Under Secretary of Defense for Acquisition, Technology, and Logistics (center).

Admiral Giampaolo Di Paola, Chief of Defense of Italy (right).

Middle Row:

Dr. Werner Fasslabend, member of the Austrian National Assembly and former Minister of Defense of Austria; Ambassador Jean De Ruyt, Belgian Ambassador to Italy; Dr.-Ing. Bacharuddin Jusuf Habibie, former President of Indonesia; Dr. Hans Birke, Head of Political Affairs, Deutsche Bahn AG (from left to right).

General George A. Joulwan (Ret.), former Supreme Allied Commander, Europe and past Workshop Honorary General Chaiman and His Excellency Prof. Ioan Mircea Pascu, Minister of National Defense of Romania.

Bottom Row:

The Honorable Dale Klein, Assistant to the U.S. Secretary of Defense for Nuclear, Chemical and Biological Defense Programs (left).

Mr. Jean-Pierre Maulny, Deputy Director of IRIS (Institut de Relations Internationales et Stratégiques); Mr. Jean-Louis Gergorin, Executive Vice President, Strategic Coordination, European Aeronautic Defence and Space Company (EADS); The Rt Hon Bruce George, MP, President of the Parliamentary Assembly of the OSCE and Chair of the U.K. House of Commons Defense Committee; Dr. Roger Weissinger-Baylon, Workshop Chairman and Founder (from left to right).

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Top Row:

Dr. Hans-Heinrich Weise, Deputy Director General of Armaments of Germany; General Richard Wolsztynski, Chief of Staff of the French Air Force; Mr. Al Volkman, Diretor for International Cooperation, Office of the U.S. Under Secretary of Defense for AT&L (from left to right)

Dr. Linton Wells II, U.S. Assistant Secretary of Defense for Networks and Information Integration (acting) and General Klaus Naumann, former Chief of Defense of Germany (from left to right).

Colonel (Ret.) Robert Dickey, Defense Threat Reduction Agency.

Middle Row:

Lieutenant General Robert Chelberg, European Field Office, Defense Threat Reduction Agency; Mr. Doug Englund, Director, On-site Inspection, Defense Threat Reduction Agency; Lieutenant General Jan Folmer, Netherlands Advisory Council on International Affairs; Mr. Kent Schneider, President, Defense Enterprise Solutions, Northrop Grumman Information Technology.

Boat trip on the Spree River on the cruise boat "Spreekrone."

Bottom Row:

Ingénieur Général de l'Armement Robert Ranquet, Deputy Director of Strategic Affairs, Ministry of Defense of France, and Ing. Dr. Giorgio Zappa, Chairman and CEO, Alenia Aeronautica S.p.A. (from left to right).

Ambassador Jaromir Novotny, Ambassador of the Czech Republic to India; Vice Admiral Tarmo Kouts, Commander of the Estonian Defense Forces; General of the Armed Forces Jiri Sedivy (Ret.), former Chief of the General Staff, Czech Republic. (from left to right).

Mr. Eugene Cunningham, General Manager, International Business Development, Boeing Military Aircraft and Missile Systems and Mr. Wolf-Peter Denker, Senior Vice President, Governmental and Political Affairs, EADS (from left to right). Page 4 Top Row:

Ambassador Franz Cede, Ambassador of Austria to Belgium and to NATO; Ambassador Volodymyr Khandogiy, Ukrainian Ambassador to NATO, Belgium and Luxembourg; Mr. Satish Chandra, Deputy to the National Security Advisor of India (from left to right).

Mr. Fred Spivey, Director, International Business Development, The Boeing International Corporation; Mr. Michael Landrum, Northrop Grumman Corporation, and Mr. James Moseman, Northrop Grumman (from left to right).

Second Row:

Mr. Tom Leris, Director of International Marketing, Europe, General Dynamics and Mr. Steve Cogggins, Senior Vice President and General Manager, EMEA, Silicon Graphics (from left to right).

Third Row:

Mr. Tom Baker, Director, International Business Development, Northrop Grumman Information Technology and Mr. Vince Roske, Senior Director, Northrop Grumman (from left to right).

Evening Concert in the Baroque Chapel of Charlottenburg Palace.

Fourth Row:

Featured demonstration of three-dimensional computer graphics presented by Silicon Graphics Internationa (SGI).

Fifth Row:

Mr. Robert Lentz, Office of the U.S. Assistant Secretary of Defense for Networks and Information Integration; Dr. Linton Wells II, U.S. Assistant Secretary of Defense for Networks and Information Integration (acting); Major General Ruud van Dam, Assistant Chief of Staff for C4I, Allied Command Transformation; Lieutenant General Johan Kihl, Chief of Staff of the Swedish Armed Forces; Mr. John Quilty, Senior Vice President and Director, MITRE Corporation (from left to right)

Evening dinner at Charlottenburg Palace: Dr. Roger Weissinger-Baylon, Workshop Chairman; Mrs. Marie-Francoise Perruche; Lieutenant-General Jean-Paul Perruche, Director General, EU Military Staff. (front row from left to right).